VINEYARD WIND

Supporting Attachment

VINEYARD WIND

RESPONSE TO THE REQUEST FOR PROPOSALS FOR LONG-TERM CONTRACTS FOR AN OFFSHORE WIND ENERGY PROJECT

Prepared for

Fitchburg Gas & Electric Light Company d/b/a Unitil, Massachusetts Electric Company and Nantucket Electric Company d/b/a/ National Grid, NSTAR Electric Company d/b/a Eversource Energy, and the Massachusetts Department of Energy Resources

September 16, 2021

Submitted by

VINEYARD WIND

Vineyard Wind LLC
700 Pleasant St., Suite 510
New Bedford, MA 02740
508-717-8964

Certain information in this document or electronic file is non-public, proprietary, commercial, and/or financial information ("Confidential Information"), which has been redacted from the version of this proposal marked "PUBLIC." Vineyard Wind intends for all such Confidential Information to remain confidential and for the version of this proposal marked "CONFIDENTIAL" to be treated as a non-public record that is exempt from disclosure under applicable laws and as set forth in the Request for Proposals issued on May 7, 2021.

Confidentiality Statement

Certain information in this proposal is non-public, proprietary, commercial, and/or financial information ("Confidential Information"), which has been redacted from the version of this proposal marked "PUBLIC." Such Confidential Information is highlighted in gray and/or is clearly marked as confidential in the version of this proposal marked "CONFIDENTIAL." Vineyard Wind intends for all such Confidential Information to remain confidential. Further, the version of this proposal marked "CONFIDENTIAL" should be treated as a non-public record that is exempt from disclosure under applicable laws and as set forth in the Request for Proposals issued on May 7, 2021.

VINEYARD WIND

ATTACHMENT TO SECTION 1

Attachment 1.0-1: [redacted]

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Version FINAL 05/06/21

Part I
Guidelines and Instructions

Certification, Project and Pricing Data (CPPD)

This CPPD form comprises Part I through Part VII and is included as Section 1 of Appendix A to the RFP. Parts II through VII of this Attachment must be completed in this Excel spreadsheet and submitted according to the instructions in Part 1 and the remainder of the CPPD form. Additionally, bidders must complete and submit the Bid Fee Submittal Form. Please read these instructions in their entirety.

Proposals will include a net generating capacity of at least 200 MW and up to 1600 MW, a guaranteed commercial operation date prior to January 1, 2030, on-shore interconnection point information, and an hourly profile production schedule. With respect to on-shore interconnection points, a proposal in which there will be a single point of interconnection and delivery will be considered a single bid. Similarly, a bid in which there will be two points of interconnection and delivery, with a specified allocation of energy delivered to each point of interconnection, will also be considered a single bid for evaluation purposes. If submitting multiple proposals with different capacity sizes, commercial operation dates, on-shore interconnection points (except, as noted above, where there is a specified allocation of energy between interconnection points), or production schedules, please submit separate CPPD forms for each unique proposal and indicate the name of each CPPD form on the Bid Fee Submittal Form.

Part II - Proposal Certification and Authorization and Bid Contact Information
Proposal Certification, name of the bidder, project name and contact info.

Part III - Proposal Identification and Definitions

Part III requires the bidder to provide a summary of how this proposal meets the Definitions included in the RFP.

Part IV - Eligible Facility Summary Information

Part IV provides technical information about a facility and facility parameters, including storage, if applicable, to be considered in the evaluation. If the bid proposal is for a one phase project, please complete Part IV(a). If the bid proposal includes phases of development, Part IV (a) must be completed for the first phase, and Part IV (b) must be completed for the second phase. Part IV (c) and Part IV (d) must be completed for the third and fourth phases, respectively, if applicable.

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Part I (continued)
Guidelines and Instructions

Part V - Operational Information (Expected Hourly, Monthly and Annual Production Data)

The forms are used to convey the information about the quantity and timing of energy and/or RECs and/or environmental attributes to be delivered. The data entry must be provided in an 'hourly profile' format. Hourly Profile data is entered in Part V(a)(i), and provides for greater modeling accuracy during the evaluation process. It is requested that the bidder provide hourly production data representative of a specific year (8760 or 8784 data points). Table Part V (a) below will be populated automatically from your data entered in Part V(a)(i), creating the project's 12 x 24 annual energy production. Bidders are required to provide an hourly profile specific to 2012 weather patterns. 2012 is chosen as a “typical meteorological year” and assures consistency in evaluation of bids.

If the bid proposal is for a one-phase project, please provide data in tab Part V (phase 1). If a proposal includes phases of development, you must provide separate data for each relevant phase, in tabs 'Part V (phase1)', 'Part V (phase2)', 'Part V (phase3)', 'Part V (phase4)', respectively.

Part V (b) provides monthly adjustment factors for up to 20 years to adjust for varying maintenance intervals or declining output. The factors are for specific months and years, so the factors should coincide with the expected commercial operation date or the guaranteed delivery start date of the bid. Because of this calendar convention, there are 21 years of factors to accommodate partial years at the beginning and end of a 20 year offer. The values should be expressed in decimal format, where 1 means no change to the output. Any reductions should be reflect as 1 less the outage rate (i.e. a 1% decrease in output should be input as 0.99).

There is also a Part V (Informational) which provides conversion of the hourly generation profile into monthly on- and off-peak quantities prior to the monthly adjustment factors according to standard NERC definitions. This takes the profile for Part V (b), and makes adjustments for the average number of days over a 20 year period.

For proposals with Paired Energy Storage you must provide data in tabs 'Part V (phase1 with Storage)', 'Part V (phase2 with Storage)', 'Part V (phase3 with Storage)', and 'Part V (phase4 with Storage)', if necessary. Note that for Projects with Paired Energy Storage, the expected hourly generation tables in Part V (a)(i) should show the output of the generation resource. Enter the Energy Storage charge and discharge schedule in Part V(a)(ii). The net delivered energy from the combined resources, after the timing and loss effects of storage, will be calculated in Parts V(b-1). When providing hourly profile data, bidders are required to provide an hourly profile specific to 2012 weather patterns. The Energy Storage schedule will be analyzed to verify compliance with the maximum charging rate, maximum discharging rate, potential for exceeding storage capacity, and combined hourly scheduled negative net deliveries.

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Part I (continued)
Guidelines and Instructions

Part VI - Pricing

Part VI (a) to VI(d) Pricing. These parts are used to capture the energy and REC prices for each contract year in the term. Pricing must conform to Section 2.2.1.4 of the RFP. If the bid proposal is for a one phase project, please complete Part VI (a). If the bid proposal includes additional phases of development, Part VI (a) must be completed for the first phase, Part VI (b) must be completed for the second phase, and Part VI (c) and Part VI (d) must be completed for the third and fourth phases, respectively, if applicable.

Part VI (a) (i) to Part VI (d) (i) are auto-populated templates from Part VI to ensure proposals conform with RFP Section 2.2.1.4.i(e). No input information is required.

Part VI-2.2.1.4.i.(a) and (d) check is an auto-populated template from Part IV and Part VI to ensure that proposals comply with the price cap requirement in RFP Section 2.2.1.4.i(a) and that multiple-phase proposals conform with RFP Section 2.2.1.4.i(d). No input information is required.

Part VII - ISO-NE Forward Capacity Auction Qualification

Part VII provides spaces to describe the amount of capacity and the capacity commitment period, for which the bidder expects the generation unit in their proposal to qualify under the Forward Capacity Auction Qualification requirements set forth in Section III.13.1 of Market Rule 1 of ISO-NE's Transmission Markets and Services Tariff and how the bidder expects to meet those requirements.

PUBLIC

Part II (a)
Proposal Certification and Authorization (Appendix C)

A proposal will be considered incomplete unless all required signatures are provided.

The undersigned certifies that he or she is an authorized officer or other authorized representative of the Bidder, and further certifies that:

(1) the Bidder has reviewed this RFP and all attachments and has investigated and informed itself with respect to all matters pertinent to this RFP and its proposal; (2) the Bidder's proposal is submitted in compliance with all applicable federal, state and local laws and regulations, including antitrust and anti-corruption laws; (3) the Bidder is bidding independently and that it has no knowledge of non-public information associated with a proposal being submitted by another party in response to this RFP other than a response submitted: (a) by an affiliate of that bidder or (b) for a project in which that bidder is also a project proponent or participant, which, in each case, must be disclosed in writing to the Evaluation Team with each such bidder's or affiliated bidder's proposal; (4) the Bidder has no knowledge of any confidential information associated with development of the RFP; (5) the Bidder's proposal has not been developed utilizing knowledge of any non-public information associated with the development of the RFP; (6) the Bidder has not obtained any confidential bidding-related information directly or indirectly from any of the Distribution Companies, in preparation of its bid; (7) except as disclosed by the Bidder in the relevant portions of its response, the Bidder is not an Affiliated Company of any Massachusetts investor-owned electric Distribution Company and no Distribution Company which is seeking proposals pursuant to the RFP has a financial or voting interest, controlling or otherwise in the bidder or the bidder's proposed project; (8) the bidder accepts that confidential information about their proposal might be shared with any members of the Evaluation Team, the Evaluation Team Consultant, the Independent Evaluator, ISO-NE or Other Authorities personnel; and (9) the bidder will continue to observe these requirements throughout the RFP process.

Violation of any of the above requirements may be reported to the appropriate government authorities and shall disqualify the Bidder from the RFP process.

The undersigned further certifies that the prices, terms and conditions of the Bidder's proposal are valid and shall remain open, without modification except as allowed in this RFP, until March 28, 2022, unless otherwise extended by mutual agreement between the bidder(s) and the Distribution Companies.

The undersigned further certifies that he or she has personally examined and is familiar with the information submitted in this proposal and all appendices thereto, and based on reasonable investigation, including inquiry of the individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of the undersigned's knowledge and belief.

The undersigned understands that a false statement or failure to disclose material information in the submitted proposal may be punishable as a criminal offense under applicable law. The undersigned further certifies that that this proposal is on complete and accurate forms as provided without alteration of the text. The undersigned further understands and agrees to the provisions of this RFP related to confidential information, and consents to the limited exchange and sharing of confidential information related to the Bidder's proposal as described in this RFP, including with members of the Evaluation Team, the Independent Evaluator, ISO-NE, or and adjacent Control Area personnel.

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Project Title(s) [redacted]
(as Submitted to the Soliciting Parties)

Bidder Name Vineyard Wind

Bidder or Authorized Representative [redacted]

[redacted]

Bidder Representative's Title Date

See signed Certification form provided separately

Signature of Bidder or Authorized Representative

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Version FINAL 05/06/21

Part II (b)
Bidder and Contact Information

Contact Information For Project	
Name	[redacted]
Mailing Address	
Courier Address (If Different)	
Telephone Number	
E-mail Address	

Alternate Contact (	
Name	[redacted]
Mailing Address	
Courier Address (If Different)	
Telephone Number	
E-mail Address	

PUBLIC

Version FINAL 05/06/21

Part III
Proposal Identification and Definitions

Bidder Name Vineyard Wind

Project Title [redacted]

Provide a summary description of the following:

How this proposal meets the definition of "Offshore Wind Energy Generation"

[redacted]

How the developer of this proposal meets the definition of "Offshore Wind Developer"

[redacted]

How this proposal meets the definition of "Energy storage system", if applicable

[redacted]

How this proposal contributes to reducing Winter Electricity Price Spikes

[redacted]

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VINEYARD WIND

ATTACHMENT TO SECTION 1

Attachment 1.0-2: [redacted]

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Version FINAL 05/06/21

Part I
Guidelines and Instructions

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Part I (continued)
Guidelines and Instructions

Part V - Operational Information (Expected Hourly, Monthly and Annual Production Data)

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If the bid proposal is for a one-phase project, please provide data in tab Part V (phase 1). If a proposal includes phases of development, you must provide separate data for each relevant phase, in tabs 'Part V (phase1)', 'Part V (phase2)', 'Part V (phase3)', 'Part V (phase4)', respectively.

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Part I (continued)
Guidelines and Instructions

Part VI - Pricing

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Part VI (a) (i) to Part VI (d) (i) are auto-populated templates from Part VI to ensure proposals conform with RFP Section 2.2.1.4.i(e). No input information is required.

Part VI-2.2.1.4.i.(a) and (d) check is an auto-populated template from Part IV and Part VI to ensure that proposals comply with the price cap requirement in RFP Section 2.2.1.4.i(a) and that multiple-phase proposals conform with RFP Section 2.2.1.4.i(d). No input information is required.

Part VII - ISO-NE Forward Capacity Auction Qualification

Part VII provides spaces to describe the amount of capacity and the capacity commitment period, for which the bidder expects the generation unit in their proposal to qualify under the Forward Capacity Auction Qualification requirements set forth in Section III.13.1 of Market Rule 1 of ISO-NE's Transmission Markets and Services Tariff and how the bidder expects to meet those requirements.

PUBLIC

Part II (a)
Proposal Certification and Authorization (Appendix C)

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(1) the Bidder has reviewed this RFP and all attachments and has investigated and informed itself with respect to all matters pertinent to this RFP and its proposal; (2) the Bidder's proposal is submitted in compliance with all applicable federal, state and local laws and regulations, including antitrust and anti-corruption laws; (3) the Bidder is bidding independently and that it has no knowledge of non-public information associated with a proposal being submitted by another party in response to this RFP other than a response submitted: (a) by an affiliate of that bidder or (b) for a project in which that bidder is also a project proponent or participant, which, in each case, must be disclosed in writing to the Evaluation Team with each such bidder's or affiliated bidder's proposal; (4) the Bidder has no knowledge of any confidential information associated with development of the RFP; (5) the Bidder's proposal has not been developed utilizing knowledge of any non-public information associated with the development of the RFP; (6) the Bidder has not obtained any confidential bidding-related information directly or indirectly from any of the Distribution Companies, in preparation of its bid; (7) except as disclosed by the Bidder in the relevant portions of its response, the Bidder is not an Affiliated Company of any Massachusetts investor-owned electric Distribution Company and no Distribution Company which is seeking proposals pursuant to the RFP has a financial or voting interest, controlling or otherwise in the bidder or the bidder's proposed project; (8) the bidder accepts that confidential information about their proposal might be shared with any members of the Evaluation Team, the Evaluation Team Consultant, the Independent Evaluator, ISO-NE or Other Authorities personnel; and (9) the bidder will continue to observe these requirements throughout the RFP process.

Violation of any of the above requirements may be reported to the appropriate government authorities and shall disqualify the Bidder from the RFP process.

The undersigned further certifies that the prices, terms and conditions of the Bidder's proposal are valid and shall remain open, without modification except as allowed in this RFP, until March 28, 2022, unless otherwise extended by mutual agreement between the bidder(s) and the Distribution Companies.

The undersigned further certifies that he or she has personally examined and is familiar with the information submitted in this proposal and all appendices thereto, and based on reasonable investigation, including inquiry of the individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of the undersigned's knowledge and belief.

The undersigned understands that a false statement or failure to disclose material information in the submitted proposal may be punishable as a criminal offense under applicable law. The undersigned further certifies that that this proposal is on complete and accurate forms as provided without alteration of the text. The undersigned further understands and agrees to the provisions of this RFP related to confidential information, and consents to the limited exchange and sharing of confidential information related to the Bidder's proposal as described in this RFP, including with members of the Evaluation Team, the Independent Evaluator, ISO-NE, or and adjacent Control Area personnel.

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Project Title(s) [redacted]
(as Submitted to the Soliciting Parties)

Bidder Name Vineyard Wind

Bidder or Authorized Representative [redacted]

[redacted] [redacted]

Bidder Representative's Title Date

See signed Certification form provided separately

Signature of Bidder or Authorized Representative

PUBLIC

Version FINAL 05/06/21

Part II (b)
Bidder and Contact Information

Contact Information For Project	
Name	[redacted]
Mailing Address	
Courier Address (If Different)	
Telephone Number	
E-mail Address	

Alternate Contact (Optional)	
Name	[redacted]
Mailing Address	
Courier Address (If Different)	
Telephone Number	
E-mail Address	

PUBLIC

Version FINAL 05/06/21

Part III
Proposal Identification and Definitions

Bidder Name Vineyard Wind

Project Title [redacted]

Provide a summary description of the following:

How this proposal meets the definition of "Offshore Wind Energy Generation"

[redacted]

How the developer of this proposal meets the definition of "Offshore Wind Developer"

[redacted]

How this proposal meets the definition of "Energy storage system", if applicable

[redacted]

How this proposal contributes to reducing Winter Electricity Price Spikes

[redacted]

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[redacted]

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Version: FINAL 05/06/21

Part V (a)

Operational Information - Production Data of Off Shore Wind Project

Project Title [redacted] **Data Entry:** [redacted]

You must insert an Hourly Profile, do so to the right. Table Part V (a) below will be populated automatically from your data entered in Part V(a)(i), creating the projects 12 x 24 annual energy production.

HOURLY DELIVERY in MW *(Averaged)* - 12 Months by 24 Hours For Representative Day For Each Month

[redacted]

Note: Intermittent Resources must use the P50 Level (Probability Distribution of Output).

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Part VII
ISO-NE Forward Capacity Auction Qualification

Project Title [redacted]

Provide MW of expected qualified capacity for the Facility, by phase, if applicable, determined in accordance with the Forward Capacity Auction Qualification ("FCAQ") process. The Bidder must utilize the ISO-NE FCA Wind Qualification Template spreadsheet to approximate the qualified capacity associated with its proposed Offshore Wind Energy Generation project.

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VINEYARD WIND

ATTACHMENT TO SECTION 4

Attachment 4.1-1: [redacted]

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ATTACHMENT TO SECTION 4

Attachment 4.1-2: [redacted]

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ATTACHMENT TO SECTION 4

Attachment 4.1-3: [redacted]

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ATTACHMENT TO SECTION 4

Attachment 4.1-4: [redacted]

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ATTACHMENT TO SECTION 4

Attachment 4.1-5: [redacted]

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VINEYARD WIND

ATTACHMENT TO SECTION 4

Attachment 4.1-6: [redacted]

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ATTACHMENT TO SECTION 4

Attachment 4.3-1: [redacted]

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ATTACHMENT TO SECTION 5

Attachment 5.1-1: [redacted]

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ATTACHMENT TO SECTION 5

Attachment 5.1-2: [redacted]

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ATTACHMENT TO SECTION 5

Attachment 5.1-3: [redacted]

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Attachment 5.6-1: [redacted]

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Attachment 5.6-2: [redacted]

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Attachment 5.6-3: [redacted]

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Attachment 5.6-6: [redacted]

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Attachment 5.6-7: [redacted]

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Attachment 5.6-8: [redacted]

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Attachment 5.6-9: [redacted]

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ATTACHMENT TO SECTION 5

Attachment 5.6-10: [redacted]

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Attachment 5.6-18: Avangrid Annual Report 2018

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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Form 10-K

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the fiscal year ended December 31, 2018
Or

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the transition period from to
Commission File No. 001-37660

Avangrid, Inc.
(Exact name of registrant as specified in its charter)

New York	**4911**	**14-1798693**
(State or other jurisdiction of incorporation or organization)	**(Primary Standard Industrial Classification Code Number)**	**(I.R.S. Employer Identification No.)**
180 Marsh Hill Road **Orange, Connecticut**		**06477**
(Address of principal executive offices)		**(Zip Code)**

Telephone: (207) 629-1200
(Registrant's telephone number, including area code)
Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common Stock, $0.01 par value per share par value	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☒
Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Exchange Act. Yes ☐ No ☒
Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐
Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for shorter period that the registrant was required to submit such files). Yes ☒ No ☐
Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☒
Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or emerging growth company. See definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☒	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
Emerging growth company	☐		

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards pursuant to Section 13(a) of the Exchange Act. ☐
Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒
The aggregate market value of the Avangrid, Inc.'s voting stock held by non-affiliates, computed by reference to the price at which the common equity was last sold as of the last business day of Avangrid, Inc.'s most recently completed second fiscal quarter (June 30, 2018) was $2,959 million based on a closing sales price of $52.93 per share.
Indicate the number of shares outstanding of each of the registrant's classes of common stock, as of the latest practicable date: 309,005,272 shares of common stock, par value $0.01, were outstanding as of February 27, 2019.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the documents listed below have been incorporated by reference into the indicated parts of this report, as specified in the responses to the item numbers involved.
Designated portions of the Proxy Statement relating to the 2019 Annual Meeting of the Shareholders are incorporated by reference into Part III to the extent described therein.

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GLOSSARY OF TERMS AND ABBREVIATIONS

Unless the context indicates otherwise, references in this Annual Report on Form 10-K to "AVANGRID," the "Company," "we," "our," and "us" refer to Avangrid, Inc. and its consolidated subsidiaries.

Consent order refers to the partial consent order issued by DEEP in August 2016.

English station site refers to the former generation site on the Mill River in New Haven, Connecticut.

GenConn Devon refers to GenConn's peaking generating plant in Devon, Connecticut.

GenConn Middletown refers to GenConn's peaking generating plant in Middletown, Connecticut.

Ginna refers to the Ginna Nuclear Power Plant, LLC and the R.E. Ginna Nuclear Power Plant.

Iberdrola refers to Iberdrola, S.A., which owns 81.5% of the outstanding shares of Avangrid, Inc.

Iberdrola Group refers to the group of companies controlled by Iberdrola, S.A.

Installed capacity refers to the production capacity of a power plant or wind farm based either on its rated (nameplate) capacity or actual capacity.

Joint Proposal refers to the Joint Proposal, filed with the NYPSC on February 19, 2016, by NYSEG, RG&E and certain other signatory parties for a three-year rate plan for electric and gas service at NYSEG and RG&E commencing May 1, 2016.

Klamath Plant refers to the Klamath gas-fired cogeneration facility located in the city of Klamath, Oregon.

Merger Agreement refers to the Agreement and Plan of Merger, dated as of February 25, 2015, by and among Avangrid, Inc., Green Merger Sub, Inc. and UIL Holdings Corporation.

Non-GAAP refers to the financial measures that are not prepared in accordance with U.S. GAAP, including adjusted net income and adjusted earnings per share.

AGT	Algonquin Gas Transmission
AMI	Automated Metering Infrastructure
AOCI	Accumulated other comprehensive income
ARHI	Avangrid Renewables Holdings, Inc.
ARP	Alternative Revenue Programs
ASC	Accounting Standards Codification
Asnat	Asnat Realty, LLC
Army Corps	U.S. Army Corps of Engineers
ARO	Asset retirement obligation
AVANGRID	Avangrid, Inc.
Bcf	One billion cubic feet
BGC	The Berkshire Gas Company
BGEPA	Bald and Golden Eagle Protection Act
BLM	U.S. Bureau of Land Management
Cayuga	Cayuga Operating Company, LLC
CENG	Constellation Energy Nuclear Group, LLC
CfDs	Contracts for Differences

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CFTC	Commodity Futures Trading Commission
CL&P	The Connecticut Light and Power Company
CMP	Central Maine Power Company
CNG	Connecticut Natural Gas Corporation
CPCN	Certificate of Public Convenience and Necessity
CSC	Connecticut Siting Council
DCF	Discounted cash flow
DEEP	Connecticut Department of Energy and Environmental Protection
DIMP	Distribution Integrity Management Program
DER	Distributed energy resources
Dodd-Frank Act	Dodd-Frank Wall Street Reform and Consumer Protection Act
DOE	Department of Energy
DOER	Massachusetts Department of Energy Resources
DOJ	Department of Justice
DPA	Deferred Payment Arrangements
DPU	Massachusetts Department of Public Utilities
DSIP	Distributed System Implementation Plan
DSP	Distributed System Platform
DTh	Dekatherm
EAMs	Earnings adjustment mechanisms
EBITDA	Earnings before interest, taxes, depreciation and amortization
EDC	Massachusetts electric distribution companies
EDF	Environmental Defense Fund
EPA	Environmental Protection Agency
EPAct 2005	Energy Policy Act of 2005
ERCOT	Electric Reliability Council of Texas
ESA	Endangered Species Act
ESC	Earnings Smart Community
ESM	Earnings sharing mechanism
Evergreen Power	Evergreen Power III, LLC
Exchange Act	The Securities Exchange Act of 1934, as amended
FASB	Financial Accounting Standards Board
FERC	Federal Energy Regulatory Commission
FirstEnergy	FirstEnergy Corp.
FPA	Federal Power Act
Gas	Enstor Gas, LLC
GenConn	GenConn Energy LLC
Ginna Facility	R.E. Ginna Nuclear Power Plant
GNPP	Ginna Nuclear Power Plant, LLC.

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HLBV	Hypothetical Liquidation at Book Value
HQUS	H.Q. Energy Services (U.S) Inc.
IRS	Internal Revenue Service
ISO	Independent system operator
ISO-NE	ISO New England, Inc.
kV	Kilovolts
kWh	Kilowatt-hour
LDCs	Local distribution companies
LIBOR	London Interbank Offer Rate
LIPA	Long Island Power Authority
LNG	Liquefied natural gas
LNS	Local Network Service
MBTA	Migratory Bird Treaty Act
Mcf	One thousand cubic feet
Merger Sub	Green Merger Sub, Inc.
MEPCO	Maine Electric Power Corporation
MGP	Manufactured gas plants
MHI	Mitsubishi Heavy Industries
MNG	Maine Natural Gas Corporation
MPRP	Maine Power Reliability Program
MPUC	Maine Public Utilities Commission
MtM	Mark-to-market
MW	Megawatts
MWh	Megawatt-hours
NAV	Net asset value
NECEC	New England Clean Energy Connect
NEPA	National Environmental Policy Act
NERC	North American Electric Reliability Corporation
NETOs	New England Transmission Owners
Networks	Avangrid Networks, Inc.
New York TransCo	New York TransCo, LLC.
NGA	Natural Gas Act of 1938
NOL	Net operating loss
NYISO	New York Independent System Operator, Inc.
NYPA	New York Power Authority
NYPSC	New York State Public Service Commission
NYSE	New York Stock Exchange
NYSEG	New York State Electric & Gas Corporation
NYSERDA	New York State Energy Research and Development Authority

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OATT	Open Access Transmission Tariff
OCC	Connecticut Office of Consumer Counsel
OCI	Other comprehensive income
OSHA	Occupational Safety and Health Act, as amended
PA	Connecticut Public Act
PCB	Polychlorinated Biphenyls
PJM	PJM Interconnection, L.L.C.
PPA	Power purchase agreement
PTF	Pool Transmission Facilities
PUCT	Public Utility Commission of Texas
PUHCA 2005	Public Utility Holding Company Act of 2005
PURA	Connecticut Public Utilities Regulatory Authority
RAM	Rate Adjustment Mechanism
RCRA	Resource Conservation and Recovery Act
RDM	Revenue decoupling mechanism
REC	Renewable Energy Certificate
RFP	Request for Proposals
Renewables	Avangrid Renewables, LLC
REV	Reforming the Energy Vision
RG&E	Rochester Gas and Electric Corporation
ROE	Return on equity
RNS	Regional Network Service
RPS	Renewable Portfolio Standards
RSSA	Reliability Support Services Agreement
RTO	Regional transmission organization
SCG	The Southern Connecticut Gas Company
Scottish Power	Scottish Power Ltd.
SEC	United States Securities and Exchange Commission
SOX	Sarbanes-Oxley Act
SPHI	Scottish Power Holdings, Inc.
Tax Act	Tax Cuts and Jobs Act of 2017 enacted by the U.S. federal government on December 22, 2017
TEF	Tax equity financing arrangements
TOTS	Transmission Owner Transmission Solutions
UI	The United Illuminating Company
UIL	UIL Holdings Corporation
U.S. GAAP	Generally accepted accounting principles for financial reporting in the United States.
VaR	Value-at-risk
VIEs	Variable interest entities
WECC	Western Electricity Coordinating Council

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CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains a number of forward-looking statements. Forward-looking statements may be identified by the use of forward-looking terms such as “may,” “will,” “should,” “would,” “could,” “can,” “expect(s,)” “believe(s),” “anticipate(s),” “intend(s),” “plan(s),” “estimate(s),” “project(s),” “assume(s),” “guide(s),” “target(s),” “forecast(s),” “are (is) confident that” and “seek(s)” or the negative of such terms or other variations on such terms or comparable terminology. Such forward-looking statements include, but are not limited to, statements about our plans, objectives and intentions, outlooks or expectations for earnings, revenues, expenses or other future financial or business performance, strategies or expectations, or the impact of legal or regulatory matters on business, results of operations or financial condition of the business and other statements that are not historical facts. Such statements are based upon the current reasonable beliefs, expectations and assumptions of our management and are subject to significant risks and uncertainties that could cause actual outcomes and results to differ materially. Important factors that could cause actual results to differ materially from those indicated by such forward-looking statements include, without limitation:

- the future financial performance, anticipated liquidity and capital expenditures;
- actions or inactions of local, state or federal regulatory agencies;
- success in retaining or recruiting our officers, key employees or directors;
- changes in levels or timing of capital expenditures;
- adverse developments in general market, business, economic, labor, regulatory and political conditions;
- fluctuations in weather patterns;
- technological developments;
- the impact of any cyber breaches or other incidents, grid disturbances, acts of war or terrorism or natural disasters; and
- the impact of any change to applicable laws and regulations affecting operations, including those relating to environmental and climate change, taxes, price controls, regulatory approval and permitting;
- the implementation of changes in accounting standards; and
- other presently unknown unforeseen factors.

Additional risks and uncertainties are set forth under Part I, Item 1A, “Risk Factors” in this Annual Report on Form 10-K. Should one or more of these risks or uncertainties materialize, or should any of the underlying assumptions prove incorrect, actual results may vary in material respects from those expressed or implied by these forward-looking statements. You should not place undue reliance on these forward-looking statements. We do not undertake any obligation to update or revise any forward-looking statements to reflect events or circumstances after the date of this report, whether as a result of new information, future events or otherwise, except as may be required under applicable securities laws. Other risk factors are detailed from time to time in our reports filed with the Securities and Exchange Commission, or SEC, and we encourage you to consult such disclosures.

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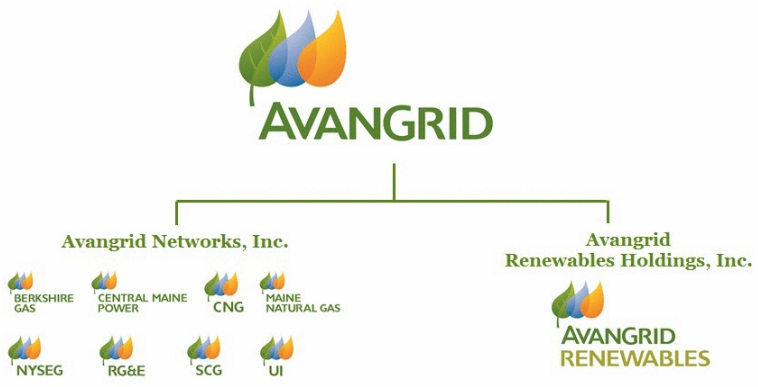
PART I

Item 1. *Business*

Overview

AVANGRID is a leading sustainable energy company with approximately $32 billion in assets and operations in 24 states. AVANGRID has two primary lines of business - Avangrid Networks and Avangrid Renewables. Avangrid Networks owns eight electric and natural gas utilities, serving approximately 3.2 million customers in New York and New England. Avangrid Renewables owns and operates 7.2 gigawatts of electricity capacity, primarily through wind power, with a presence in 22 states across the United States. AVANGRID supports the achievement of the Sustainable Development Goals approved by the member states of the United Nations, and earned the Compliance Leader Verification certification from the Ethisphere Institute, a third party verification of its ethics and compliance program. AVANGRID employs approximately 6,500 people. Iberdrola S.A., a corporation *(sociedad anónima)* organized under the laws of the Kingdom of Spain, a worldwide leader in the energy industry, directly owns 81.5% of outstanding shares of AVANGRID common stock. AVANGRID'S primary business is ownership of its operating businesses, which are described below.

Our direct, wholly-owned subsidiaries include Avangrid Networks, Inc., or Networks, and Avangrid Renewables Holdings, Inc., or ARHI. ARHI in turn holds subsidiaries including Avangrid Renewables, LLC, or Renewables. Networks owns and operates our regulated utility businesses through its subsidiaries, including electric transmission and distribution and natural gas distribution, transportation and sales. Renewables operates a portfolio of renewable energy generation facilities primarily using onshore wind power and also solar, biomass and thermal power. The following chart depicts our current organizational structure.



Through Networks, we own electric generation, transmission and distribution companies and natural gas distribution, transportation and sales companies in New York, Maine, Connecticut and Massachusetts, delivering electricity to approximately 2.2 million electric utility customers and delivering natural gas to approximately 1.0 million natural gas public utility customers as of December 31, 2018. The interstate transmission and wholesale sale of electricity by these regulated utilities is regulated by the Federal Energy Regulatory Commission, or FERC, under the Federal Power Act, or FPA, including with respect to transmission rates. Further, Networks' electric and gas distribution utilities in New York, Maine, Connecticut and Massachusetts are subject to regulation by the New York State Public Service Commission, or NYPSC, the Maine Public Utilities Commission, or MPUC, the Connecticut Public Utilities Regulatory Authority, or PURA, and the Massachusetts Department of Public Utilities, or DPU, respectively. Networks strives to be a leader in safety, reliability and quality of service to its utility customers.

Through Renewables, we had a combined wind, solar and thermal installed capacity of 7,218 megawatts, or MW, as of December 31, 2018, including Renewables' share of joint projects, of which 6,466 MW were installed wind capacity. Approximately 71% of the capacity was contracted as of December 31, 2018, for an average period of 8.5 years. Being among the top three largest wind operators in the United States based on installed capacity as of December 31, 2018, Renewables strives to lead the transformation of the U.S. energy industry to a sustainable, competitive, clean energy future. Renewables currently operates 57 wind farms in 21 states across the United States.

In December 2017, our management committed to a plan to sell the gas storage and trading businesses because they represented non-core businesses that are not aligned with our strategic objectives. At that time, we determined that the assets and liabilities associated with our gas trading and storage businesses met the criteria for classification as assets held for sale, but did not meet the criteria for classification as discontinued operations. On March 1, 2018, the Company closed a transaction to sell

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Enstor Energy Services, LLC, which operated AVANGRID's gas trading business, to CCI U.S. Asset Holdings LLC, a subsidiary of Castleton Commodities International, LLC. On May 1, 2018, the Company closed a transaction to sell Enstor Gas, LLC, which operated AVANGRID's gas storage business, to Amphora Gas Storage USA, LLC. The agreement included, among other things, a transition services agreement that obligates ARHI to provide certain transition services for up to one year after the closing date. Additional details on held for sale classification are provided in Note 26 to our consolidated financial statements contained in this Annual Report on Form 10-K.

Further information regarding the amount of revenues from external customers, including revenues by products and services, a measure of profit or loss and total assets for each segment for each of the last three fiscal years is provided in Note 23 to our consolidated financial statements contained in this Annual Report on Form 10-K.

See "Item 7. *Management's Discussion and Analysis of Financial Condition and Results of Operations*" for further details.

History

We were incorporated in 1997 as a New York corporation under the name NGE Resources, Inc. and subsequently changed our name to Energy East Corporation. The stock of Energy East Corporation was publicly traded on the New York Stock Exchange, or the NYSE. In 2007, Iberdrola, S.A. acquired Scottish Power Ltd., or Scottish Power, including ScottishPower Holdings, Inc., or SPHI, the parent company of Scottish Power's U.S. subsidiaries. Through this acquisition, Iberdrola, S.A. acquired PPM Energy, a subsidiary that operated SPHI's U.S. wind business, thermal generation operations and the gas storage and energy management businesses and changed PPM Energy's name to Iberdrola Renewables. In 2008, Iberdrola, S.A. acquired Energy East Corporation, and we changed our name to Iberdrola USA, Inc. in December 2009. In 2013, we completed an internal corporate reorganization to create a unified corporate presence for the Iberdrola brand in the United States, bringing all of its U.S. energy companies under one single holding company, Iberdrola USA, Inc. The internal reorganization, completed in November 2013, resulted in the concentration of our principal businesses in two major subsidiaries: Networks, which held all of our regulated utilities; and Renewables, which held our renewable and thermal generation businesses, and gas storage and marketing businesses.

We were the corporate parent of The Southern Connecticut Gas Company, or SCG, Connecticut Natural Gas Corporation, or CNG and The Berkshire Gas Company, or BGC, prior to UIL Holdings Corporation, or UIL, acquiring those companies in 2010.

On December 16, 2015, we completed the acquisition of UIL, pursuant to which UIL merged with and into our wholly-owned subsidiary, Green Merger Sub, Inc., or Merger Sub, with Merger Sub surviving as our wholly-owned subsidiary. The acquisition was effected pursuant to the Agreement and Plan of Merger, dated as of February 25, 2015, or the Merger Agreement, by and among us, Merger Sub and UIL. Following the completion of the acquisition, Merger Sub was renamed "UIL Holdings Corporation" and we were renamed Avangrid, Inc. Immediately following the completion of the acquisition, former UIL shareowners owned 18.5% of the outstanding shares of common stock of AVANGRID, and Iberdrola, S.A. owned the remaining shares. Effective as of April 30, 2016, UIL and its subsidiaries were transferred to a wholly-owned subsidiary of Networks.

Networks

Overview

Networks, a Maine corporation, holds our regulated utility businesses, including electric generation, transmission and distribution and natural gas distribution, transportation and sales. Networks serves as a super-regional energy services and delivery company through the eight regulated utilities it owns directly:

- New York State Electric & Gas Corporation, or NYSEG, which serves electric and natural gas customers across more than 40% of the upstate New York geographic area;
- Rochester Gas and Electric Corporation, or RG&E, which serves electric and natural gas customers within a nine-county region in western New York, centered around Rochester;
- The United Illuminating Company, or UI, which serves electric customers in southwestern Connecticut;
- Central Maine Power Company, or CMP, which serves electric customers in central and southern Maine;
- SCG, which serves natural gas customers in Connecticut;
- CNG, which serves natural gas customers in Connecticut;
- BGC, which serves natural gas customers in western Massachusetts; and
- Maine Natural Gas Corporation, or MNG, which serves natural gas customers in several communities in central and southern Maine.

For the year ended December 31, 2018, Networks distributed approximately 37.3 million megawatt-hours, or MWh, of electricity. As of December 31, 2018, Networks provided electric service to its approximately 2.2 million customers in the states of New York, Maine and Connecticut. In total, the electric system of Networks' regulated utilities consisted of 8,662 miles of

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transmission lines, 70,653 miles of distribution lines and 821 substations as of December 31, 2018. Furthermore, for the year ended December 31, 2018, Networks delivered approximately 203 million dekatherms, or DTh, of natural gas, to approximately 1 million customers, providing service in the states of New York, Maine, Connecticut and Massachusetts.

The demand for electric power and natural gas is affected by seasonal differences in the weather. Demand for electricity in each of the states in which Networks operates tends to increase during the summer months to meet cooling load or in winter months for heating load while statewide demand for natural gas tends to increase during the winter to meet heating load.

The following table sets forth certain information relating to the rate base, number of customers and the amount of electricity or natural gas provided by each of Networks' regulated utilities as of and for the year ended December 31, 2018:

Utility	Rate Base(1) (in billions)	Electricity Customers	Electricity Delivered (in MWh)	Natural Gas Customers	Natural Gas Delivered (in DTh)
NYSEG	$ 2.7	898,685	15,728,000	267,893	57,649,000
RG&E	$ 1.9	381,377	7,221,000	315,684	58,367,000
CMP	$ 2.4	627,114	9,240,000	—	—
MNG	$ 0.1	—	—	4,803	1,487,000
UI	$ 1.6	336,394	5,148,000	—	—
SCG	$ 0.6	—	—	198,966	36,251,000
CNG	$ 0.5	—	—	177,660	37,995,000
BGC	$ 0.1	—	—	40,381	10,545,000

(1) "Rate base" means the net assets upon which a utility can receive a specified return, based on the value of such assets. The rate base is set by the relevant regulatory authority and typically represents the value of specified property, such as plants, facilities and other investments of the utility. These rate base values have been calculated using the best estimates as of December 31, 2018.

During the last five years, Networks has invested nearly $5.9 billion in creating a delivery network with greater capacity and improved reliability, environmental security and sustainability, efficiency and automation. Networks continuously improves its grid to accommodate new requirements for advanced metering, demand response and enhanced outage management, while improving its flexibility for the integration and management of distributed energy resources, or DER.

New York

As of December 31, 2018, NYSEG served approximately 899,000 electricity customers and 268,000 natural gas customers across more than 40% of upstate New York's geographic area, while RG&E served approximately 381,000 electricity customers and 316,000 natural gas customers in a nine-county region centered around Rochester, in western New York.

In 2018, the nine hydroelectric plants owned by NYSEG and RG&E generated approximately 267 million kilowatt-hours, or kWh, of clean hydropower, which is enough energy to power 37,100 homes across New York State, assuming an average electricity consumption of 600 kWh per month per customer. See "—Properties—Networks" for more information regarding Networks' electric generation plants.

Networks also holds an approximate 20% ownership interest in the regulated New York TransCo, LLC, or New York TransCo. Through New York TransCo, Networks has formed a partnership with Central Hudson Gas and Electric Corporation, Consolidated Edison, Inc., National Grid, plc, and Orange and Rockland Utilities, Inc. to develop a portfolio of interconnected transmission lines and substations to fulfill the objectives of the New York energy highway initiative, a proposal to install up to 3,200 MW of new electric generation and transmission capacity in order to deliver more power generated from upstate New York power plants to downstate New York.

Maine

As of December 31, 2018, CMP delivered electricity to more than 627,000 customers in an 11,000 square-mile service area in central and southern Maine. CMP completed a $1.4 billion investment plan for the construction of upgrades to the bulk power transmission grid in Maine, the largest transmission investment in the history of Maine, which included the construction of five new 345-kilovolt, or kV, substations and related facilities linked by approximately 440 miles of new transmission lines (refers to the Maine Power Reliability Program, or MPRP).

CMP also owns 78% of the Maine Electric Power Corporation, or MEPCO, a single-asset 182-mile 345kV electric transmission line from the Maine/New Brunswick border to Wiscasset, Maine.

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As of December 31, 2018, MNG delivers natural gas to 4,803 customers in central and southern Maine. MNG continues to build out in 12 communities.

On February 14, 2018, the New England Clean Energy Connect, or NECEC, transmission project, proposed in a joint bid by CMP and Hydro-Québec, was selected by the Massachusetts electric utilities and the Massachusetts Department of Energy Resources, or DOER, in the Commonwealth of Massachusetts's 83D clean energy Request for Proposal, or RFP, to move forward as the alternative to the Northern Pass Transmission project which failed to win approval from the New Hampshire Site Evaluation Committee by March 27, 2018. On March 28, 2018, the DOER informed CMP that the conditional selection of Northern Pass Transmission project had been terminated, making the NECEC transmission project the lone winning bid in the RFP. The proposed NECEC transmission project includes a 145-mile transmission line linking the electrical grids in Québec, Canada and New England. The project, which has an estimated cost of approximately $950 million, would add 1,200 MW of transmission capacity to supply New England with power from reliable hydroelectric generation.

On June 13, 2018, CMP entered into transmission service agreements, or TSAs, with the purchasing Massachusetts electric distribution companies, or the EDCs, and H.Q. Energy Services (U.S.) Inc., or HQUS, an affiliate of Hydro-Québec, which govern the terms of service and revenue recovery for the NECEC transmission project. Simultaneous with the execution of the TSAs with CMP, the EDCs have executed certain PPAs with HQUS for sales of electricity and environmental attributes to the EDCs. The EDCs submitted the TSAs and PPAs to the DPU for approval on July 23, 2018, and CMP filed the TSAs for approval by the FERC on August 20, 2018. On October 19, 2018, FERC issued an order accepting the TSAs for filing as CMP rate schedules effective as of October 20, 2018. The DPU proceedings are ongoing with a decision from the agency expected in the second quarter of 2019.

The NECEC project also requires certain permits, including environmental, from multiple state and federal agencies and a presidential permit from the U.S. Department of Energy, authorizing the construction, operation, maintenance and connection of facilities for the transmission of electric energy at the international border between the United States and Canada. These permitting activities are ongoing. CMP expects to obtain the applicable state and federal permits by year end 2019. See "Item 7. *Management's Discussion and Analysis of Financial Condition and Results of Operations*" for further details.

Connecticut

As of December 31, 2018, UI served more than 336,000 residential, commercial and industrial customers in a service area of approximately 335 square miles in the southwestern part of Connecticut. The service area includes Bridgeport and New Haven and is home to a diverse array of business sectors including aerospace manufacturing, healthcare, biotech, financial services, precision manufacturing, retail and education. UI's retail electric revenues vary by season, with the highest revenues typically in the third quarter of the year reflecting seasonal rates, hotter weather and air conditioning use.

UI is also a party to a joint venture with Clearway Energy, Inc. (formerly NRG Yield, Inc.), which is an affiliate of Global Infrastructure Partners, or GIP, pursuant to which UI holds 50% of the membership interests in GCE Holding LLC, whose wholly owned subsidiary, GenConn Energy LLC, or GenConn, operates peaking generation plants in Devon, Connecticut, or GenConn Devon, and Middletown, Connecticut, or GenConn Middletown. In September 2018, NRG Energy, Inc. sold its interests in NRG Yield, Inc. to GIP. The sale is not expected to have an impact on GenConn.

As of December 31, 2018, SCG and CNG provided local gas distribution services to approximately 377,000 customers in the greater Hartford-New Britain area, Greenwich and the southern Connecticut coast from Westport to Old Saybrook, including the cities of Bridgeport and New Haven.

Massachusetts

As of December 31, 2018, BGC provided local gas distribution services to approximately 40,000 customers in a service area in western Massachusetts, which includes the cities of Pittsfield, North Adams and Greenfield.

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Rate Base

These rate base values were calculated using the best estimates as of December 31, 2018. The rate base of Networks' regulated utilities for the years indicated below were as follows:

Rate base	2016	2017	2018
		(in millions)	
NYSEG Electric	$ 1,828	$ 1,872	$ 2,067
NYSEG Gas	490	534	585
RG&E Electric	1,061	1,218	1,386
RG&E Gas	407	428	497
Subtotal New York	**3,786**	**4,052**	**4,535**
CMP Dist.	790	854	903
CMP Trans.	1,447	1,460	1,460
MNG	69	67	71
Subtotal Maine	**2,306**	**2,381**	**2,434**
UI Dist.	972	1,007	1,035
UI Trans.	544	570	592
SCG	510	536	550
CNG	429	449	479
Subtotal Connecticut	**2,456**	**2,562**	**2,656**
BGC	91	107	111
Total	**$ 8,638**	**$ 9,103**	**$ 9,736**

Earnings Sharing Mechanisms

Networks' regulated utilities' rate plans approved by State regulators often include earnings sharing mechanisms, or ESM, that are intended to encourage regulated utilities to operate efficiently. Pursuant to ESMs, if certain of the regulated utilities of Networks earn more than certain threshold amounts, they must share with customers a specified percentage of these earnings. Below is a history of ESMs over the past three years:

	2016	2017	2018
NYSEG Electric	50% / 50%: 9.50% - 10.00% 75% / 25%: 10.00% - 10.50% 90% / 10%: over 10.50%; Based on Actual Equity Ratio up to 50% *	50% / 50%: 9.65% - 10.15% 75% / 25%: 10.15% - 10.65% 90% / 10%: over 10.65%; Based on Actual Equity Ratio up to 50%	50% / 50%: 9.75% - 10.25% 75% / 25%: 10.25% - 10.75% 90% / 10%: over 10.75%; Based on Actual Equity Ratio up to 50%
NYSEG Gas	Same as above	Same as above	Same as above
RG&E Electric	Same as above	Same as above	Same as above
RG&E Gas	Same as above	Same as above	Same as above
CMP Dist.	No ESM	No ESM	No ESM
CMP Trans.	No ESM	No ESM	No ESM
MNG	No ESM	50% / 50% over 11.55%	50% / 50% over 11.55%
UI	50% / 50% over 9.15%	50% / 50% over 9.10%	50% / 50% over 9.10%
SCG	No ESM	No ESM	50% / 50% over 9.25%
CNG	50% / 50% over 9.18%	50% / 50% over 9.18%	50% / 50% over 9.18%
BGC	No ESM	No ESM	No ESM

*No ESM from January through April 2016.

Renewables

The Renewables business, based in Portland, Oregon, is engaged primarily in the design, development, construction, management and operation of generation plants that produce electricity using renewable resources and, with more than 60 renewable energy projects, is one of the leaders in renewable energy production in the United States based on installed capacity. Renewables'

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primary business is onshore wind energy generation, which represented approximately 90% of Renewables' combined installed capacity as of December 31, 2018. For the year ended December 31, 2018, Renewables produced approximately 16,207,000 MWh of energy through wind power generation. Renewables had a pipeline of approximately 14,000 MW (approximately 10,000 MW - onshore and approximately 4,000 MW - offshore) of future renewable energy projects in various stages of development as of December 31, 2018.

Typically, Renewables enters into long-term lease agreements with property owners who lease their land for renewable projects. Electricity generated at a wind project is then transmitted to customers through long-term agreements with purchasers. There are a limited number of turbine suppliers in the market. Renewables' largest turbine suppliers, Siemens-Gamesa, in which Iberdrola has an 8.1% ownership, and GE Wind, in the aggregate supplied turbines which accounted for 74% of Renewables' installed wind capacity as of December 31, 2018.

Renewables currently operates 57 wind farms in 21 states across the United States. To monetize the tax benefits resulting from production tax credits and accelerated tax depreciation available to qualifying wind energy projects, Renewables has entered into "tax equity" financing structures with third party investors for a portion of its wind farms. Renewables holds nine operating wind farms under these structures through limited liability companies jointly owned by one or more third party investors. These investors generally provide an up-front investment or, in some cases, payments over time for their membership interests in the financing structures. In return, the investors receive specified cash distribution allocations and substantially all of the tax earnings and benefits generated by the wind farms, until such benefits achieve a negotiated return on their investment. Upon attainment of this target return, the sharing of the cash flows and tax benefits flip, with Renewables receiving substantially all of these amounts thereafter. We also have an option to repurchase the investor's interest within a certain timeframe after the target return is met. Renewables maintains operational and management control over the wind farm businesses, subject to investor approval of certain major decisions. See "—Properties—Renewables" for more information regarding Renewables' wind power generation properties.

Additionally, as part of the Renewables portfolio, Renewables operates two thermal generation facilities in the United States, with 636 MW of combined capacity as of December 31, 2018. Renewables worked closely with the City of Klamath Falls, Oregon to develop the Klamath Plant, which has a current capacity of 536 MW. The Klamath Plant operates by creating two useful forms of energy, electricity and process steam, from a single fuel source of natural gas. In addition, Renewables operates a highly flexible 100 MW Klamath Peaking Plant adjacent to the Klamath Plant, providing customers of Renewables additional capability to meet their peak summer and winter power needs.

In addition to its wind assets, Renewables operates four solar photovoltaic facilities with an installed capacity of 116 MW. The solar photovoltaic facilities produced over 262,000 MWh of renewable energy for the year ended December 31, 2018. Solar accounted for 1.5% of the total renewable energy generation from Renewables in these same periods.

Renewables is pursuing the continued development of a large pipeline of wind energy projects in various regions across the United States. Each site features a range of different atmospheric characteristics that ultimately drive the selection of turbine technology for the proposed project. As part of Renewables' wind resource assessment investigation, critical atmospheric parameters such as mean wind speed, extreme wind speed, turbulence intensity, and mean air density are characterized to represent long-term conditions, for over 20 years. The summary wind characteristics are then combined with a terrain, or orography, analysis to assess siting risks in order to mitigate any future operations and maintenance concerns that may arise due to improper turbine siting.

Renewables maintains close relationships with key turbine suppliers, including Siemens-Gamesa, GE, Vestas and others in order to identify the turbine technology that safely delivers the lowest cost of energy for each candidate project in its portfolio. Renewables has deployed the following mix of turbines under this strategy. See "—Properties—Renewables" for more information regarding Renewables' turbine technology.

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MFG	Model	Rating	Turbines	MW
Siemens-Gamesa	G83	2.0	60	120
Siemens-Gamesa	G87	2.0	651	1,302
Siemens-Gamesa	G90	2.0	237	474
Siemens-Gamesa	G97	2.0	109	218
Siemens-Gamesa	G114	2.0	282	581
Siemens-Gamesa	SWT2.3-93	2.3	44	101
GE	1.5s	1.5	133	200
GE	1.5sle	1.5	1,126	1,689
GE	2.3	2.3	57	131
MHI	MWT62/1.0	1.0	45	45
MHI	MWT92/2.4	2.4	168	403
MHI	MWT95/2.4	2.4	125	300
MHI	MWT102/2.4	2.4	1	2
NEG	NM48	0.7	3	2
Suzlon	S88	2.1	341	716
Vestas	V47	0.7	34	22
Vestas	V82	1.7	97	160
Total			3,513	6,466

The Renewables meteorology team supports the commercial development of wind energy projects in Renewables' pipeline by performing a wide variety of detailed investigations to characterize the expected wind energy production from a proposed wind farm in its pre-construction phase of development. These investigations include measuring the wind resource with several well-equipped meteorological masts, utilizing state of the art laser-based and acoustic-based remote sensing equipment, computational fluid dynamics modeling software and energy modeling software packages that characterize wake losses from any upwind turbines that may be present. The Renewables fleet of measurement masts consists of approximately 170 towers that are currently in operation. Additionally, a total of six light detecting and ranging, and six sonic detecting and ranging, remote sensing devices are deployed at sites across the United States. These remote sensing devices allow hub-height wind speed measurement from a ground-based sensor that can be rapidly deployed and moved as the project matures or changes in nature. The resulting pre-construction energy production estimates that utilize these measurements have been shown to be accurate in a multi-year internal study that compares results to actual, operational data in a benchmarking analysis. This study provides a critical feedback loop that is used to define methodology requirements for future pre-construction energy production estimates to ensure confidence in project investment. Renewables' commitment to obtaining robust atmospheric measurement is driven by a company culture that values business case confidence and understands the role that accurate meteorological data play in the pursuit of this goal.

Regulatory Environment and Principal Markets

Federal Energy Regulatory Commission

Among other things, the FERC regulates the transmission and wholesale sales of electricity in interstate commerce and the transmission and sale of natural gas for resale in interstate commerce. Certain aspects of Networks' businesses and Renewables' competitive generation businesses are subject to regulation by the FERC.

Pursuant to the FPA, electric utilities must maintain tariffs and rate schedules on file with the FERC, which govern the rates, terms and conditions for the provision of the FERC-jurisdictional wholesale power and transmission services. Unless otherwise exempt, any person that owns or operates facilities used for the wholesale sale or transmission of power in interstate commerce is a public utility subject to the FERC's jurisdiction. The FERC regulates, among other things, the disposition of certain utility property, the issuance of securities by public utilities, the rates, the terms and conditions for the transmission or wholesale sale of power in interstate commerce, interlocking officer and director positions, and the uniform system of accounts and reporting requirements for public utilities.

With respect to Networks' regulated electric utilities in Maine, New York and Connecticut, the FERC governs the return on equity, or ROE, on all transmission assets in Maine and Connecticut and certain New York TransCo assets in New York; FERC also oversees the rates, terms and conditions of transmission of electric energy in interstate commerce, interconnection service in interstate commerce (which applies to independent power generators, for example), and the rates, terms and conditions of wholesale sales of electric energy in interstate commerce, which includes cost-based rates, market-based rates and the operations of regional capacity and electric energy markets in New England administered by an independent entity, ISO New England, Inc., or ISO-NE, and in New York, administered by another independent entity, the New York Independent System Operator, Inc., or NYISO. The FERC approves CMP, UI and New York TransCo regulated electric utilities' transmission revenue requirements. Wholesale electric transmission revenues are recovered through formula rates that are approved by the FERC. CMP's, MEPCO's and UI's electric

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transmission revenues are recovered from New England customers through charges that recover costs of transmission and other transmission-related services provided by all regional transmission owners. NYSEG's and RG&E's electric transmission revenues are recovered from New York customers through charges that recover the costs of transmission, and other transmission-related services provided by all transmission owners in New York. Several of our affiliates have been granted authority to engage in sales at market-based rates and blanket authority to issue securities, and have also been granted certain waivers of the FERC reporting and accounting regulations available to non-traditional public utilities; however, we cannot be assured that such authorizations or waivers will not be revoked for these affiliates or will be granted in the future to other affiliates.

Pursuant to a series of orders involving the ROE for regionally planned New England electric transmission projects, the FERC established a base-level transmission ROE of 11.14%, as well as providing a 50-basis point ROE adder on Pool Transmission Facilities, or PTF, for participation in the regional transmission organization, or RTO, for New England and a 100-basis point ROE incentive for projects included in the ISO-NE Regional System Plan that were completed and on line as of December 31, 2008. Certain other transmission projects received authorization for incentives up to 125 basis points.

Since 2011, several parties have filed four separate complaints with the FERC against ISO-NE and several New England transmission owners, or NETOs, including UI, CMP and MEPCO, claiming that the current approved base ROE of 11.14% was not just and reasonable, seeking a reduction of the base ROE and a refund to customers for the 15-month refund periods beginning October 1, 2011 (Complaint I), December 27, 2012 (Complaint II), July 31, 2014 (Complaint III) and April 29, 2016 (Complaint IV).

Following various intermediate hearings, orders, and appellate decisions, on October 16, 2018, the FERC issued an order directing briefs and proposing a new methodology to calculate the NETOs ROE that is contained in NETOs' transmission formula rate on file at FERC, or the October 2018 Order. The FERC proposes to use this new methodology to resolve Complaints I, II, III, and IV filed by the New England state consumer advocates.

The new proposed ROE methodology set forth in the October 2018 Order considers more than just the two-step discounted cash flow, or DCF, analysis adopted in the FERC order on Complaint I vacated by the Court. The new proposed ROE methodology uses three financial analyses (i.e., DCF, the capital-asset pricing model, and the expected earnings analysis) to produce a range of returns to narrow the zone of reasonableness when assessing whether a complainant has met its initial burden of demonstrating that the utility's existing ROE is unjust and unreasonable. The new proposed ROE methodology establishes a range of just and reasonable ROEs of 9.60% to 10.99% and proposes a just and reasonable base ROE of 10.41% with a new ROE cap of 13.08%. Pursuant to the October 2018 Order, the NETOs filed briefs on the proposed methodology in all four Complaints on January 11, 2019. We cannot predict the outcome of this proceeding.

The FERC has the right to review books and records of "holding companies," as defined in the Public Utility Holding Company Act of 2005, or PUHCA 2005, that are determined by FERC to be relevant to the companies' respective FERC-jurisdictional rates. We are a holding company, as defined in PUHCA 2005.

The FERC has civil penalty authority over violations of any provision of Part II of the FPA, as well as any rule or order issued thereunder. FERC is authorized to assess a maximum civil penalty of $1.3 million per violation for each day that the violation continues. The FPA also provides for the assessment of criminal fines and imprisonment for violations under Part II of the FPA. Pursuant to the Energy Policy Act of 2005, or EPAct 2005, the North American Electric Reliability Corporation, or NERC, has been certified by the FERC as the Electric Reliability Organization for North America responsible for developing and overseeing the enforcement of electric system reliability standards applicable throughout the United States. FERC-approved reliability standards may be enforced by the FERC independently, or, alternatively, by NERC and the regional reliability organizations with frontline responsibility for auditing, investigating and otherwise ensuring compliance with reliability standards, subject to the FERC oversight.

The gas distribution operations of NYSEG, RG&E, SCG, CNG and BGC are subject to the FERC regulation under the Natural Gas Act of 1938, or NGA, with respect to their gas purchases/sales and contracted transportation/storage capacity. FERC has civil penalty authority under the NGA to impose penalties for certain violations of up to $1.3 million per day for violations. FERC also has the authority to order the disgorgement of profits from transactions deemed to violate the NGA and EPAct 2005.

Market Anti-Manipulation Regulation

The FERC and the Commodity Futures Trading Commission, or CFTC, monitor certain segments of the physical and futures energy commodities market pursuant to the FPA, the Commodity Exchange Act and the Dodd-Frank Wall Street Reform and Consumer Protection Act, or the Dodd-Frank Act, including our businesses' energy transactions and operations in the United States. With regard to the physical purchases and sales of electricity and natural gas, the gathering storage, transmission and delivery of these energy commodities and any related trading or hedging transactions that some of our operating subsidiaries undertake, our operating subsidiaries are required to observe these anti-market manipulation laws and related regulations enforced

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by the FERC and CFTC. The FERC and CFTC hold substantial enforcement authority, including the ability to assess civil penalties of up to $1.3 million per day per violation, to order disgorgement of profits and to recommend criminal penalties.

State Regulation

Networks' regulated utilities are subject to regulation by the applicable state public utility commissions, including with regard to their rates, terms and conditions of service, issuance of securities, purchase or sale of utility assets and other accounting and operational matters. NYSEG and RG&E are subject to regulation by the NYPSC; CMP and MNG are subject to regulation by the MPUC; UI, SCG and CNG are subject to regulation by the PURA; and BGC is subject to regulation by the DPU. The NYPSC, MPUC and the Connecticut Siting Council, or CSC, exercise jurisdiction over the siting of electric transmission lines in their respective states, and each of the NYPSC, MPUC, PURA and DPU exercise jurisdiction over the approval of certain mergers or other business combinations involving Networks' regulated utilities. In addition, each of the utility commissions has the authority to impose penalties on these regulated utilities, which could be substantial, for violating state utility laws and regulations and their orders.

Networks' regulated distribution utilities deliver electricity and/or natural gas to all customers in their service territory at rates established under cost of service regulation. Under this regulatory structure, Networks' regulated distribution utilities recover the cost of providing distribution service to their customers based on its costs, and earn a return on their capital investment in utility assets.

The following provides a summary of Networks regulated utilities' most recent rate cases:

- *New York*. On May 20, 2015, NYSEG and RG&E initiated a distribution rate case to ensure that the companies are able to continue to provide safe, adequate and reliable service, continue to make investments to modernize infrastructure, enhance low income programs and improve both gas and electric reliability, while maintaining the Companies' financial integrity. On February 19, 2016, NYSEG, RG&E and other signatory parties filed a Joint Proposal, with the NYPSC for a three-year rate plan for electric and gas service at NYSEG and RG&E commencing May 1, 2016. The Joint Proposal was approved on June 15, 2016 by the NYPSC. For more information on rate case activity in New York, see Note 5 of our consolidated financial statements included in Part II, Item 8, "Financial Statements and Supplementary Data" of this Annual Report on Form 10-K, which information is incorporated herein by reference.

  The NYSEG and RG&E 2016 three-year rate plan ends in April 2019. The companies intend to file rate cases in New York in the second quarter of 2019 for new tariffs effective in the second quarter of 2020.

- *Maine*. On May 1, 2013, CMP filed a distribution service rate case in order to recover past and future investments and provide safe and adequate service. On August 25, 2014, MPUC approved a stipulation agreement that provided for a distribution rate increase of approximately $24.3 million, effective July 1, 2014, with an allowed ROE of 9.45% and an allowed equity ratio of 50%. The stipulation provided for the implementation of a revenue decoupling mechanism, or RDM, reserve accounting and sharing of incremental storm costs, a separate proceeding for recovery of a new billing system and no earnings sharing. On March 1, 2018, the MPUC issued a Notice of Investigation initiating a summary investigation into CMP's metering, billing and customer communications practices. Due to the highly technical nature of CMP's customer billing system, on March 22, 2018 the MPUC issued an Order Initiating Audit commencing a forensic audit of CMP's customer billing system to identify any errors that have, or continue to be resulting in billing inaccuracies. On July 10, 2018, the MPUC issued an Order Modifying Scope of Audit, which expanded the scope of the audit to include the customer communication practices that were originally identified in the Commission's Notice of Investigation. On May 29, 2018, a ten-person complaint was filed with the MPUC against CMP, Networks and AVANGRID. The complaint requested that the MPUC open a rate case to determine if CMP is making excessive returns on investment and, therefore, whether CMP's retail rates should be lower. The complaint also requested the MPUC deny certain costs associated with the October 2017 windstorm. On July 24, 2018, the MPUC issued an order dismissing the complaint and its associated request to deny the recovery of costs associated with the October 2017 windstorm. The order initiated an investigation into CMP's rates and revenue requirement and directed CMP to make a filing consistent with the requirements for a general rate case no later than October 15, 2018. Consistent with the order in the ten-person complaint proceeding, on August 7, 2018, the MPUC issued a Notice of Investigation, opening the proceeding in which CMP would make its rate case filing and through which the MPUC will examine the rates and revenue requirements of CMP. On October 15, 2018, CMP filed a general rate case as directed by the MPUC requesting a ROE of 10% and an equity ratio of 55%. CMP is proposing to use savings arising out of changes in federal taxation pursuant to the Tax Cuts and Jobs Act of 2017, or the Tax Act, to keep its distribution prices stable while making its electric system more reliable. The MPUC has established a ten-month process to review CMP's filing and we expect a decision in October of 2019. CMP's general rate case filing includes a proposal to enhance the resiliency of the energy grid by expanding vegetation management and pursuing additional reliability measures such as pole replacements and addition of tree wire in selected areas. Such investments are designed to strengthen CMP's power grid so it can better stand up to severe weather. CMP is planning to use savings from the

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federal Tax Act to pay for the costs of resiliency programs, other investments in infrastructure and certain cost increases since 2014. On December 20, 2018, the MPUC released the findings of the forensic audit of CMP's customer billing system and customer communication practices. On January 14, 2019, the MPUC issued an Order and Notice of Investigation initiating an investigation of CMP's metering and billing practices and initiating a separate investigation of the audit of CMP's customer service and communication practices and incorporating such investigation into the general rate case. We cannot predict the outcome of this matter.

On March 5, 2015, MNG filed a rate case in order to further recover future investments and provide safe and adequate service. On May 3, 2016, all active parties to the case filed a stipulation that settled all matters at issue in the case and reflected a 10-year rate plan through April 30, 2026. The MPUC approved the stipulation on May 17, 2016, for new rates effective June 1, 2016. The settlement structure for non-Augusta customers includes a 34.6% delivery revenue increase over five years with an allowed 9.55% ROE and 50% common equity ratio. The settlement structure for Augusta customers includes a ten-year rate plan with existing Augusta customers being charged rates equal to non-Augusta customers plus a surcharge that increases annually for five years. New Augusta customers will have rates set based on an alternate fuel market model. In year seven of the rate plan MNG will submit a cost of service filing for the Augusta area to determine if the rate plan should continue. This cost of service filing will exclude $15 million of initial 2012/2013 gross plant investment, however the stipulation allows for accelerated depreciation of these assets. If the Augusta area's cost of service filing illustrates results above a 14.55% ROE then the rate plan may cease, otherwise the rate plan would continue. A disallowance for the initial 2012/2013 gross plant investment is not part of the approved stipulation.

- *Connecticut*. In December 2016, PURA approved distribution rate schedules for UI for three years that became effective January 1, 2017 and which, among other things, provides for annual tariff increases and an ROE of 9.10% based on a 50% equity ratio, continued UI's existing ESM pursuant to which UI and its customers share on a 50/50 basis all distribution earnings above the allowed ROE in a calendar year, continued the existing decoupling mechanism, and approved the continuation of a requested storm reserve. Any dollars due to customers from the ESM continue to be first applied against any storm regulatory asset balance (if one exists at that time) or refunded to customers through a bill credit if such storm regulatory asset balance does not exist.

  In December 2017, PURA approved new tariffs for SCG effective January 1, 2018 for a three-year rate plan with rate increases of $1.5 million, $4.7 million and $5.0 million in 2018, 2019 and 2020, respectively. The new tariff also includes an RDM and Distribution Integrity Management Program, or DIMP, mechanism similar to the mechanisms authorized for CNG, ESM, the amortization of certain regulatory liabilities (most notably accumulated hardship deferral balances and certain accumulated deferred income taxes) and tariff increases based on a ROE of 9.25% and approximately 52% equity level. Any dollars due to customers from the ESM will be first applied against any environmental regulatory asset balance as defined in the settlement agreement (if one exists at that time) or refunded to customers through a bill credit if such environmental regulatory asset balance does not exist.

  On June 29, 2018, CNG filed an application with PURA for new tariffs to become effective January 1, 2019. On August 30, 2018, CNG entered into a settlement agreement with the Office of Consumer Counsel and PURA prosecutorial staff that provides for new rates effective January 1, 2019. The settlement agreement was approved by PURA on December 19, 2018. The settlement agreement included an increase in rates of $9.9 million in 2019, an incremental increase of $4.6 million in 2020 and an incremental increase of $5.2 million in 2021, for a total increase of $19.7 million over the three-year rate plan. The settlement agreement is based on an ROE of 9.30%, and an equity ratio of 54% in 2019, 54.50% in 2020 and 55% in 2021.

  For more information on rate case activity in Connecticut, see Note 5 of our consolidated financial statements included in Part II, Item 8, "Financial Statements and Supplementary Data" of this Annual Report on Form 10-K, which information is incorporated herein by reference.

- *Massachusetts*. BGC's rates are established by the DPU. BGC's ten-year rate plan, which was approved by the DPU and included an approved ROE of 10.5%, expired on January 31, 2012. BGC continues to charge the rates that were in effect at the end of the rate plan.

  On May 17, 2018, BGC filed a petition with the DPU seeking approval of a distribution rate increase to be effective January 1, 2019. On December 4, 2018, BGC and the Massachusetts Attorney General's Office filed a settlement agreement with the DPU. The settlement agreement provides for a $1.6 million distribution base rate increase effective January 1, 2019, or February 1, 2019 if the DPU did not approve the settlement agreement prior to January 1, 2019, and an additional $0.7 million base distribution increase effective November 1, 2019, if certain investments are made by BGC. The settlement agreement contained a make-whole provision if the DPU approved the agreement after January 1, 2019. The distribution rate increase is based on a 9.70% ROE and 55% equity ratio. The settlement agreement provides for the implementation

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of a RDM and pension expense tracker and also provides that BGC will not file to change base distribution to become effective before November 1, 2021. The settlement agreement was approved by the DPU on January 18, 2019.

In addition, as a result of a restructuring of the utility industry in New York, Maine, Connecticut and Massachusetts, most of Networks' distribution utilities' customers have the opportunity to purchase their electricity or natural gas supplies from third-party energy supply vendors. Most customers in New York, however, continue to purchase such supplies through the distribution utilities under regulated energy rates and tariffs. In Maine, CMP customers can also purchase electric supply from competitive providers but the majority receives baseline standard offer service that is provided through a MPUC procurement process. Networks' regulated utilities in New York, Connecticut and Massachusetts and MNG purchase electricity or natural gas from unaffiliated wholesale suppliers and recover the actual approved costs of these supplies on a pass-through basis, as well as certain costs associated with industry restructuring, through reconciling rate mechanisms that are periodically adjusted.

In April 2014, the NYPSC instituted its Reforming the Energy Vision, or REV, proceeding, the goals of which are to improve electric system efficiency and reliability, encourage renewable energy resources, support DER, and empower customer choice. Within REV and its related proceedings, the NYPSC is examining the establishment of a Distributed System Platform, or DSP, to manage and coordinate DER, and to provide customers with market data and tools to manage their energy use. The NYPSC has determined distribution utilities should be the DSP providers. The NYPSC also is examining how its regulatory practices should be modified to incent utility practices to promote REV objectives. The REV-related proceedings involve a two-phased schedule with an initial order relating to policy determinations for DSP and related matters issued in February 2015 and an initial order for regulatory design and regulatory matters issued in May 2016. All electric utilities were ordered to file an initial Distributed System Implementation Plan, or DSIP, by June 30, 2016. An initial DSIP was filed by NYSEG and RG&E and included information regarding the potential deployment of Automated Metering Infrastructure, or AMI. A separate petition for the cost recovery associated with full deployment of AMI was filed by NYSEG and RG&E in December 2016. In March, 2017, the NYPSC issued three separate REV-related orders. These orders created a series of filing requirements for NYSEG and RG&E beginning in March 2017 and extending through the end of 2018. The three orders involve: 1) modifications to the electric utilities' proposed interconnection earnings adjustment mechanism, or EAM, framework; 2) further DSIP requirements, including filing of an updated DSIP plan by mid-2018 and implementing two energy storage projects at each company by the end of 2018; and 3) Net Energy Metering Transition including implementation of Phase One of the Value of DER. In September 2017, the NYPSC issued another order related to the Value of DER, requiring tariff filings, changes to Standard Interconnection Requirements, and planning for the implementation of automated consolidated billing. In July 2018, NYSEG and RG&E submitted an updated DSIP plan consistent with guidance received from the NY Department of Public Service. As of the end of 2018, both NYSEG and RG&E had deployed two energy storage projects each, consistent with the March 2017 NYPSC order requirements. Phase Two of the Value of DER proceeding was established and several working group sessions occurred between the latter half of 2017 and all of 2018, primarily addressing issues pertaining to compensation for DER and rate design. In December 2018, the NYPSC Staff submitted whitepapers on standby and buyback service rate design, future value stack compensation and capacity value compensation. It is expected that the NYPSC will rule on the proposals set forth in the whitepapers in 2019. An additional staff whitepaper on Rate Design for Mass Market On-Site DER projects interconnected after January 1, 2020 is scheduled to be submitted by the NYPSC Staff in the first quarter of 2019.

State public utility commissions may also have jurisdiction over certain aspects of Renewables' competitive generation businesses. For example, in New York, certain Renewables' generation subsidiaries are electric corporations subject to "lightened" regulation by the NYPSC. As such, the NYPSC exercises its jurisdictional authority over certain non-rate aspects of the facilities, including safety, retirements and the issuance of debt secured by recourse to those generation assets located in New York. In Texas, Renewables' operations within the Electric Reliability Council of Texas, or ERCOT, footprint are not subject to regulation by FERC, as they are deemed to operate solely within the ERCOT market and not in interstate commerce. These operations are subject to regulation by the Public Utility Commission of Texas, or PUCT. In California, Renewables' generation subsidiaries are subject to regulation by the California Public Utilities Commission with regard to certain non-rate aspects of the facilities, including health and safety, outage reporting and other aspects of the facilities' operations.

Tax Cuts and Jobs Act

On December 22, 2017, the Tax Cuts and Jobs Act of 2017, or the Tax Act, was signed into law. The Tax Act significantly changed the federal taxation of business entities including, among other things, implementing a federal corporate tax rate decrease from 35% to 21% for tax years beginning after December 31, 2017. Reductions in accumulated deferred income tax balances due to the reduction in the corporate income tax rates will result in amounts previously and currently collected from utility customers for these deferred taxes to be refundable to such customers, generally through reductions in future rates. The NYPSC, MPUC, PURA, DPU and the FERC have instituted separate proceedings in New York, Maine, Connecticut, Massachusetts and the FERC, respectively, to review and address the implications of the Tax Act on the utilities. For more information on the Tax Act proceedings, see Note 5 of our consolidated financial statements included in Part II, Item 8, "Financial Statements and Supplementary Data" of this Annual Report on Form 10-K, which information is incorporated herein by reference.

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RTOs and ISOs

Networks' regulated electric utilities in New York, Connecticut and Maine, as well as some of Renewables' generation fleet, operate in or have access to organized energy markets, known as RTOs or independent system operators, or ISOs, particularly NYISO and ISO-NE. Each organized market administers centralized bid-based energy, capacity and ancillary services markets pursuant to tariffs approved by the FERC, or in the case of ERCOT, market rules approved by the PUCT. These tariffs and rules dictate how the energy, capacity and ancillary service markets operate, how market participants bid, clear, are dispatched, make bilateral sales with one another, and how entities with market-based rates are compensated. Certain of these markets set prices, referred to as Locational Marginal Prices that reflect the value of energy, capacity or certain ancillary services, based upon geographic locations, transmission constraints and other factors. Each market is subject to market mitigation measures designed to limit the exercise of market power. Some markets limit the prices of the bidder based upon some level of cost justification. These market structures impact the bidding, operation, dispatch and sale of energy, capacity and ancillary services.

The RTOs and ISOs are also responsible for transmission planning and operations within their respective regions. Each of Networks' transmission-owning subsidiaries in New York, Connecticut and Maine has transferred operational control over certain of its electric transmission facilities to its respective ISOs, such as ISO-NE and NYISO.

New Renewable Source Generation

Under Connecticut Public Act 11-80, or PA, Connecticut electric utilities are required to enter into long-term contracts to purchase Connecticut Class I Renewable Energy Certificates, or RECs, from renewable generators located on customer premises. Under this program, UI is required to enter into contracts totaling approximately $200 million in commitments over approximately 21 years. The obligations will phase in over a six-year solicitation period, and are expected to peak at an annual commitment level of about $13.6 million per year after all selected projects are online. Upon purchase, UI accounts for the RECs as inventory. UI expects to partially mitigate the cost of these contracts through the resale of the RECs. PA 11-80 provides that the remaining costs (and any benefits) of these contracts, including any gain or loss resulting from the resale of the RECs, are fully recoverable from (or credited to) customers through electric rates. PA 17-144 and PA18-50 added seventh and eighth years and up to $48 million in additional commitments by UI to the program.

On October 23, 2013, PURA approved UI's renewable connections program filed in accordance with PA 11-80, pursuant to which UI has developed 10 MW of renewable generation. The costs for this program will be recovered on a cost of service basis. PURA established a base ROE to be calculated as the greater of: (A) the current UI authorized distribution ROE (currently 9.10%) plus 25 basis points and (B) the current authorized distribution ROE for The Connecticut Light and Power Company, (currently 9.25%), less target equivalent market revenues (reflected as 25 basis points). In addition, UI will retain a percentage of the market revenues from the project, which percentage is expected to equate to approximately 25 basis points on a levelized basis over the life of the project. The cost of this program, a 2.8 MW fuel cell facility in New Haven, solar photovoltaic and fuel cell facilities totaling 5 MW in Bridgeport and a 2.2 MW fuel cell facility in Woodbridge, all of which are now operational, was $41.5 million.

Pursuant to Connecticut statute, in January 2017, UI entered into a master agreement with the Connecticut Green Bank to procure Connecticut Class I RECs produced by residential solar installations in 15-year tranches, with a final tranche to commence no later than 2022. UI's contractual obligation is to procure 20% of RECs produced by about 255 MW of residential solar installations. Connecticut statutes provide that the net costs (and any benefits) of these contracts, including any gain or loss resulting from the resale of the RECs, are fully recoverable from (or credited to) customers through electric rates.

On May 25, 2017, UI entered into six 20-year power purchase agreements, or PPAs, totaling approximately 32 MW with developers of wind and solar generation. These PPAs originated from a three-state Clean Energy RFP, and were entered into pursuant to PA 13-303 which provides that the net costs of the PPAs are recoverable through electric rates. The PPAs were approved by PURA on September 13, 2017.

On June 20, 2017, UI entered into twenty-two 20-year PPAs totaling approximately 72 MW with developers of wind and solar generation. These PPAs originated from an RFP issued by the Connecticut Department of Energy and Environmental Protection, or DEEP, under PA 15-107 1(b), which provides that the net costs of the PPAs are recoverable through electric rates. The PPAs were approved by PURA on September 7, 2017. One contract was terminated on October 24, 2017, resulting in UI having twenty-one remaining contracts from this solicitation totaling approximately 70 MW.

In October of 2018, UI entered into five PPAs totaling approximately 50 MW from developers of offshore wind and fuel cell generation. These PPAs originated from an RFP issued by DEEP, under PA 17-144 which provides that the net costs of the PPAs are recoverable through electric rates. The PPAs were filed for PURA approval on October 25, 2018. On December 19, 2018, PURA issued its final decision approving the five PPAs and approved UI's use of the non by-passable federally mandated congestion charges for all customers to recover the net costs of the PPAs.

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On December 28, 2018, DEEP issued a directive to UI to negotiate and enter into PPAs with 12 projects, totaling approximately 12 million MWh, which were selected as a result of the Zero Carbon RFP issued by DEEP pursuant to PA 17-3, which provides that the net costs of the PPAs are recoverable through electric rates. One of the selected projects is the Millstone nuclear facility located in Waterford, Connecticut and owned by Dominion Energy, Inc. DEEP's directive provides that UI should file these PPAs for PURA by March 31, 2019. UI has not yet entered into any of these PPAs.

Under Maine law 35-A M.R.S.A §§ 3210-C, 3210-D, the MPUC is authorized to conduct periodic RFPs seeking long-term supplies of energy, capacity or RECs, from qualifying resources. The MPUC is further authorized to order Maine transmission and distribution utilities to enter into contracts with sellers selected from the MPUC's competitive solicitation process. Pursuant to a MPUC Order dated October 8, 2009, CMP entered into a 20-year agreement with Evergreen Wind Power III, LLC, on March 31, 2010, to purchase capacity and energy from Evergreen's 60 MW Rollins wind farm in Penobscot County, Maine. CMP's purchase obligations under the Rollins contract are approximately $7 million per year. In accordance with subsequent MPUC orders, CMP periodically auctions the purchased Rollins energy to wholesale buyers in the New England regional market. Under applicable law, CMP is assured recovery of any differences between power purchase costs and achieved market revenues through a reconcilable component of its retail distribution rates. Although the MPUC has conducted multiple requests for proposals under M.R.S.A §3210-C and has tentatively accepted long-term proposals from other sellers, these selections have not yet resulted in additional currently effective contracts with CMP.

Pursuant to Maine Law 35-A M.R.S.A §3604, the MPUC is authorized to direct Maine transmission and distribution utilities to enter into long-term contracts to purchase capacity, energy and renewable energy credits from up to 50 MW of qualifying Community-Based Renewable Energy facilities. In accordance with §3604, on October 22, 2016, CMP commenced purchases from Athens Energy LLC for a contract term of three years. CMP purchase obligations under the Athens contract are approximately $6 million per year. Under the provisions of §3604 and MPUC implementing orders, CMP will periodically auction the purchased products from Athens for resale to wholesale market purchasers and recover any differences between power purchase costs and resale revenues through a reconcilable component of its retail distribution rates. Although the MPUC has certified several additional Community - Based Renewable Energy generation projects under §3604 and authorized similar PPAs between these sellers and CMP, no additional facilities have advanced to operational status.

Environmental, Health and Safety

Permitting and Other Regulatory Requirements

Networks. Similar to Renewables, Networks' distribution utilities in New York, Maine, Connecticut and Massachusetts are subject to various federal, state and local laws and regulations in connection with the environmental, health and safety effects of its operations. The distribution utilities of Networks are subject to regulation by the applicable state public utility commission with respect to the siting and approval of electric transmission lines, with the exception of UI, the siting of whose transmission lines is subject to the jurisdiction of the CSC, and with respect to pipeline safety regulations for intrastate gas pipeline operators.

The National Environmental Policy Act, or NEPA, requires that detailed statements of the environmental effect of Networks' facilities be prepared in connection with the issuance of various federal permits and licenses. Federal agencies are required by NEPA to make an independent environmental evaluation of the facilities as part of their actions during proceedings with respect to these permits and licenses.

Under the federal Toxic Substances Control Act, the Environmental Protection Agency, or EPA, has issued regulations that control the use and disposal of Polychlorinated Biphenyls, or PCBs. PCBs were widely used as insulating fluids in many electric utility transformers and capacitors manufactured before the federal Toxic Substances Control Act prohibited any further manufacture of such PCB equipment. Fluids with a concentration of PCBs higher than 500 parts per million and materials (such as electrical capacitors) that contain such fluids must be disposed of through burning in high temperature incinerators approved by the EPA. For our gas distribution companies, PCBs are sometimes found in the distribution system. Networks tests any distribution piping being removed or repaired for the presence of PCBs and complies with relevant disposal procedures, as needed.

Under the federal Resource Conservation and Recovery Act, or RCRA, the generation, transportation, treatment, storage and disposal of hazardous wastes are subject to regulations adopted by the EPA. All of Networks' subsidiaries have complied with the notification and application requirements of present regulations, and the procedures by which the subsidiaries handle, store, treat and dispose of hazardous waste products comply with these regulations.

Prior to the last quarter of the 20th century, when environmental best practices laws and regulations were implemented, utility companies, including Networks' subsidiaries, often disposed of residues from operations by depositing or burying them on-site or disposing of them at off-site landfills or other facilities. Typical materials disposed of include coal gasification byproducts, fuel oils, ash, and other materials that might contain PCBs or that otherwise might be hazardous. In recent years it has been determined that such disposal practices, under certain circumstances, can cause groundwater contamination.

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Renewables. Renewables' projects are subject to a variety of state environmental review and permitting requirements. Many states where Renewables' projects are located, or may be located in the future, have laws that require state agencies to evaluate a broad array of environmental impacts before granting state permits. Generally, state agencies evaluate similar issues as federal agencies, including the project's impact on wildlife, historic sites, aesthetics, wetlands and water resources, agricultural operations and scenic areas. States may impose different or additional monitoring or mitigation requirements than federal agencies. Additional approvals may be required for specific aspects of a project, such as stream or wetland crossings, impacts to designated significant wildlife habitats, storm water management and highway department authorizations for oversize loads and state road closings during construction. Permitting requirements related to transmission lines may be required in certain cases.

Renewables' projects also are subject to local environmental and regulatory requirements, including county and municipal land use, zoning, building and transportation requirements. Permitting at the local municipal or county level often consists of obtaining a special use or conditional use permit under a land use ordinance or code, or, in some cases, rezoning is required for a project. Obtaining a permit usually requires that Renewables demonstrates that the project will conform to certain development standards specified under the ordinance so that the project is compatible with existing land uses and protects natural and human environments. Local or state regulatory agencies may require modeling and measurement of permissible sound levels in connection with the permitting and approval of Renewables' projects. Local or state agencies also may require Renewables to develop decommissioning plans for dismantling the project at the end of its functional life and establish financial assurances for carrying out the decommissioning plan.

In addition to permits required under state and local laws, Renewables' projects may be subject to permitting and other regulatory requirements arising under federal law. For example, if a project is located near wetlands, a permit may be required from the U.S. Army Corps of Engineers, or Army Corps, with respect to the discharge of dredged or fill material into the waters of the United States. The Army Corps may also require the mitigation of any loss of wetland functions and values that accompanies the project's activities. In addition, Renewables may be required to obtain permits under the federal Clean Water Act for water discharges, such as storm water runoff associated with construction activities, and to follow a variety of best management practices to ensure that water quality is protected and impacts are minimized. Renewables' projects also may be located, or partially located, on lands administered by the U.S. Bureau of Land Management, or BLM. Therefore, Renewables may be required to obtain and maintain BLM right-of-way grants for access to, or operations on, such lands. To obtain and maintain a grant, there must be environmental reviews conducted, a plan of development implemented and a demonstration that there has been compliance with the plan to protect the environment, including measures to protect biological, archeological and cultural resources encountered on the grant.

Renewables' projects may be subject to requirements pursuant to the Endangered Species Act, or ESA, and analogous state laws. For example, federal agencies granting permits for Renewables' projects consider the impact on endangered and threatened species and their habitat under the ESA, which prohibits and imposes stringent penalties for harming endangered or threatened species and their habitats. Renewables' projects also need to consider the Migratory Bird Treaty Act, or MBTA, and the Bald and Golden Eagle Protection Act, or BGEPA, which protect migratory birds and bald and golden eagles and are administered by the U.S. Fish and Wildlife Service. Criminal liability can result from violations of the MBTA and the BGEPA, even for incidental takings of migratory birds. For example, the U.S. Department of Justice, or DOJ, has recently entered into settlements with two large wind farm operators, pursuant to which those operators pled guilty to criminal violations of the MBTA and agreed to substantial penalties and mitigation measures.

In addition to regulations, voluntary wind turbine siting guidelines established by the U.S. Fish and Wildlife Service set forth siting, monitoring and coordination protocols that are designed to support wind development in the United States while also protecting both birds and bats and their habitats. These guidelines include provisions for specific monitoring and study conditions which need to be met in order for projects to be in adherence with these voluntary guidelines. Most states also have similar laws. Because the operation of wind turbines may result in injury or fatalities to birds and bats, federal and state agencies often recommend or require that Renewables conduct avian and bat risk assessments prior to issuing permits for its projects. They may also require ongoing monitoring or mitigation activities as a condition to approving a project.

Global Climate Change and Greenhouse Gas Emission Issues

Global climate change and greenhouse gas emission issues continue to receive an increased focus from state governments and the federal government. In November 2010, the EPA published final rules for monitoring and reporting requirements for petroleum and natural gas systems that emit greenhouse gases under the authority of the Clean Air Act beginning in 2011. These regulations apply to facilities that emit greenhouse gases above the threshold level of 25,000 metric tons equivalent per year. SCG and CNG both exceed this threshold and are subject to reporting requirements. The liquefied natural gas, or LNG, facilities owned and/or contracted by SCG and CNG are also subject to the monitoring and reporting requirements under the regulations. Similarly, Networks is subject to reporting requirements under provisions of the greenhouse gases regulations, which regulate electric transmission and distribution equipment that emit sulfur hexafluoride.

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We are continuously evaluating the regulatory risks and regulatory uncertainty presented by climate change and greenhouse gas emission. Such concerns could potentially lead to additional rules and regulations that impact how we operate our business. We expect that any costs of these rules and regulations would be recovered from customers.

OSHA and Certain Other Federal Safety Laws

We are subject to the requirements of the federal Occupational Safety and Health Act, as amended, or OSHA, and comparable state laws that regulate the protection of the health and safety of employees. In addition, OSHA's hazard communication standard and standards administered by other federal as well as state agencies, including the Emergency Planning and Community Right to Know Act and the related implementing regulations require that information be maintained about hazardous materials used or produced in operations of our subsidiaries and that this information be provided to employees, state and local government authorities and citizens.

Management, Disposal and Remediation of Hazardous Substances

We own or lease real property and may be subject to federal, state and local requirements regarding the storage, use, transportation and disposal of petroleum products and toxic or hazardous substances, including spill prevention, control and counter-measure requirements. Project properties and materials stored or disposed thereon may be subject to the federal RCRA, the Toxic Substances Control Act, the Comprehensive Environmental Response, Compensation and Liability Act and analogous state laws. If any of our owned or leased properties are contaminated, whether during or prior to our ownership or operation, we could be responsible for the costs of investigation and cleanup and for any related liabilities, including claims for damage to property, persons or natural resources. Such responsibility may arise even if we were not at fault and did not cause the contamination. In addition, waste generated by our operating subsidiaries is at times sent to third party disposal facilities. If such facilities become contaminated, the operating subsidiary and any other persons who arranged for the disposal or treatment of hazardous substances at those sites may be jointly and severally responsible for the costs of investigation and remediation, as well as for any claims of damages to third parties, their property or natural resources.

On September 16, 2015, UI signed a partial consent order that was then issued by DEEP in August 2016 related to the investigation and remediation of the English Station site. The consent order requires UI to investigate and remediate certain environmental conditions within the perimeter of the English Station site. Under the consent order, to the extent that the cost of this investigation and remediation is less than $30 million, UI is required to remit to the State of Connecticut the difference between such cost and $30 million to be applied to a public purpose as determined in the discretion of the Governor of the State of Connecticut, the Attorney General of the State of Connecticut and the Commissioner of DEEP. However, UI is obligated to comply with the consent order even if the cost of such compliance exceeds $30 million. The state may discuss options with UI on recovering or funding any cost above $30 million, such as through public funding or recovery from third parties, however it is not bound to agree to or support any means of recovery or funding.

Customers

Networks delivers natural gas and electricity to residential, commercial and institutional customers through its regulated utilities in New York, Maine, Connecticut and Massachusetts. Networks' customer payment terms are regulated by the states of New York, with respect to NYSEG and RG&E; Maine, with respect to CMP and MNG; Connecticut, with respect to UI, SCG and CNG; and Massachusetts, with respect to BGC, and each of the regulated utilities must provide extended payment arrangements to customers for past due balances. See "—Networks" for more information relating to the customers of Networks.

Renewables sells the majority of its output to large investor-owned utilities, public utilities and other credit-worthy entities. Additionally, Renewables generates and provides power, among other services, to federal and state agencies, institutional retail and joint action agencies. Offtakers typically purchase renewable energy from Renewables through long-term PPAs, allowing Renewables to limit its exposure to market volatility. Approximately 71% of Renewables' wind generating capacity is fully committed under PPAs as of December 31, 2018, with an average duration of 8.5 years. Renewables also delivers thermal output to wholesale customers in the Western United States.

Competition

Networks' regulated public utilities in New York, Maine, Connecticut and Massachusetts do not generally face competition from other companies that transmit and distribute electricity and natural gas. However, demand for electricity and natural gas may be negatively impacted by federal and state legislation mandating that certain percentages of power delivered to end users be produced from renewable resources, such as wind, thermal and solar energy.

Networks faces competition from self-contained micro-grids that integrate renewable energy sources in the areas served by Networks. However, there has been limited development of these micro-grids in Networks' service areas to date, and Networks

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expects that growth in distributed generation of renewable energy will continue due to financial incentives being provided by federal and state legislation. Networks has experienced significant growth in alternative distribution sources of generation on its network over the past ten years, with approximately 90% of the growth coming from solar photovoltaic facilities.

Renewables has competitive advantages, including a robust development pipeline, a management team with extensive experience, strong relationships with suppliers and clients, expert regulatory knowledge and brand awareness. However, Renewables faces competition throughout the life cycles of its energy facilities, including during the development phase, in the identification and procurement of suitable sites with high wind resource availability, grid connection capacity and land availability. Renewables also competes with other suppliers in securing long-term PPAs with power purchasers and participates in competitive bilateral and organized energy markets with other energy sources for power that is not sold under PPAs. Competitive conditions may be substantially affected by various forms of energy legislation and regulation considered from time to time by federal, state and local legislatures and administrative agencies.

Properties

Networks

The following table sets forth certain information relating to Networks' electricity generation facilities and their respective locations, type and installed capacity as of December 31, 2018. Unless noted otherwise, Networks owns each of these facilities and all our generating properties are regulated under cost of service regulation.

Operating Company	Facility Location	Facility Type	Installed Capacity (in MW)	Year(s) Commissioned
NYSEG	Newcomb, NY	Diesel Turbine	4.3	1967, 2017
NYSEG	Auburn, NY(1)	Natural Gas Turbine	7.4	2000
NYSEG	Eastern New York (6 locations)	Hydroelectric	61.4	1921—1983
RG&E	Rochester, NY (3 locations)	Hydroelectric	57.1	1917—1960

(1) The Auburn, NY natural gas turbine generating unit is leased.

UI is also party to a 50-50 joint venture with certain affiliates of Clearway Energy, Inc. in GCE Holding LLC, whose wholly owned subsidiary, GenConn, operates two 188 MW peaking generation plants, GenConn Devon and GenConn Middletown, in Connecticut.

The following table sets forth certain operating data relating to the electricity transmission and distribution activities of each of Networks' regulated utilities as of December 31, 2018.

Utility	State	Substations	Transmission Lines (in miles)	Overhead Distribution Lines (in pole miles)	Underground Lines (in miles)	Total Distribution (in miles)	Electricity Customers
NYSEG	New York	430	4,515	32,243	2,860	35,103	898,685
RG&E	New York	155	1,094	5,918	2,894	8,812	381,377
CMP	Maine	208	2,914	21,733	1,510	23,243	627,114
UI	Connecticut	28	139	3,283	212	3,495	336,394

The following table sets forth certain operating data relating to the natural gas transmission and distribution activities of each of Networks' regulated utilities, as of December 31, 2018:

Utility	State	Natural Gas Customers	Transmission Pipeline (in miles)	Distribution Pipeline (in miles)
NYSEG	New York	267,893	20	8,339
RG&E	New York	315,684	105	8,990
MNG	Maine	4,803	2	211
SCG	Connecticut	198,966	—	2,441
CNG	Connecticut	177,660	—	2,167
BGC	Massachusetts	40,381	—	761

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CNG owns and operates a LNG plant which can store up to 1.2 Bcf of natural gas and can vaporize up to 110,000 Mcf per day of LNG to meet peak demand. SCG has contract rights to and operates a similar plant, which is owned by an affiliate, that can also store up to 1.2 Bcf of natural gas. SCG's LNG facilities can vaporize up to 82,000 Mcf per day of LNG to meet peak demand. SCG and CNG have also contracted for 20.6 Bcf of storage with a maximum peak day delivery capability of 210,000 Mcf per day.

Renewables

The following table sets forth Renewables' portfolio of wind projects as of December 31, 2018. Unless noted otherwise, Renewables wholly owns each of these facilities.

Location	Wind Project	Turbines	Total Installed Capacity (MW)	Commercial Operation Date	North American Electric Reliability Corporation (NERC) Region
Arizona	Dry Lake I	30 (Suzlon S88, 2.1 MW)	63	2009	WECC
	Dry Lake II	31 (Suzlon, 2.1 MW)	65	2010	WECC
California	Dillon	45 (Mitsubishi, 1 MW)	45	2008	WECC
	Manzana	126 (GE, 1.5 MW)	189	2011	WECC
	Mountain View III	34 (Vestas V47, 0.66 MW)	22	2003	WECC
	Phoenix Wind Power	3 (Neg Micon (Vestas), 0.66 MW)	2	1999	WECC
	Shiloh	100 (GE, 1.5 MW)	150	2006	WECC
	Tule	57 (GE, 2.3 MW)	131	2017	WECC
Colorado	Colorado Green	108 (GE, 1.5 MW)	162	2003	WECC
	Twin Buttes	50 (GE, 1.5 MW)	75	2007	WECC
	Twin Buttes II	30 (Gamesa G114, 2.10 MW); 6 (Gamesa G114, 2.0 MW)	75	2017	WECC
Illinois	Providence Heights	36 (Gamesa G87, 2.0 MW)	72	2008	MRO
	Streator Cayuga Ridge South	150 (Gamesa, 2.0MW)	300	2010	SERC
Iowa	Barton	80 (Gamesa, 2.0 MW)	160	2009	MRO
	Flying Cloud	29 (GE, 1.5 MW)	44	2004	MRO
	New Harvest	50 (Gamesa G87, 2.0W)	100	2012	MRO
	Top of Iowa II	40 (Gamesa G87, 2.0 MW)	80	2008	MRO
	Winnebago I	10 (Gamesa G83, 2.0 MW)	20	2008	MRO
Kansas	Elk River	100 (GE, 1.5 MW)	150	2005	MRO
Massachusetts	Hoosac	19 (GE, 1.5 MW)	29	2012	NPCC
Minnesota	Elm Creek	66 (GE, 1.5 MW)	99	2008	MRO
	MinnDakota	100 (GE, 1.5 MW)	150	2008	MRO
	Trimont	67 (GE, 1.5 MW)	101	2005	MRO
	Elm Creek II	62 (Mitsubishi, 2.4)	149	2010	MRO
	Moraine I	34 (GE, 1.5 MW)	51	2003	MRO
	Moraine II	33 (GE, 1.5 MW)	50	2009	MRO
Missouri	Farmers City	73 (Gamesa G87, 2.0 MW)	146	2009	MRO
New Hampshire	Groton	24 (Gamesa G87, 2.0 MW)	48	2012	NPCC
	Lempster	12 (Gamesa, 2 MW)	24	2008	NPCC
New Mexico	El Cabo	140 (Gamesa G114, 2.1 MW); 2 (Gamesa G114, 2.0 MW)	298	2017	WECC
New York	Hardscrabble	37 (Gamesa G90, 2MW)	74	2011	NPCC
	Maple Ridge I(1)	70 (Vestas V82, 1.65 MW)	116	2006	NPCC
	Maple Ridge II(1)	27 (Vestas V82, 1.65 MW)	45	2006	NPCC
North Carolina	Amazon Wind Farm US - East	104 (Gamesa G114, 2.0 MW)	208	2016	SERC
North Dakota	Rugby	71 (Suzlon S88, 2.1 MW)	149	2009	MRO
Ohio	Blue Creek	152 (Gamesa G90 – 2.0 MW)	304	2012	RFC
Oregon	Hay Canyon	48 (Suzlon S88, 2.1 MW)	101	2009	WECC
	Klondike I	16 (GE, 1.5 S – 1.5 MW)	24	2001	WECC
	Klondike II	50 (GE, 1.5 S – 1.5 MW)	75	2005	WECC

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Location	Wind Project	Turbines	Total Installed Capacity (MW)	Commercial Operation Date	North American Electric Reliability Corporation (NERC) Region
	Klondike III	44 (Siemens, 2.3 MW); 80 (GE, 1.5 SLE, 1.5 MW); 1 (Mitsubishi, 2.4 MW)	224	2007	WECC
	Klondike IIIa	51 (GE, 1.5 MW)	77	2008	WECC
	Leaning Juniper II	74 (GE, 1.5 MW); 43 (Suzlon, 2.1 MW)	201	2011	WECC
	Pebble Springs	47 (Suzlon S88/2100, 2.1 MW)	99	2009	WECC
	Star Point	47 (Suzlon, 2.1 MW)	99	2010	WECC
Pennsylvania	Casselman	23 (GE, 1.5 MW)	35	2008	RFC
	Locust Ridge I	13 (Gamesa G87, 2.0)	26	2006	RFC
	Locust Ridge II	51 (Gamesa G83, 2.0 MW)	102	2009	RFC
	South Chestnut	23 (Gamesa, 2.0 MW)	46	2012	RFC
South Dakota	Buffalo Ridge I	24 (Suzlon, 2.1 MW)	50	2009	MRO
	Buffalo Ridge II	105 (Gamesa G87, 2.0 MW)	210	2010	MRO
Texas	Baffin	101 (Gamesa G97, 2.0 MW)	202	2015	TRE
	Barton Chapel	60 (Gamesa, 2.0 MW)	120	2009	TRE
	Peñascal I	84 (Mitsubishi, 2.4 MW)	202	2009	TRE
	Peñascal II	84 (Mitsubishi, 2.4 MW)	199	2010	TRE
Vermont	Deerfield	7 (Gamesa G87, 2.0 MW); 8 (Gamesa G97, 2.0 MW)	30	2018	NPCC
Washington	Big Horn I	133 (GE, 1.5 MW)	200	2006	WECC
	Big Horn II	25 (Gamesa, 2.0 MW)	50	2010	WECC
	Juniper Canyon	63 (Mitsubishi, 2.4 MW)	151	2011	WECC

(1) Jointly owned with Horizon Wind Energy; capacity amounts represent only Renewables' share of the wind farm.

Additionally, set forth below are the solar and thermal facilities operated by Renewables as of December 31, 2018. Unless otherwise noted, Renewables owns each such facility.

Facility	Location	Type of Facility	Installed Capacity (MW)	Commercial Operation Date
Copper Crossing Solar Ranch	Pinal County, Arizona	Solar	20	2011
San Luis Valley Solar Ranch (1)	Alamosa County, Colorado	Solar	30	2012
Gala Solar	Deschutes County, Oregon	Solar	56	2017
Klamath Cogeneration	Klamath Falls, Oregon	Thermal	536	2001
Klamath Peakers	Klamath Falls, Oregon	Thermal	100	2009
Wy'East Solar	Sherman County, Oregon	Solar	10	2018

(1) Operated pursuant to a sale-and-leaseback agreement.

Infrastructure Protection and Cyber Security Measures

We have risk based security measures in place designed to protect our facilities, assets and cyber-infrastructure, such as our transmission and distribution system.

While we have not had any significant security breaches, a physical security intrusion could potentially lead to theft and the release of critical operating information. In addition to physical security intrusions, a cyber breach could potentially lead to theft and the release of critical operating information or confidential customer information.

To manage these operational risks, pursuant to the cybersecurity risk policy and corporate security policy approved by the AVANGRID board, we have implemented cyber and physical security measures and continue to strengthen our security posture by improving and expanding our physical and cyber security capabilities to protect critical assets.

In an effort to reduce our vulnerability to cyber attacks, the AVANGRID board appointed a senior officer responsible for security (chief security officer) and we have established a dedicated corporate security office, responsible for improving and

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coordinating security and NERC compliance across the company. We have adopted a comprehensive company-wide physical and cyber security program, which is supported by a governance program to manage, oversee and assist us in meeting our corporate, legal and regulatory responsibilities with regard to the protection of our cyber, physical and information assets.

However, as threats evolve and grow increasingly more sophisticated, we cannot ensure that a potential security breach may not occur or quantify the potential impact of such an event. We continue to invest in technology, processes, security measures and services to predict, detect, mitigate and protect our assets, both physical and cyber. These investments include upgrades to our cyber-infrastructure assets, network architecture and physical security measures, and compliance with emerging industry best practice and regulation.

Employees

As of December 31, 2018, we had 6,449 employees excluding twelve international assignees. Of these 6,449 employees, 48.3% are represented by a union. The following table provides an overview of the number of employees at each business segment as of December 31, 2018:

Business Segment	Number of Employees (excluding International Assignees)	% of Union Workforce Subject to Collective Bargaining Agreement
Networks	5,325	58.4%
Renewables	831	—
Corporate	293	—
Total	6,449	48.3%

We have not experienced any work stoppages in the last five years and enjoy good relations with our labor unions. Virtually all of our employees work full-time.

Available Information

Copies of our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and any amendments to these reports filed with the SEC may be requested, viewed or downloaded on-line, free of charge, on our website www.avangrid.com. Printed copies of these reports may be obtained free of charge by writing to our Investor Relations Department at 180 Marsh Hill Road, Orange, Connecticut, 06477.

Item 1A. Risk Factors

Risks Relating to Our Regulatory Environment

Our businesses are subject to substantial regulation by federal, state and local regulatory agencies and our businesses, results of operations and prospects may be materially adversely affected by legislative or regulatory changes, as well as liability under, or any future inability to comply with, existing or future regulations or requirements.

The operations of our businesses are subject to, and influenced by, complex and comprehensive federal, state and local regulation and legislation, including regulations promulgated by state utility commissions and the FERC. This extensive regulatory and legislative framework, portions of which are more specifically identified in the following risk factors, regulates, among other things and to varying degrees, the industries in which our subsidiaries operate, our business segments, rates for our products and services, financings, capital structures, cost structures, construction, environmental obligations (including in respect of, among others, air emissions, water consumption, water discharge, protections for wildlife and humans, nuisance prohibitions and allowances, and regulation of gas infrastructure operations, and associated environmental and facility permitting), development and operation of electric generation facilities and electric and gas transmission and distribution facilities, natural gas transportation, processing and storage facilities, acquisition, disposal, depreciation and amortization of facilities and other assets, service reliability, hedging, derivatives transactions and commodities trading.

In our business planning and in the management of our subsidiaries' operations, we must address the effects of regulation on our businesses, including the significant and increasing compliance costs imposed on our operations as a result of such regulation, and any inability or failure to do so timely and adequately could have a material adverse effect on our businesses, results of operations, financial condition and cash flows. The federal, state and local political and economic environment has had, and may in the future have, an adverse effect on regulatory decisions with negative consequences for our businesses. These decisions may require, for example, our businesses to cancel or delay planned development activities, to reduce or delay other planned capital expenditures or investments or otherwise incur costs that we may not be able to recover through rates, any of which could have

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a material adverse effect on the business, results of operations, financial condition and cash flows of our businesses. In addition, changes in the nature of the regulation of our business could have a material adverse effect on our business, results of operations, financial condition and cash flows. We are unable to predict future legislative or regulatory changes, initiatives or interpretations, and there can be no assurance that we will be able to respond adequately or sufficiently quickly to such changes, although any such changes, initiatives or interpretations may increase costs and competitive pressures on us, which could have a material adverse effect on our business, results of operations, financial condition and cash flows. There can be no assurance that we will be able to respond adequately or sufficiently quickly to such rules and developments, or to any other changes that reverse or restrict the competitive restructuring of the energy industry in those jurisdictions in which such restructuring has occurred. Any of these events could have a material adverse effect on our business, results of operations, financial condition and cash flows.

Our businesses are subject to the jurisdiction of various federal, state and local regulatory agencies including, but not limited to, the FERC, the CFTC, the DOE and the EPA. Further, Networks' regulated utilities in New York, Maine, Connecticut and Massachusetts are subject to the jurisdiction of the NYPSC, the MPUC, the New York State Department of Environmental Conservation, the Maine Department of Environmental Protection, the PURA, the CSC, the DEEP and the DPU. These regulatory agencies cover a wide range of business activities, including, among other items, the retail and wholesale rates for electric energy, capacity and ancillary services, and for the transmission and distribution of these products, the costs charged to Networks' customers through tariffs including cost recovery clauses, the terms and conditions of Networks' services, procurement of electricity for Networks' customers, issuances of securities, the provision of services by affiliates and the allocation of those service costs, certain accounting matters, and certain aspects of the siting, construction and transmission and distribution systems. The FERC has the authority to impose penalties, which could be substantial, for violations of the FPA, the NGA, or related rules, including reliability and cyber security rules as described in further detail below. The Financial Accounting Standards Board, or FASB, or the SEC, may enact new accounting standards that could impact the way we are required to record revenue, expenses, assets and liabilities. Certain regulatory agencies have the authority to review and disallow recovery of costs that they consider excessive or imprudently incurred and to determine the level of return that our businesses are permitted to earn on invested capital.

The regulatory process, which may be adversely affected by the political, regulatory and economic environment in New York, Maine, Connecticut and Massachusetts, as applicable, may limit our ability to increase earnings and does not provide any assurance as to achievement of authorized or other earnings levels. The disallowance of the recovery of costs incurred by us or a decrease in the rate of return that we are permitted to earn on our invested capital could have a material adverse effect on our business, results of operation, financial condition and cash flows. Certain of these regulatory agencies also have the authority to audit the management and operations of our businesses in New York, Maine, Connecticut and Massachusetts and require or recommend operational changes. Such audits and post-audit work requires the attention of our management and employees and may divert their attention from other regulatory, operational or financial matters.

As previously described, we are subject to a variety of federal, state, local laws and regulations. The introduction of new laws or regulations or changes in existing laws or regulations, or the interpretation thereof, may alter the environment in which we do business and could increase the costs of doing business for us or restrict our actions and adversely affect our financial condition, operating results and cash flows.

Any failure to meet the reliability standards mandated by NERC could have a material adverse effect on our business, results of operation, financial condition and cash flows.

As a result of the EPAct 2005, owners, operators and users of bulk electric systems are subject to mandatory reliability standards developed by NERC and are subject to oversight by the FERC in the U.S. and governmental authorities in Canada. The standards are based on the functions that need to be performed to ensure that the bulk electric system operates reliably. Networks' and Renewables' businesses have been, and will continue to be, subject to routine audits and monitoring with respect to compliance with applicable NERC reliability standards, including standards approved by the FERC that could result in an increase in the number of assets (including cyber-security assets) designated as "BES Cyber Systems," which would subject such assets to NERC cyber-security standards. The implementation of the Balancing Authority registration for the Northwest Renewable assets in 2018 has brought increased NERC compliance requirements and additional compliance risks including increase in assets, budgets and experienced resources. This new registration as a Balancing Authority also changes the NERC audit cycle from six years down to three years for Renewables and may impact other AVANGRID NERC registrations at Networks. NERC and the FERC can be expected to continue to refine existing reliability standards as well as develop and adopt new reliability standards. Compliance with modified or new reliability standards may subject Networks' and/or Renewables' businesses to new requirements resulting in higher operating costs and/or increased capital expenditures. If Networks' and/or Renewables' businesses were found not to be in compliance with the mandatory reliability standards, it could be subject to penalties of up to $1.3 million per day per violation. Both the costs of regulatory compliance and the costs that may be imposed as a result of any actual or alleged compliance failures could have a material adverse effect on our business, results of operation, financial condition, reputation and prospects. UI completed an onsite NERC CIP audit in 2018; an offsite audit is expected to conclude in early 2019.

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The NYPSC has initiated a proceeding that may result in the alteration of the public utility model in New York State and could materially and adversely impact our business and operations in New York State.

In April 2014, the NYPSC commenced a proceeding titled REV, which is an initiative to reform New York State's energy industry and regulatory practices. REV has followed several simultaneous paths, including a formal Track 1 dealing with market design and platform technology and Track 2 dealing with regulatory reform. REV's objectives include the promotion of more efficient use of energy, increased utilization of renewable energy resources such as wind and solar in support of New York State's renewable energy goals and wider deployment of "distributed" energy resources, such as micro grids, on-site power supplies, and storage. Track 1 of the REV initiative involves the examination of the role that distribution utilities will have in the enablement of market-based deployment of DER to promote load management, system efficiency and peak load reductions. NYSEG and RG&E are participating in all aspects of the REV initiative with other New York utilities as well as providing their unique perspective. NYPSC staff has conducted public statement hearings across New York State regarding REV.

Various other REV-related proceedings have also been initiated by the NYPSC, each of which is following its own schedule. These proceedings include the Clean Energy Fund, Demand Response Tariffs, Community Choice Aggregation, Large Scale Renewables and Community Distributed Generation. As part of this initiative, NYSEG and RG&E entered into agreements with New York State Energy Research and Development Authority, or NYSERDA, for RECs and Zero-Emission Credits, or ZECs in 2017.

Track 2 of the REV initiative is also underway, and through a NYPSC Staff Whitepaper review process, is examining potential changes in current regulatory, tariff, market design and incentive structures which could better align utility interests with achieving New York State and NYPSC policy objectives. New York utilities will also be addressing related regulatory issues in their individual rate cases. A Track 2 order was issued in May 2016, and includes guidance related to the potential for EAMs, platform service revenues, innovative rate designs and data utilization and security. The companies, in December 2016, filed a proposal for the implementation of EAMs in the areas of system efficiency, energy efficiency, interconnections and clean air. NYSEG and RG&E continue to engage through a number of working groups that have been established to assist the implementation of the DSIP items and delivering the Value of DER/Net Metering changes.

We are not able to predict the outcome of the REV proceeding or its impact on our business, results of operations, financial condition and cash flows. While the end result of the REV process at the NYPSC remains unclear, it could alter the utility model in New York in a manner that could create material adverse impacts on our businesses and operations in New York.

Changes in regulatory and/or legislative policy could negatively impact Networks' transmission planning and cost allocation.

The existing FERC-approved ISO-NE, transmission tariff allocates the costs of transmission facilities that provide regional benefits to all customers of participating transmission-owning utilities in New England. As new investment in regional transmission infrastructure occurs in any one state, its cost is shared across New England in accordance with a FERC-approved formula found in the transmission tariff. Participating New England transmission owners' agreement to this regional cost allocation is set forth in the transmission operating agreement. This agreement can be modified with the approval of a majority of the transmission-owning utilities and approval by the FERC. In addition, other parties, such as state regulators, may seek certain changes to the regional cost allocation formula, which could have adverse effects on the rates Networks' distribution companies in New England charge their retail customers. The FERC has found that the New England rate protocols lacked transparency and have established a hearing and settlement procedures. We cannot predict the outcome of this proceeding.

The FERC has issued rules requiring all RTOs and transmission owning utilities to make compliance changes to their tariffs and contracts in order to further encourage the construction of transmission for generation, including renewable generation. This compliance will require RTOs (such as ISO-NE and NYISO) and the transmission owners in New England and New York to develop methodologies that allow for regional planning and cost allocation for transmission projects chosen in the regional plan that are designed to meet public policy goals such as reducing greenhouse gas emissions or encouraging renewable generation. Such compliance may also allow non-incumbent utilities and other entities to participate in the planning and construction of new projects in Networks' service areas and regionally.

Changes in RTO tariffs, transmission owners' agreements or legislative policy, or implementation of these new FERC planning rules, could adversely affect our transmission planning, results of operations, financial condition and cash flows.

We are subject to numerous environmental laws, regulations and other standards, including rules and regulations with respect to climate change, which could result in capital expenditures, increased operating costs and various liabilities, and could require us to cancel or delay planned projects or limit or eliminate certain operations.

Our businesses are subject to environmental laws and regulations, including, but not limited to, extensive federal, state and local environmental statutes, rules and regulations relating to air quality, water quality and usage, climate change, emissions of

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greenhouse gases (including, but not limited to carbon dioxide), waste management, hazardous wastes (including the clean-up of former manufactured gas and electric generation facilities), marine, avian and other wildlife mortality and habitat protection, historical artifact preservation, natural resources and health and safety (including, but not limited to, electric and magnetic fields from power lines and substations, and ice throw, shadow flicker and noise related to wind turbines) that could, among other things, prevent or delay the development of power generation, power or natural gas transmission, or other infrastructure projects, restrict the output of some existing facilities, limit the availability and use of some fuels required for the production of electricity, require additional pollution control equipment, and otherwise increase costs, increase capital expenditures and limit or eliminate certain operations. There are significant capital, operating and other costs associated with compliance with these environmental statutes, rules and regulations, and those costs could be even more significant in the future as a result of new legislation. For example, new laws, regulations or treaties relating to climate change could mandate new or increased requirements to control or reduce the emission of greenhouse gases, such as carbon dioxide, taxes or fees on fossil fuels or emissions, cap and trade programs, emission limits and clean or renewable energy standards or mandates that require curtailment of operations for certain periods of time due to potential electromagnetic interference. Violations of current or future laws, rules, regulations or other standards could expose our subsidiaries to regulatory and legal proceedings, disputes with, and legal challenges by, third parties, and potentially significant civil fines, criminal penalties and other sanctions, which could have an adverse effect on our operations, financial condition and cash flows.

Our regulated utility operations may not be able to recover costs in a timely manner or at all or obtain a return on certain assets or invested capital through base rates, cost recovery clauses, other regulatory mechanisms or otherwise.

Our regulated utilities in New York, Maine, Connecticut and Massachusetts are subject to periodic review of their rates by the NYPSC, MPUC, PURA and DPU, respectively, and the retail rates charged to our regulated utilities' customers through base rates and cost recovery clauses are subject to the jurisdiction of the NYPSC, MPUC, PURA and DPU, as applicable. New rates may be proposed by Network's businesses, which are then subject to review, modification and final authorization and implementation by regulators. Alternatively, regulators may review the rates of Networks' regulated utilities on their own motion. Networks' regulated utilities' rate plans cover specified periods, but rates determined pursuant to a plan generally continue in effect until a new rate plan is approved by the state utility regulator. Networks' regulated utilities' business rate plans approved by state utility regulators limit the rates Networks' regulated utilities can charge their customers. The rates are generally designed for, but do not guarantee, the recovery of Networks' regulated utilities' respective cost of service and the opportunity to earn a reasonable rate of return (ROE). Actual costs may increase due to inflation or other factors and exceed levels provided for such costs in the rate plans for Networks' regulated utilities. Utility regulators can initiate proceedings to prohibit Networks' regulated utilities from recovering from their customers the cost of service (including energy costs) that the regulators determine to have been imprudently incurred. Networks' regulated utilities defer for future recovery certain costs including major storm costs and environmental costs. In a number of proceedings in recent years, Networks' regulated subsidiaries have been denied recovery, or deferred recovery pending the next general rate case, including denials or deferrals related to major storm costs and construction expenditures. In some instances, denial of recovery may cause the regulated subsidiaries to record an impairment of assets. If Networks' regulated utilities' costs are not fully and timely recovered through the rates ultimately approved by regulators, our cash flows, results of operations and financial condition, and our ability to earn a return on investment and meet financial obligations, could be adversely affected.

Current electric and gas rate plans of Networks' regulated utilities include RDMs and the provisions for the recovery of energy costs, including reconciliation of the actual amount paid by such regulated utilities. There is no guarantee that such decoupling mechanisms or recovery and reconciliation mechanism will remain part of the rate plan of Networks in future rate proceedings.

In addition, there are pending challenges at the FERC against New England transmission owners (including UI and CMP) seeking to lower the ROE that these transmission owners are allowed by the FERC to receive for wholesale transmission service pursuant to the ISO-NE Open Access Transmission Tariff. Reductions to ROE adversely impact the revenues that Networks' regulated utilities receive from wholesale transmission customers and could have a material adverse effect on our business, results of operations, financial condition and cash flows.

Harming of protected species can result in curtailment of wind project operations and could have a material adverse effect on our business, results of operation, financial condition and cash flows.

The operation of energy projects and transmission of energy can adversely affect endangered, threatened or otherwise protected animal species under federal and state statutes, laws, rules and regulations. Wind projects involve a risk that protected flying species, such as birds and bats, will be harmed due to collision. Transmission and distribution lines are another source of potential avian collision as well as electrocution. Energy generation and transmission facilities can result in impacts to protected wildlife, including death caused by collision, electrocution and poisoning. Energy infrastructure occasionally affects endangered or protected species. Our businesses observe industry guidelines and government-recommended best practices to avoid, minimize

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and mitigate harm to protected species, but complete avoidance is not possible and subsequent penalties may result. Where appropriate, our businesses can apply for an "incidental take" permit for some protected species, which may be conditioned upon the institution of costly avoidance and remediation measures.

Violations of wildlife protection laws in certain jurisdictions may result in civil or criminal penalties, including violations of certain laws protecting migratory birds, endangered species and eagles. The ESA and analogous state laws restrict activities without a permit that may adversely affect endangered and threatened species or their habitat. The ESA also provides for private causes of actions against a development project, an operating facility, or the agency that oversees the alleged violation of law. Complying with the state and federal laws protecting migratory birds, endangered species and eagles may require implementation of operating restrictions or a temporary, seasonal, or permanent ban on operations in affected areas, which can have a material adverse effect on the revenue of those projects. For example, there have been recent sightings of the protected California condor at Renewables' Manzana wind facility. Any incidental taking of a California condor could result in substantial financial, legal and reputational harm to us.

Renewables relies in part on governmental policies that support utility-scale renewable energy. Any reductions to, or the elimination of, governmental mandates and incentives that support utility-scale renewable energy or the imposition of additional taxes or other assessments on renewable energy, could result in a material adverse effect on our business, results of operations, financial condition and cash flows.

Renewables relies, in part, upon government policies that support utility-scale renewable energy projects and enhance the economic feasibility of developing and operating wind energy projects in regions in which Renewables operates or plans to develop and operate renewable energy facilities. The federal government and many states and local jurisdictions have policies or other mechanisms, such as tax incentives or renewable portfolio standards, or RPS, that support the sale of energy from utility-scale renewable energy facilities, such as wind energy facilities. As a result of budgetary constraints, political factors or otherwise, federal, state and local governments from time to time may review their policies and other mechanisms that support renewable energy and consider actions that would make them less conducive to the development or operation of renewable energy facilities. Any reductions to, or the elimination of, governmental policies or other mechanisms that support renewable energy or the imposition of additional taxes or other assessments on renewable energy, could result in, among other items, the lack of a satisfactory market for the development of new renewable energy projects, Renewables abandoning the development of new renewable energy projects, a loss of Renewables' investments in the projects and reduced project returns, any of which could have a material adverse effect on our business, results of operations, financial condition and cash flows.

Our businesses may face risks related to obtaining governmental approvals and permits in respect of project siting, financing, construction, operation and the negotiation of project development agreements which could delay a project and could result in a material adverse effect on our business, results of operations, financial condition and cash flows.

Renewables owns, develops, constructs and/or operates electricity generation, including renewable and thermal generators, and associated transmission facilities. Networks develops, constructs, manages and operates transmission and distribution facilities to meet customer needs. As part of these operations, our businesses must periodically apply for licenses and permits from various local, state, federal and other regulatory authorities and abide by their respective conditions. In particular, with respect to Renewables, over the past years noise standards and siting criteria in the Northeast, where population density is higher compared to the Northwest, where Renewables also operates, have grown more restrictive. Federal and state siting legislation has increased its focus on potential conflicts with military installations. Offshore wind also incorporates a new and more complex permitting process and has higher development costs. If our businesses are unsuccessful in obtaining necessary licenses or permits on acceptable terms, there is a delay in obtaining or renewing necessary licenses or permits or regulatory authorities initiate any associated investigations or enforcement actions or impose related penalties or disallowances on us, they individually or in the aggregate could have a material adverse effect on our businesses, results of operations, financial condition and cash flows.

Our operating subsidiaries' purchases and sales of energy commodities and related transportation and services expose us to potential regulatory risks that could have a material adverse effect on our business, results of operations, financial condition and cash flows.

Under the EPAct 2005 and the Dodd-Frank Act, our businesses are subject to enhanced FERC and CFTC statutory authority to monitor certain segments of the physical and financial energy commodities markets. These agencies have imposed broad regulations prohibiting fraud and manipulation of the electricity and gas markets. Under these laws, the FERC and CFTC have promulgated new regulations that have increased compliance costs and imposed new reporting requirements on our businesses. For example, the Dodd-Frank Act substantially increased regulation of the over-the-counter derivative contracts market and futures contract markets, which impacts our businesses. The new regulations require our operating subsidiaries to comply with certain margin requirements for our over-the-counter derivative contracts with certain CFTC- or SEC-registered entities and if the rules implementing the new regulations require us to post significant amounts of cash collateral with respect to swap transactions, this

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could have a material adverse effect on our liquidity. We cannot predict the impact these new regulations will have on our businesses' ability to hedge their commodity and interest rate risks or on over-the-counter derivatives markets as a whole, but they could potentially have a material adverse effect on our businesses' risk exposure, as well as reduce market liquidity and further increase the cost of hedging activities.

With regard to the physical purchases and sales of energy commodities, the physical trading of energy commodities and any related transportation and/or hedging activities that some of our operating subsidiaries undertake, our operating subsidiaries are required to observe the market-related regulations and certain reporting and other requirements enforced by the FERC, the CFTC and the SEC. Additionally, to the extent that the operating subsidiaries enter into transportation contracts with natural gas pipelines or transmission contracts with electricity transmission providers that are subject to FERC regulation, the operating subsidiaries are subject to FERC requirements related to the use of such transportation or transmission capacity. Any failure on the part of our operating subsidiaries to comply with the regulations and policies of the FERC, the CFTC or the SEC relating to the physical or financial trading and sales of natural gas or other energy commodities, transportation or transmission of these energy commodities or trading or hedging of these commodities could result in the imposition of significant civil and criminal penalties. Failure to comply with such regulations, as interpreted and enforced, could have a material adverse effect on our business, results of operations, financial condition and cash flows.

Renewables' ability to generate revenue from certain utility-scale wind energy power plants depends on having continuing interconnection arrangements, PPAs, or other market mechanisms and depends upon interconnecting utility and RTO rules, policies, procedures and FERC tariffs that do not present restrictions to current and future wind project operations.

The electric generation facilities owned by Renewables rely on interconnection and/or transmission agreements and transmission networks in order to sell the energy generated by such facility. If the interconnection and/or transmission agreement of an electric generating facility Renewables owns is terminated for any reason, Renewables may not be able to replace it with an interconnection or transmission arrangement on terms as favorable as the existing arrangement, or at all, or it may experience significant delays or costs in securing a replacement. If a transmission network to which one or more of Renewables' electric generating facilities is connected experiences outages or curtailments, the affected projects may lose revenue. These factors could materially affect Renewables' ability to forecast operations and negatively affect our business, results of operations, financial condition and cash flows. In addition, certain of Renewables' operating facilities' generation of electricity may be physically or economically curtailed, and offtakers or transmission or interconnection providers may be permitted to restrict wind project operations without paying full compensation to Renewables pursuant to PPAs or interconnection agreements or FERC tariff provisions or rules, policies or procedures of RTOs, which may reduce our revenues and impair our ability to capitalize fully on a particular facility's generating potential. Such curtailments or operational limitations could have a material adverse effect on our business, financial condition, results of operations and cash flows. Furthermore, economic congestion on the transmission grid (for instance, a negative price difference between the location where power is put on the grid by a project and the location where power is taken off the grid by the project's customer) in certain of the bulk power markets in which Renewables operates may occur and its businesses may be responsible for those congestion costs. Similarly, negative congestion costs may require that the wind projects either not participate in the energy markets or bid and clear at negative prices which may require the wind projects to pay money to operate each hour in which prices are negative. If such businesses were liable for such congestion costs or if the wind projects are required to pay money to operate in any given hour when prices are negative, then our financial results could be adversely affected.

Risks Relating to Our Business and Operations

Disruptions, uncertainty or volatility in the credit and capital markets may negatively affect our liquidity and capital needs and our ability to meet our growth objectives and can also materially adversely affect our results of operations and financial condition.

A crisis affecting the banking system and the financial markets including severe volatility in stock and bond markets could impact our financial operating conditions, our day-to-day activities, our liquidity and cash positions, the loss of significant investment opportunities, the value of our business and our financial condition. In addition, during periods of slow or little economic growth, energy conservation efforts often increase and the amount of uncollectible customer accounts increases. These factors may also reduce earnings and cash flow.

Increases in interest rates or reductions in credit ratings could have an adverse impact on our cash flows, results of operations and financial condition.

Trends in the general level of interest rates and in the debt capital and credit markets could increase the cost of our borrowings and our ability to access the credit markets. We have floating rate exposure under our commercial paper program, our credit facilities and our auction rate bonds which closely tracks movements in the London Interbank Offer Rate, or LIBOR. The cost of

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new long-term debt can be affected by the level of US treasury rates and conditions in the debt capital markets that affect credit spreads.

In addition, AVANGRID and certain of its subsidiaries have credit ratings which directly affect the cost of maintaining and borrowing under revolving credit facilities and which indirectly affect the cost of borrowing under our commercial paper program and the cost of new long-term debt raised in the debt capital markets. In addition, we intend to access the capital markets and issue debt securities from time to time, and a decrease in credit ratings or outlook could adversely affect our liquidity, increase borrowing costs and decrease demand for our debt securities and increase the expense and difficulty of financing our operations and investments. Lower credit ratings could increase the cost of debt and equity capital and, depending on the rating and market conditions, preclude access to the debt and equity capital markets. Any of these events could have a materially adverse effect on our business, results of operations, financial condition and cash flows.

If Networks' electricity and natural gas transmission, transportation and distribution systems do not operate as expected, they could require unplanned expenditures, including the maintenance and refurbishment of Networks' facilities, which could adversely affect our business, results of operations, financial position and cash flows.

Networks' ability to operate its electricity and natural gas transmission, transportation and distribution systems is critical to the financial performance of our business. The ongoing operation of Networks' facilities involves risks customary to the electric and natural gas industry that include the breakdown, failure, loss of use or destruction of Networks' facilities, equipment or processes or the facilities, equipment or processes of third parties due to natural disasters, war or acts of terrorism, operational and safety performance below expected levels, errors in the operation or maintenance of these facilities and the inability to transport electricity or natural gas to customers in an efficient manner. These and other occurrences could reduce potential earnings and cash flows and increase the costs of repairs and replacement of assets. Losses incurred by Networks in respect of such occurrences may not be fully recoverable through insurance or customer rates. Further, certain of Networks' facilities require periodic upgrading and improvement.

In addition, unplanned outages typically increase Networks' operation and maintenance expenses. Any unexpected failure, including failure associated with breakdowns, forced outages or any unanticipated capital expenditures, accident, failure of major equipment, shortage of or inability to acquire critical replacement or spare parts could result in reduced profitability, harm to our reputation or regulatory penalties. For more information, see "*Risks Relating to Our Regulatory Environment*" above.

Our businesses' operations and power production may fall below expectations due to the impact of severe weather or other natural events, which could adversely affect our cash flows, results of operations and financial position.

Weather conditions directly influence the demand for electricity and natural gas and other fuels and affect the price of energy and energy-related commodities. Severe weather, such as ice and snow storms, hurricanes and other natural disasters, such as floods and earthquakes, can be destructive and cause power outages, bodily injury and property damage or affect the availability of fuel and water, which may require additional costs or loss of revenues, for example, the costs incurred to restore service and repair damaged facilities, to obtain replacement power and to access available financing sources, may not be recoverable from customers and could adversely affect our cash flows, results of operations and financial position. Many of our facilities could be placed at greater risk of damage should changes in the global climate produce unusual variations in temperature and weather patterns, resulting in more intense, frequent and extreme weather events, abnormal levels of precipitation and a change in sea level. A disruption or failure of electric generation, transmission or distribution systems or natural gas production, transmission, transportation, storage or distribution systems in the event of ice and snow storms, long periods of severe weather, hurricane, tornado or other severe weather event, or otherwise, could prevent us from operating our business in the normal course and could result in any of the adverse consequences described above. Because utility companies, including our regulated utilities, have large customer bases, they are subject to adverse publicity focused on the reliability of their distribution services and the speed with which they are able to respond to electric outages, natural gas leaks and similar interruptions caused by storm damage or other unanticipated events. Adverse publicity of this nature could harm our reputations and the reputations of our subsidiaries.

Furthermore, Renewables can incur damage to wind turbine equipment, either through natural events such as lightning strikes that damage blades or in-ground electrical systems used to collect electricity from turbines. Many of the operating facilities of Networks are located either in, or close to, densely populated public places. A failure of, or damage to, these facilities, could result in bodily injury or death, property damage, the release of hazardous substances or extended service interruptions. The cost of repairing damage to Networks' facilities and the potential disruption of their operations due to storms, natural disasters or other catastrophic events could be substantial. In respect of our businesses where cost recovery is available, recovery of costs to restore service and repair damaged facilities is or may be subject to regulatory approval, and any determination by the regulator not to permit timely and full recovery of the costs incurred could have a material adverse effect on our business, results of operations, financial condition and cash flows.

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If wind conditions are unfavorable or below Renewables' production forecasts, or Renewables' wind turbines are not available for operation, Renewables projects' electricity generation and the revenue generated from its projects may be substantially below our expectations.

Changing wind patterns or lower than expected wind resource could cause reductions in electricity generation at Renewables' projects, which could affect the revenues produced by these wind generating facilities. Renewables' wind projects are sited, developed and operated to maximize wind performance. Prior to siting a wind facility, detailed studies are conducted to measure the wind resource in order to estimate future production. However, wind patterns or wind resource in the future might deviate from historical patterns and are difficult to predict. These events could negatively impact the results of operations of Renewables, which may vary significantly from period to period, depending on the level of available resources. To the extent that resources are not available at planned levels, the financial results from these facilities may be less than expected. Changing wind patterns or lower than expected wind resources could also degrade equipment or components and the interconnection and transmission facilities' lives or maintenance costs. Replacement and spare parts for wind turbines and key pieces of electrical equipment may be difficult or costly to acquire or may be unavailable. The loss of any suppliers or service providers or inability to find replacement suppliers or service providers or to purchase turbines at rates currently offered by Renewables' existing suppliers or a change in the terms of Renewables' supply or operations and maintenance agreements, such as increased prices for maintenance services or for spare parts, could have a material adverse effect on Renewables' ability to construct and maintain wind farms or the profitability of wind farm development and operation.

The revenues generated by Renewables' facilities depend upon Renewables' ability to maintain the working order of its wind turbines. A natural disaster, severe weather, accident, failure of major equipment, shortage of or inability to acquire critical replacement or spare parts, failure in the operation of any future transmission facilities that Renewables may acquire, including the failure of interconnection to available electricity transmission or distribution networks, could damage or require Renewables to shut down its turbines or related equipment and facilities, leading to decreases in electricity generation levels and revenues. Additionally, Renewables' operating projects generally do not hold spare substation main transformers in inventory. These transformers are designed specifically for each wind power project, and order lead times can be lengthy. If one of Renewables' projects had to replace any of its substation main transformers, it would be unable to sell all of its power until a replacement is installed.

If Renewables experiences a prolonged interruption at one of its operating projects due to natural events or operational problems and such events are not fully covered by insurance, Renewables' electricity generation levels could materially decrease, which could have a material adverse effect on its business, results of operation and financial condition and could adversely affect our cash flows, results of operations and financial position.

Cyber breaches, acts of war or terrorism, grid disturbances or security breaches involving the misappropriation of confidential and proprietary customer, employee, financial or system operating information could negatively impact our business.

Cyber breaches, acts of war or terrorism or grid disturbances resulting from internal or external sources could target our generation, transmission and distribution facilities or our information technology systems. In the regular course of business, we maintain sensitive customer, employee, financial and system operating information and are required by various federal and state laws to safeguard this information. Cyber or physical security intrusions could potentially lead to disabling damage to our generation, transmission and distribution facilities and to theft and the release of critical operating information or confidential customer or employee information, which could adversely affect our operations or adversely impact our reputation, and could result in significant costs, fines and litigation. We routinely experience attempts by external parties to penetrate and attack our networks and systems. Although such attempts have not resulted in any material breaches, disruptions or loss of business - critical information, our systems and procedures for preparing and protecting against such attacks and mitigating such risks may prove to be insufficient in the future and such attacks could have an adverse impact on our business and operations. Additionally, because our generation and transmission facilities are part of an interconnected regional grid, we face the risk of blackout due to a disruption on a neighboring interconnected system. The Company maintains a specific insurance program for cyber-risk in accordance with insurance market current offerings; and that will need to be periodically reviewed due to the rapid evolution and broad range of cyber risks. While we maintain insurance coverage that is designed to address losses or claims that may arise in connection with cyber risks, such insurance coverage may be insufficient to cover all losses or claims that may arise from such risks. As threats evolve and grow increasingly more sophisticated, we may incur significant costs to upgrade or enhance our security measures to protect against such risks and we may face difficulties in fully anticipating or implementing adequate preventive measures or mitigating potential harms. In addition, we cannot ensure that a potential security breach may not occur or quantify the potential impact of such an event. Any such cyber breaches could result in a significant decrease in revenues, significant expense to repair system damage or security breaches, adversely impact our reputation, regulatory penalties and liability claims, which could have a material adverse effect on our cash flows, results of operations and financial condition.

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Risks including but not limited to any physical security breach involving unauthorized access, electricity or equipment theft and vandalism could adversely affect our business operations and adversely impact our reputation.

A physical attack on our transmission and distribution infrastructure could interfere with normal business operations and affect our ability to control our transmission and distribution assets. A physical security intrusion could potentially lead to theft and the release of critical operating information, which could adversely affect our operations or adversely impact our reputation, and could result in significant costs, fines and litigation. Additionally, certain of our power generation and transmission and distribution assets and equipment are at risk for theft and damage. For example, Networks is at risk for copper wire theft, especially, due to an increased demand for copper in the United States and internationally. Theft of copper wire or solar panels can cause significant disruption to Networks' and Renewables' operations, respectively, and can lead to operating losses at those locations. Furthermore, Renewables can incur damage to wind turbine equipment through vandalism, such as gunshots into towers or other generating equipment. Such damage can cause disruption of operations for unspecified periods which may lead to operating losses at those locations.

Our risk management policies cannot fully eliminate the risk associated with some of our operating subsidiaries' commodity trading and hedging activities, which may result in significant losses.

Renewables has exposure to commodity price movements through their "natural" long positions in electricity in addition to proprietary trading and hedging activities.

Networks and Renewables manage the exposure to risks of commodity price movements through internal risk management policies, enforcement of established risk limits and risk management procedures. These risk policies, risk limits and risk management procedures may not work as planned and cannot eliminate all risks associated with these activities. Even when these risk policies and procedures are followed, and decisions are made based on projections and estimates of future performance, results of operations may be diminished if the judgments and assumptions underlying those decisions prove to be incorrect. Our risk management tools and metrics associated with our hedging and trading procedures, such as daily value at risk, stop loss limits and liquidity guidelines, are based on historical price movements. Due to the inherent uncertainty involved in price movements and potential deviation from historical pricing behavior, we are unable to assure that our risk management tools and metrics will be effective to protect against material adverse effects on our business, financial condition, results of operations and prospects. Factors, such as future prices and demand for power and other energy-related commodities, become more difficult to predict and the calculations become less reliable the further into the future estimates are made. As a result, we cannot fully predict the impact that some of our subsidiaries' commodity trading and hedging activities and risk management decisions may have on our business, results of operations, financial condition and cash flows.

We expect to invest in development opportunities in all segments of our business, but such opportunities may not be successful, projects may not commence operation as scheduled and/or within budget or at all, which could have a material adverse effect on our business prospects.

We are pursuing broader development investment opportunities related to all segments of our business, particularly in respect of additional opportunities related to electric transmission, renewable energy generation, interconnections to generating resources and other development investment opportunities. The development, construction and expansion of such projects involve numerous risks. Various factors could result in increased costs or result in delays or cancellation of these projects. Offshore wind brings significant development costs associated to single projects. Risks include regulatory approval processes, permitting, new legislation, economic events, environmental and community concerns, negative publicity, design and siting issues, difficulties in obtaining required rights of way, construction delays and cost overruns, including delays in equipment deliveries, particularly of wind turbines or transformers, severe weather, competition from incumbent facilities and other entities, and actions of strategic partners. For example, there may be delays or unexpected developments in completing current and future construction projects. While most of Renewables' construction projects are constructed under fixed-price and fixed-schedule contracts with construction and equipment suppliers, these contracts provide for limitations on the liability of these contractors to pay liquidated damages for cost overruns and construction delays. These circumstances could prevent Renewables' construction projects from commencing operations or from meeting original expectations about how much electricity it will generate or the returns it will achieve. In addition, for Renewables' projects that are subject to PPAs, substantial delays could cause defaults under the PPAs, which generally require the completion of project construction by a certain date at specified performance levels. A delay resulting in a wind project failing to qualify for federal production tax credits could result in losses that would be substantially greater than the amount of liquidated damages paid to Renewables. In December 2015, the Consolidated Appropriations Act extended the expiration date for this tax credit to December 31, 2019, for wind facilities commencing construction, with a phase-down beginning for wind projects commencing construction after December 31, 2016. In May 2018, Vineyard Wind, LLC (AVANGRID has a 50% voting interest) was selected to build 800 MW of offshore wind in Massachusetts. The company still needs to get regulatory approvals before starting construction. A delay in getting all necessary permits may impact expected returns of this project or affect the final investment decision outcome. In 2018, CMP was selected to construct a transmission line (New England Clean

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Energy Connect) to provide renewable energy to Massachusetts. The company is going through a permitting process that includes federal, state and local permits that will need to be approved before the project starts construction. As is typical with large projects, we could experience delays, including in regulatory approvals, permitting and construction. Should any of these factors result in such delays or cancellations, our growth projections, financial position, results of operations and cash flows could be adversely affected or our future growth opportunities may not be realized as anticipated.

Advances in technology and rate design initiatives could impair or eliminate the competitive advantage of our business or could result in customer defection, which could have a material adverse effect on our growth, business, financial condition and results of operations.

The emergence of technology and initiatives designed to reduce greenhouse gas emissions or limit the effects of global warming and overall climate change has increased the development of new technologies for solar generation, energy efficiency and for investment in research and development to make those technologies more efficient and cost effective. There is a potential that new technology or rate design incentives could adversely affect the demand for services of our regulated subsidiaries thus impacting our revenues, which could adversely affect our cash flows, results of operations and financial concerns. For example, net energy metering allows electricity customers who supply their own electricity from on-site generation to pay only for the net energy obtained from the utility. Further, the behind-the-meter storage systems and grid integration components such as inverters or electronics could result in electricity delivery customers abandoning the grid system or replacing part of grid services with self-supply or self-balancing, which could impact the return on current or future Networks' assets deployed and designed to serve projected load. Such emergence of alternative sources of energy supply can result in customers relying on the power grid for limited use, such as in the case of a deficit or an emergency, or completely abandoning the grid, which is known as customer defection. While currently the regulated utilities of Networks are subject to RDMs, they are either legislatively or regulatory in nature and there is no assurance such mechanisms will always be available. The progressive reduction in the costs of distributed energy assets, as a result of technological improvements, large scale deployment in certain jurisdictions and constructive support regimes could result in customer defection (individually or integrated in micro-grids) when a net benefit analysis of investing in self-supply and storage of energy compared to energy provided by utility service appears attractive for certain customer classes. Similarly, future investments in Networks could be impacted if adequate rate making does not fully contemplate the characteristics of an integrated reliable grid from a unified perspective, regardless of customer disconnection. Further, the interoperability, integration and standard connection of these distributed energy devices and systems could place a burden on the system of Networks' operating subsidiaries, without adequately compensating them. Furthermore, the technologies used in the renewable energy sector change and evolve rapidly. Techniques for the production of electricity from renewable sources are constantly improving and becoming more complex. In order to maintain Renewables' competitiveness and expand its business, Renewables must adjust effectively to changes in technology. If Renewables fails to react effectively to current and future technological changes in the sector in a timely manner, Renewables' future business growth, results of operations and financial condition could be materially adversely affected.

Renewables' revenue may be reduced significantly upon expiration or early termination of PPAs if the market price of electricity decreases and Renewables is otherwise unable to negotiate favorable pricing terms.

Renewables' portfolio of PPAs is made up of PPAs that primarily have fixed or otherwise predetermined electricity prices for the life of the PPA. A decrease in the market price of electricity, including lower prices for traditional fossil fuels, could result in a decrease in revenues once a PPA has expired or upon a renewal of a PPA. Any decrease in the price payable to Renewables under new PPAs could have a material adverse effect on our business, results of operations, financial conditions and cash flows. For the majority of Renewables' wind energy generation projects, upon the expiration of a PPA, the project becomes a merchant project subject to market risks, unless Renewables can negotiate a renewal of the PPA. If Renewables is not able to replace an expiring or early terminated PPA with a contract on equivalent terms and conditions or otherwise obtain prices that permit operation of the related facility on a profitable basis, the affected site may temporarily or permanently cease operations and trigger an asset value impairment. The majority of the Renewables PPAs are fixed price contracts. An early termination of any may result in economic losses.

There are a limited number of purchasers of utility-scale quantities of electricity, which exposes Renewables' utility-scale projects to additional risk that could have a material adverse effect on its business.

Since the transmission and distribution of electricity is highly concentrated in most jurisdictions, there are a limited number of possible purchasers for utility-scale quantities of electricity in a given geographic location, including transmission grid operators, state and investor-owned power companies, public utility districts and cooperatives. As a result, there is a concentrated pool of potential buyers for electricity generated by Renewables' businesses, which may restrict our ability to negotiate favorable terms under new PPAs and could impact our ability to find new customers for the electricity generated by our generation facilities should this become necessary. Renewables' PPA portfolio is mostly contracted with low risk regulated utility companies. In the past few years, there has been increased participation from commercial and industrial businesses. The higher long term business risk profile

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of these companies results in increased credit risk. Furthermore, if the financial condition of these utilities and/or power purchasers deteriorated or the RPS programs, climate change programs or other regulations to which they are currently subject and that compel them to source renewable energy supplies change, demand for electricity produced by Renewables' businesses could be negatively impacted.

Lower prices for other fuel sources may reduce the demand for wind and solar energy development, which could have a material adverse effect on Renewables' ability to grow its business.

Wind and solar energy demand is affected by the price and availability of other fuels, including nuclear, coal, natural gas and oil, as well as other sources of renewable energy. To the extent renewable energy, particularly wind energy, becomes less cost-competitive due to reduced government targets, increases in the cost of wind energy, as a result of new regulations, and incentives that favor alternative renewable energy, cheaper alternatives or otherwise, demand for wind energy and other forms of renewable energy could decrease. Slow growth or a long-term reduction in the demand for renewable energy could have a material adverse effect on Renewables' ability to grow its business.

Volatility in the price of natural gas and home heating oil could adversely impact the demand for gas conversions and could have a material adverse effect on our regulated gas utilities' ability to grow their businesses.

Conversion from home heating oil to natural gas requires a significant investment by customers. If the price of natural gas does not remain sufficiently below the prices of home heating oil, current oil heating customers may elect not to convert to natural gas. Volatility in oil prices demonstrates the difficulty to predict future home heating costs. In addition, any new regulations imposed on natural gas, particularly on extraction of natural gas from shale formations, could lead to substantial increases in the price of natural gas. Reduced prices for heating oil or increases in in prices for natural gas may cause potential natural gas customers to forgo converting their heating systems to natural gas and as a result, could negatively impact the forecasted growth of the CNG, SCG and BGC businesses, and their cash flows, results of operations and financial condition.

Our subsidiaries do not own all of the land on which their projects are located and their use and enjoyment of real property rights for their projects may be adversely affected by the rights of lienholders and leaseholders that are superior to those of the grantors of those real property rights to our subsidiaries' projects, which could have a material adverse effect on their business, results of operations, financial condition and cash flows.

Our subsidiaries do not own all of the land on which their projects are located. For example, Renewables does not own all of the land on which its wind projects are located. Such projects generally are, and future projects may be, located on land occupied under long-term easements, leases and rights of way. The ownership interests in the land subject to these easements, leases and rights of way may be subject to mortgages securing loans or other liens and other easements, lease rights and rights of way of third parties that were created previously. As a result, some of the rights under such easements, leases or rights of way held by our operating subsidiaries may be subject to the rights of these third parties, and the rights of our operating subsidiaries to use the land on which their projects are or will be located and their projects' rights to such easements, leases and rights of way could be lost or curtailed. Any such loss or curtailment of the rights of our operating subsidiaries to use the land on which their projects are or will be located could have a material adverse effect on their business, results of operations, financial condition and cash flows.

We and our subsidiaries are subject to litigation or administrative proceedings, the outcome or settlement of which could adversely affect our business, results of operations, financial condition and cash flows.

Our operating subsidiaries have been and continue to be involved in legal proceedings, administrative proceedings, claims and other litigation that arise in the ordinary course of business. These actions may include environmental claims, employment-related claims and contractual disputes or claims for personal injury or property damage that occur in connection with services performed relating to the operation of our businesses, or actions by regulatory or tax authorities. Unfavorable outcomes or developments relating to these proceedings or future proceedings, such as judgments for monetary damages, injunctions or denial or revocation of permits, could have a material adverse effect on our business, financial condition and results of operations. In addition, settlement of claims could adversely affect our business, results of operations, financial condition and cash flows.

Storing, transporting and distributing natural gas involves inherent risks that could cause us to incur significant financial losses.

There are inherent hazards and operation risks in gas distribution activities, such as leaks, accidental explosions and mechanical problems that could cause the loss of human life, significant damage to property, environmental pollution and impairment of operations. The location of pipelines and storage facilities near populated areas, including residential areas, commercial business centers and industrial sites, could increase the level of damages resulting from these risks. These activities may subject us to litigation and administrative proceedings that could result in substantial monetary judgments, fines or penalties.

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To the extent that the occurrence of any of these events is not fully covered by insurance or natural gas hedges, they could adversely affect our revenue, earnings and cash flow.

We are not able to insure against all potential risks and may become subject to higher insurance premiums, and our ability to obtain insurance and the terms of any available insurance coverage could be materially adversely affected by international, national, state or local events and company-specific events, as well as the financial condition of insurers.

Our businesses and activities are exposed to the risks inherent in the construction and operation of our respective assets, such as electrical power plants, wind power plants and other renewable energy projects and natural gas storage and distribution facilities, including breakdowns, manufacturing defects, natural disasters, terrorist attacks, cyber attacks and sabotage. Our subsidiaries are also exposed to third party liability risks and environmental risks. While our operating subsidiaries maintain insurance coverage, such insurance may not continue to be offered on an economically feasible basis and may not cover all events that could give rise to a loss or claim involving the assets or operations of our subsidiaries. For example, Renewables currently has 540 MW of installed capacity in California subject to known earthquake risks and approximately 600 MW of installed capacity on the Texas Gulf Coast subject to known hurricane and windstorm risks. Further, while insurance coverage applies to property damages and business interruptions, this coverage is limited as a result of severe insurance market restrictions and we are generally not fully insured against all significant losses. In addition, our subsidiaries' insurance policies are subject to annual review by their insurers. Our ability to obtain insurance and the terms of any available insurance coverage could be materially adversely affected by international, national, state or local events and company-specific events, as well as the financial condition of insurers. If insurance coverage is not available or obtainable on acceptable terms, we may be required to pay costs associated with adverse future events. If one of our operating subsidiaries were to incur a serious uninsured loss or a loss significantly exceeding the limits of their insurance policies, the results could have a material adverse effect on our business, results of operations, financial condition and cash flows.

Furthermore, Networks' gas distribution and transportation activities involve a variety of inherent hazards and operating risks, such as leaks, accidents, explosions, fires and mechanical problems and could result in serious injury to employees and non-employees, loss of human life, significant damage to property, environmental pollution and impairment of our subsidiaries' operations. In accordance with customary industry practice, our subsidiaries maintain insurance against some, but not all, of these risks and losses. The location of natural gas pipelines and other facilities near populated areas, including residential areas, commercial business centers and industrial sites, could increase the level of damages that could potentially result from these risks. The occurrence of any of these events not fully covered by insurance could adversely affect our business, results of operations, financial position and cash flows.

The benefits of any warranties provided by the suppliers of equipment for Networks and Renewables' projects may be limited by the ability of a supplier to satisfy its warranty obligations, or if the term of the warranty has expired or has liability limits which could have a material adverse effect on our business, results of operation, financial condition and cash flows.

Networks and Renewables expect to benefit from various warranties, including product quality and performance warranties, provided by suppliers in connection with the purchase of equipment. The suppliers of our operating subsidiaries may fail to fulfill their warranty obligations or a particular defect may not be covered by a warranty. Even if a supplier fulfills its obligations, the warranty may not be sufficient to compensate the operating subsidiary for all of its losses. In addition, these warranties generally expire within two to five years after the date each equipment item is delivered or commissioned and are subject to liability limits. If installation is delayed, the operating subsidiaries may lose all or a portion of the benefit of a warranty. If Networks or Renewables seeks warranty protection and a supplier is unable or unwilling to perform its warranty obligations, whether as a result of its financial condition or otherwise, or if the term of the warranty has expired or a liability limit has been reached, there may be a reduction or loss of warranty protection for the affected equipment, which could have a material adverse effect on our business, results of operation, financial condition and cash flows.

A disruption in the wholesale energy markets or failure by an energy supplier could adversely affect our business and results of operation.

Almost all the electricity and gas that Networks sells to full-service customers is purchased through the wholesale energy markets or pursuant to contracts with energy suppliers. A disruption in the wholesale energy markets or a failure on the part of energy suppliers or operators of energy delivery systems that connect to Networks' energy facilities could adversely affect Networks' ability to meet its customers' energy needs and adversely affect our business and results of operation.

The increased cost of purchasing natural gas during periods in which natural gas prices are rising significantly could adversely impact our earnings and cash flow.

The rates that are permitted to be charged by our regulated natural gas utilities that allow for rate recovery generally allow such businesses to recover their cost of purchasing natural gas. In general, the various regulatory agencies allow our regulated

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utilities to recover the costs of natural gas purchased for customers on a dollar-for-dollar basis (in the absence of disallowances), without a profit component. Networks' regulated natural gas utilities periodically adjust customer rates for increases and decreases in the cost of gas purchased by such regulated utilities for sale to its customers. Under the regulatory body-approved gas cost recovery pricing mechanisms, the gas commodity charge portion of gas rates charged to customers may be adjusted upward on a periodic basis. If the cost of purchasing natural gas increases and Networks' regulated natural gas utilities are unable to recover these costs from its customers immediately, or at all, Networks may incur increased costs associated with higher working capital requirements and/or realize increased costs. In addition, any increases in the cost of purchasing natural gas may result in higher customer bad debt expense for uncollectible accounts and reduced sales volume and related margins due to lower customer consumption.

Pension and post-retirement benefit plans could require significant future contributions to such plan that could adversely impact our business, results of operations, financial condition and cash flows.

We provide defined benefit pension plans and other post-retirement benefits administered by our subsidiaries for a significant number of employees, former employees and retirees. Financial market disruptions and significant declines in the market values of the investments held to meet the pension and post-retirement obligations, discount rate assumptions, participant demographics and increasing longevity, and changes in laws and regulations may require us to make significant contributions to the plans. Large funding requirements or significant increases in expenses could adversely impact our business, results of operations, financial condition and cash flows.

Our existing credit facilities contain, and agreements that we may enter into in the future may contain, covenants that could restrict our financial flexibility.

Our existing credit facilities, and the credit facilities of our subsidiaries, contain covenants imposing certain requirements on our business including covenants regarding the ratio of indebtedness to total capitalization. Furthermore, our subsidiaries periodically issue long-term debt, historically consisting of both secured and unsecured indebtedness. These third-party debt agreements also contain covenants, including covenants regarding the ratio of indebtedness to total capitalization. These requirements may limit our ability and the ability of our subsidiaries to take advantage of potential business opportunities as they arise and may adversely affect our conduct and our operating subsidiaries' current business, including restricting our ability to finance future operations and capital needs and limiting the subsidiaries' ability to engage in other business activities. Other covenants place or could place restrictions on our ability and the ability of our operating subsidiaries to, among other things, incur additional debt, create liens, and sell or transfer assets.

Agreements we and our operating subsidiaries enter into in the future may also have similar or more restrictive covenants, especially if the general credit market deteriorates. A breach of any covenant in the existing credit facilities or the agreements governing our other indebtedness would result in an event of default. Certain events of default may trigger automatic acceleration of payment of the underlying obligations or may trigger acceleration of payment if not remedied within a specified period. Events of default under one agreement may trigger events of default under other agreements, although our regulated utilities are not subject to the risk of default of affiliates. Should payments become accelerated as the result of an event of default, the principal and interest on such borrowing would become due and payable immediately. If that should occur, we may not be able to make all of the required payments or borrow sufficient funds to refinance the accelerated debt obligations. Even if new financing is then available, it may not be on terms that are acceptable to us.

We may be unable to meet our financial obligations and to pay dividends on our common stock if our subsidiaries are unable to pay dividends or repay loans from us.

We are a holding company and, as such, have no revenue-generating operations of our own. We are dependent on dividends and the repayment of loans from our subsidiaries and on external financings to provide the cash that is necessary to make future investments, service debt we have incurred, pay administrative costs and pay dividends. Our subsidiaries are separate legal entities and have no independent obligation to pay us dividends. Prior to paying us dividends, the subsidiaries have financial obligations that must be satisfied, including among others, their operating expenses and obligations to creditors. Furthermore, our regulated utilities are restricted by regulatory decision from paying us dividends unless a minimum equity-to-total capital ratio is maintained. The future enactment of laws or regulations may prohibit or further restrict the ability of our subsidiaries to pay upstream dividends or to repay funds. In addition, in the event of a subsidiary's liquidation or reorganization, our right to participate in a distribution of assets is subject to the prior claims of the subsidiary's creditors. As a result, our ability to pay dividends on our common stock and meet our financial obligations is reliant on the ability of our subsidiaries to generate sustained earnings and cash flows and pay dividends to and repay loans from us.

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Our investments and cash balances are subject to the risk of loss.

Our cash balances and the cash balances at our subsidiaries may be deposited in banks, may be invested in liquid securities such as commercial paper or money market funds or may be deposited in a liquidity agreement in which we are a participant along with other affiliates of the Iberdrola Group. Bank deposits in excess of federal deposit insurance limits would be subject to risks in the counterparty bank. Liquid securities and money market funds are subject to loss of principal, more likely in an adverse market situation, and to the risk of illiquidity.

We and our subsidiaries may suffer the loss of key personnel or the inability to hire and retain qualified employees, which could result in a material adverse effect on our business, financial condition, results of operations and prospects.

The operations of our operating subsidiaries depend on the continued efforts of our employees and our subsidiaries' employees. Retaining key employees and maintaining the ability to attract new employees are important to our financial performance and for our subsidiaries' operations and financial performance. We cannot guarantee that any member of our management or of our subsidiaries' management will continue to serve in any capacity for any particular period of time. In addition, a significant portion of our and our subsidiaries' workforce, including many workers with specialized skills maintaining and servicing the electrical infrastructure, will be eligible to retire over the next five to ten years. Such highly skilled individuals cannot be quickly replaced due to the technically complex work they perform. If a significant amount of such workers retire and are not replaced, the subsequent loss in productivity and increased recruiting and training costs could result in a material adverse effect on our business, financial condition, results of operations and prospects.

We and our subsidiaries face the risk of strikes, work stoppages or an inability to negotiate future collective bargaining agreements on commercially reasonable terms which could have a material adverse effect on our business, results of operations, financial condition and cash flows.

A majority of the employees at Networks' facilities are subject to collective bargaining agreements with various unions. Additionally, unionization activities, including votes for union certification, could occur among non-union employees. If union employees strike, participate in a work stoppage or slowdown or engage in other forms of labor strike or disruption, our subsidiaries could experience reduced power generation or outages if replacement labor is not procured. The ability to procure such replacement labor is uncertain, though risks are reduced by rigorous contingency planning. Strikes, work stoppages or an inability to negotiate future collective bargaining agreements on commercially reasonable terms could have a material adverse effect on our business, results of operations, financial condition and cash flows.

Changes in tax laws, as well as judgments and estimates used in the determination of tax-related asset and liability amounts, could materially adversely affect our business, results of operations, financial condition and cash flows.

Our provision for income taxes and reporting of tax-related assets and liabilities require significant judgments and the use of estimates. Amounts of tax-related assets and liabilities involve judgments and estimates of the timing and probability of recognition of income, deductions and tax credits, including, but not limited to, estimates for potential adverse outcomes regarding tax positions that have been taken and the ability to utilize tax benefit carryforwards, such as net operating loss, or NOL, and tax credit carryforwards. Actual income taxes could vary significantly from estimated amounts due to the future impacts of, among other things, changes in tax laws, regulations and interpretations, our financial condition and results of operations.

The success of our business depends on achieving our strategic objectives, which may be through acquisitions, joint ventures, dispositions and restructurings.

We are continuously reviewing the alternatives available to ensure that we meet our strategic objectives, which include, among other things, acquisitions, joint ventures, dispositions and restructuring. With respect to potential acquisitions, joint ventures and restructuring actions, we may not achieve expected returns and other benefits as a result of various factors, including integration and collaboration challenges, such as personnel and technology. In addition, we may not achieve anticipated cost savings from restructuring actions. We also may participate in joint ventures with other companies or enterprises in various markets, including joint ventures where we may have a lesser degree of control over the business operations, which may expose us to additional operational, financial, legal or compliance risks. We also continue to evaluate the potential disposition of assets and businesses that may no longer help us meet our objectives or sell a stake of these assets as a way to maximize the value of our business. When we decide to sell assets or a business, we may encounter difficulty in finding buyers or executing alternative exit strategies on acceptable terms in a timely manner, which could delay the accomplishment of our strategic objectives. Alternatively, we may dispose of a business at a price or on terms that are less than we had anticipated. Failure to achieve our strategic objectives could have a material adverse effect on our business, results of operations, financial condition and cash flows.

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Risks Relating to Ownership of Our Common Stock

The trading price and volume of our common stock may be volatile and the value of your investment could decline.

The trading price of and demand for shares of our common stock could fluctuate and will depend on a number of conditions, including:

- the risk factors described in this Annual Report on Form 10-K;
- general economic conditions in the U.S. and internationally, including changes in interest rates;
- changes in electricity and natural gas prices;
- actual, anticipated or unanticipated fluctuations in our quarterly and annual results and those of our competitors;
- our businesses, operations, results and prospects;
- future mergers and strategic alliances;
- market conditions in the energy industry;
- changes in law, government regulation, taxes, legal proceedings or other developments;
- shortfalls in our operating results from levels forecasted by securities analysts or by us;
- investor sentiment toward the stock of energy companies in general;
- announcements concerning us or our competitors;
- maintenance of acceptable credit ratings or credit quality; and
- the general state of the securities markets.

These and other factors may impair the development or sustainability of a liquid market for shares of our common stock and the ability of investors to sell shares at an attractive price. These factors also could cause the market price and demand for shares of our common stock to fluctuate substantially, which may negatively affect the price and liquidity of shares of our common stock. These fluctuations could cause you to lose all or part of your investment in shares of our common stock. Many of these factors and conditions are beyond our control and may not be related to our operating performance.

If securities or industry analysts do not publish research or publish inaccurate or unfavorable research about us or our businesses, the price and trading volume of our common stock could decline.

The trading market for our common stock will, to some extent, depend on the research and reports that securities or industry analysts publish about us or our business. We do not have any control over these analysts. If one or more of the analysts who cover us should downgrade our shares or change their opinion of our business prospects or report inaccurate information, our share price would likely decline. If one or more of these analysts cease coverage of us or fail to publish reports on us regularly, demand for our common stock could decrease, which might cause our stock price and trading volume to decline.

Iberdrola exercises significant influence over us, and its interests may be different than yours. Additionally, future sales or issuances of our common stock by Iberdrola, S.A. could have a negative impact on the price of our common stock.

Iberdrola owns approximately 81.5% of outstanding shares of our common stock and will be able to exercise significant influence over our business policies and affairs, including the composition of our board of directors and any action requiring the approval of our shareholders, including the adoption of amendments to the certificate of incorporation and bylaws and the approval of a merger or sale of substantially all of our assets, subject to applicable law and the limitations set forth in the shareholder agreement to which we and Iberdrola are parties. The directors designated by Iberdrola may have significant authority to effect decisions affecting our capital structure, including the issuance of additional capital stock, incurrence of additional indebtedness, the implementation of stock repurchase programs and the decision of whether or not to declare dividends.

The interests of Iberdrola may conflict with the interests of our other shareholders. For example, Iberdrola may support certain long-term strategies or objectives for us that may not be accretive to shareholders in the short term. The concentration of ownership may also delay, defer or even prevent a change in control, even if such a change in control would benefit our other shareholders, and may make some transactions more difficult or impossible without the support of Iberdrola. This significant concentration of share ownership may adversely affect the trading price for shares of our common stock because investors may perceive disadvantages in owning stock in companies with shareholders who own significant percentages of a company's outstanding stock.

Further, sales of our common stock by Iberdrola or the perception that sales may be made by it could significantly reduce the market price of shares of our common stock. Even if Iberdrola does not sell a large number of shares of our common stock into the market, its right to transfer such shares may depress the price of our common stock. Furthermore, pursuant to the shareholder agreement, Iberdrola is entitled to customary registration rights of our common stock, including the right to choose the method by which the common stock are distributed, a choice as to the underwriter and fees and expenses to be borne by us. Iberdrola also retains preemptive rights to protect against dilution in connection with issuances of equity by us. If Iberdrola exercises its registration rights and/or its preemptive rights, the market price of shares of our common stock may be adversely affected.

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We have elected to take advantage of the "controlled company" exemption to the corporate governance rules for NYSE-listed companies, which could make shares of our common stock less attractive to some investors or otherwise harm our stock price.

Under the rules of the NYSE, a company in which over 50% of the voting power is held by an individual, a group or another company is a "controlled company" and is not required to have:

- a majority of its board of directors be independent directors;
- a compensation committee, or to have such committees be composed entirely of independent directors; and
- a nominating and corporate governance committee, or to have such committee composed entirely of independent directors.

In October 2016, our board determined that it was in the best interests of the company to establish a compensation, nominating and corporate governance committee. In light of our status as a controlled company, we currently rely on the NYSE exemptions with respect to board, compensation committee and nominating and corporate governance committee independence.

Because we are a controlled company, you will not have the same protections afforded to shareholders of companies that are subject to all of the corporate governance requirements of the NYSE without regard to the exemptions available for "controlled companies." Our status as a controlled company could make our shares of common stock less attractive to some investors or otherwise harm our stock price.

Our dividend policy is subject to the discretion of our board of directors and may be limited by our debt agreements and limitations under New York law.

Although we currently anticipate paying a regular quarterly dividend, any such determination to pay dividends is at the discretion of our board of directors and dependent on conditions such as our financial condition, earnings, legal requirements, including limitations under New York law, restrictions in our debt agreements that limit our ability to pay dividends to shareholders and other factors the board of directors deem relevant. Our board of directors may, in its sole discretion, change the amount or frequency of dividends or discontinue the payment of dividends entirely. For these reasons, investors may not be able to rely on dividends to receive a return on their investments.

If we are unable to implement and maintain effective internal control over financial reporting in the future, investors may lose confidence in the accuracy and completeness of our financial reports and the trading price of our common stock may be negatively affected.

As a public company, we are subject to reporting, disclosure control and other obligations under the Exchange Act, the Sarbanes-Oxley Act, or SOX, the Dodd-Frank Act, as well as rules adopted, and to be adopted, by the SEC and the NYSE. For example, beginning with the 2016 Annual Report on Form 10-K, Section 404 of SOX requires our management to report on the effectiveness of our internal control over financial reporting and our independent registered public accounting firm to attest to the effectiveness of our internal controls. Our management and other personnel will continue to devote a substantial amount of time to these compliance activities. If we are not able to comply with the requirements of Section 404 in a timely manner or if we are unable to conclude that our internal control over financial reporting is effective, our ability to accurately report our cash flows, results of operations or financial condition could be inhibited and additional financial and management resources could be required. Any failure to maintain internal control over financial reporting or if our independent registered public accounting firm determines the we have a material weakness or significant deficiency in our internal control over financial reporting, could cause investors to lose confidence in the accuracy and completeness of our financial reports, a decline in the market price of our common stock, or subject us to sanctions or investigations by the NYSE, the SEC or other regulatory authorities. Failure to remedy any material weakness or significant deficiency in our internal control over financial reporting, or to implement or maintain other effective control systems required of public companies, could also restrict our future access to the capital markets and reduce or eliminate the trading market for our common stock. Further, as a result of becoming a public company, we have incurred and will continue to incur higher legal, accounting and other expenses than we did as a private company, and these expenses may increase even more in the future.

Item 1B. ***Unresolved Staff Comments.***

None

Item 2. ***Properties.***

We have included descriptions of the location and general character of our principal physical operating properties by segment in "Item 1. *Business*", which is incorporated herein by reference. The principal offices of AVANGRID and Networks are located in Orange, Connecticut, Portland, Maine, and Rochester, New York, while Renewables' headquarters is located in Portland, Oregon.

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In addition, AVANGRID and its subsidiaries have various administrative offices located throughout the United States. AVANGRID leases part of its administrative and local offices.

The following table sets forth the principal properties of AVANGRID, by location, type, lease or ownership and size as of December 31, 2018:

Location	Type of Facility	Lease/Owned	Size (square feet)
Orange, Connecticut	Office	Owned	127,310
Augusta, Maine	Office	Leased	220,400
Portland, Maine	Office	Leased	16,462
Rochester, New York	Office	Owned	122,494
Portland, Oregon	Office	Leased	76,150

We believe that our office facilities are adequate for our current needs and that additional office space can be obtained if necessary.

Item 3. ***Legal Proceedings.***

For information with respect to this item see Notes 13 and 14 of our consolidated financial statements included in Part II, Item 8, "Financial Statements and Supplementary Data" of this Annual Report on Form 10-K, which information is incorporated herein by reference.

Item 4. ***Mine Safety Disclosures.***

Not applicable.

Executive Officers of AVANGRID

The names and ages of all executive officers of AVANGRID as of March 1, 2019 and a brief account of the business experience during the past five years of each executive officer are as follows:

Name	Age (1)	Title
James P. Torgerson	66	Chief Executive Officer
Douglas K. Stuver	55	Senior Vice President – Chief Financial Officer
Scott M. Tremble	39	Senior Vice President – Controller
Laura Beane	44	President and Chief Executive Officer of Renewables
Douglas A. Herling	55	President and Chief Executive Officer of CMP
Peter T. Church	46	Senior Vice President – Human Resources & Corporate Administration
Ignacio Estella	49	Senior Vice President – Corporate Development
Robert D. Kump	57	President and Chief Executive Officer of Networks
Carl A. Taylor	54	President and Chief Executive Officer of NYSEG and RG&E
R. Scott Mahoney	53	Senior Vice President – General Counsel and Corporate Secretary
Anthony Marone	55	President and Chief Executive Officer of UIL

(1) Age as of December 31, 2018.

James P. Torgerson. Mr. Torgerson was appointed Chief Executive Officer of AVANGRID on December 16, 2015, upon consummation of the acquisition of UIL. Previously, Mr. Torgerson served as president and chief executive officer of UIL since 2006. Prior to 2006, Mr. Torgerson was president and chief executive officer of Midwest Independent Transmission System Operator. Mr. Torgerson serves as the chair of the board of directors of the American Gas Association and as a trustee of the Yale-New Haven Hospital, a Director of Yale New Haven Health System, board and executive committee member of the Edison Electric Institute, and trustee of the Hartford Bishops' Foundation for the Archdiocese of Hartford. Mr. Torgerson is the former chairman and director of the Connecticut Business and Industry Association and the former chairman of the Connecticut Institute for the 21st Century. Mr. Torgerson holds a bachelor's of business administration degree in accounting from Cleveland State University.

Douglas K. Stuver. Mr. Stuver was appointed Senior Vice President - Chief Financial Officer of AVANGRID on July 8, 2018, and is responsible for AVANGRID's investor relations corporate communications, risk management, treasury and purchasing

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divisions. Mr. Stuver joined AVANGRID in 2015 and served as Vice President – Controller of Avangrid Renewables, LLC. Prior to joining the Company, he served as chief financial officer of the Company's prior affiliate, PacifiCorp, from 2008 to 2015. Mr. Stuver graduated magna cum laude with a B.A. from University of Pittsburgh and is a Certified Public Accountant (inactive status).

Scott M. Tremble. Mr. Tremble was appointed Senior Vice President – Controller of AVANGRID on May 1, 2018, and is responsible for the execution and recording of AVANGRID's transactional processes while meeting mandatory reporting requirements and tax obligations. Mr. Tremble joined the Company as chief accounting officer of Avangrid Management Company, LLC, a wholly-owned subsidiary of AVANGRID, in 2015, and was responsible for oversight in the areas of consolidation, financial reporting, internal controls, technical accounting, and corporate accounting for the Company. From 2014 to 2015, he served as the international controller of Cole Haan LLC. Mr. Tremble started his career at PricewaterhouseCoopers in October 2002 and served various roles, including, most recently, as senior manager in the assurance practice. Mr. Tremble received his B.S. in Accountancy from Bentley University and is a Certified Public Accountant.

Laura Beane. Ms. Beane was appointed President and Chief Executive Officer of Renewables on April 25, 2017. She was formerly Vice President, Operations and Management Services at Avangrid Renewables from September 2015 to May 2017. Ms. Beane was Director of Market Structure/Policy at Avangrid Renewables from February 2007 to September 2015. Prior to joining Iberdrola/Avangrid Renewables, Ms. Beane worked for the Company's prior affiliate, PacifiCorp, where she held regulatory and project management positions beginning in 1995. Ms. Beane graduated with distinction from the Comillas and Strathclyde universities as part of Iberdrola's first MBA program in the Global Energy Industry cohort and has also earned an MBA and Bachelor of Science degree from the University of Utah.

Douglas A. Herling. Mr. Herling was appointed President and Chief Executive Officer of CMP effective January 2, 2018. Mr. Herling also has functional responsibility for AVANGRID's electrical operations. Previously, Mr. Herling served as Networks vice president – electric operations from 2016 to 2017. From 2001 to 2016 Mr. Herling held various executive management positions at Avangrid Networks and CMP, including vice president – special projects, vice president – engineering & asset management, and engineering and vice president of CMP field operations. Mr. Herling joined CMP in 1985. Mr. Herling earned his Bachelor of Science degree in Marine Engineering from the Maine Maritime Academy.

Peter T. Church. Mr. Church was appointed Senior Vice President – Human Resources & Corporate Administration of AVANGRID on October 31, 2018, and is responsible for ensuring that human resources strategies and initiatives support AVANGRID's mission and objectives, overseeing all aspects of human resources management, practices and operations, and coordinates AVANGRID's other corporate administrative functions including health and safety, general services, and information technology and systems. Prior to joining AVANGRID, Mr. Church held a number of executive positions at UnitedHealth Group from 2012 to 2018 including serving as the Chief Talent Officer, Vice President, Human Capital - Commercial Markets, and Vice President, Talent Acquisition and Workforce Insights. Mr. Church earned both a Bachelor of Arts in Psychology as well as a Master of Arts in General/Experimental Psychology from the University of Hartford.

Ignacio Estella. Mr. Estella was appointed Senior Vice President – Corporate Development of AVANGRID on December 17, 2015, and is responsible for delivering non-organic growth opportunities for the Company beyond those of its present businesses. Previously, Mr. Estella served as corporate vice president of business origination of Iberdrola from May 2009 until November 2013 and vice president – corporate development of Iberdrola USA, Inc., from December 2013 to December 16, 2015. He served as gas markets development director of Iberdrola between February 2007 and April 2009. Mr. Estella holds a degree in law and business administration from the Universidad Pontificia Comillas and a Master of Public Administration, with concentration in industry analysis and strategic negotiation from Harvard University.

Robert D. Kump. Mr. Kump was appointed President and Chief Executive Officer of Networks in November 2010. Mr. Kump served as AVANGRID's Chief Corporate Officer from January 2014 to December 2016. Mr. Kump also has served as a director of AVANGRID's subsidiaries CMP, NYSEG, and RG&E since 2009, as the President of the Avangrid Management Company, LLC since March 2012, and as the Chief Executive Officer of Avangrid Service Company since October 2009. Mr. Kump held various positions from February 1997 to October 2009 as AVANGRID's senior vice president and chief financial officer, vice president, controller and chief accounting officer, treasurer and secretary. Mr. Kump also previously held a number of positions at NYSEG from 1986 to 1997, including senior accountant-external financial reporting, director-investor relations, director-financial services, and treasurer. Mr. Kump earned a B.A. in accounting from Binghamton University and is a C.P.A. in New York.

Carl A. Taylor. Mr. Taylor was appointed President and Chief Executive Office of NYSEG and RG&E on June 30, 2017, and has functional responsibility for AVANGRID's gas operations. Previously, Mr. Taylor served as Vice President of Customer Service of AVANGRID. Mr. Taylor started with NYSEG in 1987 as an electrical engineer in the generation planning area and progressed through positions of increasing seniority in the organization including president of NYSEG Solutions, Inc., a subsidiary

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of NYSEG. He earned a Bachelor of Electrical Engineering Degree from Rochester Institute of Technology and a Master's of Business Administration Degree from State University of New York at Binghamton.

R. Scott Mahoney. Mr. Mahoney was appointed Senior Vice President – General Counsel of AVANGRID on December 17, 2015. He was appointed Secretary of AVANGRID on January 27, 2016, and previously served as vice president-general counsel and secretary of Networks. Mr. Mahoney previously served as Deputy General Counsel and Chief FERC Compliance Officer for AVANGRID from January 2007 to June 2012, and previously served in legal and senior executive positions at AVANGRID subsidiaries from October 1996 until January 2007. Mr. Mahoney also serves on the board of directors of the Gulf of Maine Research Institute. Mr. Mahoney earned a B.A. from St. Lawrence University, a J.D. from the University of Maine, a master's degree in environmental law from the Vermont Law School, and a postgraduate diploma in business administration from the University of Warwick. He has received bar admission to the State of Maine, the State of New York, the U.S. Court of Appeals, the U.S. District Court and the U.S. Court of Military Appeals.

Anthony Marone. Mr. Marone was appointed President and Chief Executive Officer of UIL on September 9, 2016. In this role, he has overall responsibility for Avangrid Networks' electric and natural gas operating companies in Connecticut and Massachusetts and functional responsibility for AVANGRID's regulatory and asset management and planning. Mr. Marone also serves as President – Connecticut and Massachusetts Operations of Networks. Previously Mr. Marone served as senior vice president of customer and business services of UIL since May 14, 2013. Mr. Marone served as senior vice president – business services of UI and vice president of business services of UIL from November 16, 2010 to May 2013. Mr. Marone received his master's degree in engineering and business management from the University of New Haven and a bachelor's degree in mechanical engineering from the New York Institute of Technology.

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PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.

Market Information and Holders

Our shares of common stock began trading on the NYSE on December 17, 2015, under the symbol "AGR." Prior to that time, there was no public market for shares of our common stock.

As of February 27, 2019, there were 3,337 shareholders of record.

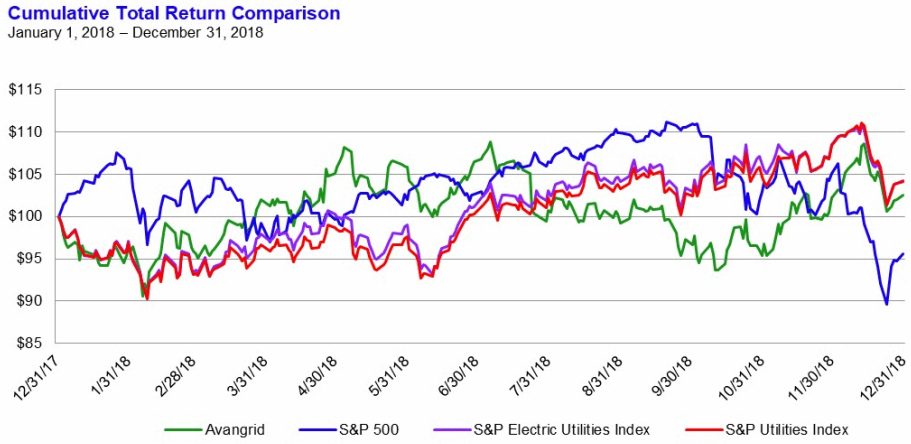
Dividends

AVANGRID expects to continue paying quarterly cash dividends, although there is no assurance as to the amount of future dividends which depends on future earnings, capital requirements and financial condition.

Further information regarding payment of dividends is provided in "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" of this Annual Report on Form 10-K.

Performance Graph

The line graph appearing below compares the change in AVANGRID's total shareowner return on its shares of common stock with the return on the S&P Composite-500 Stock Index, the S&P Electric Utilities Index and the S&P Utilities Index for the period January 1, 2018 through December 31, 2018.



	January 1, 2018	December 31, 2018
AVANGRID	$ 100.00	$ 102.52
S&P 500	$ 100.00	$ 95.61
S&P Electric Utilities Index	$ 100.00	$ 104.21
S&P Utilities Index	$ 100.00	$ 104.11

The above information assumes that the value of the investment in shares of AVANGRID's common stock and each index was $100 on January 1, 2018, including dividend reinvestment during this time period. The changes displayed are not necessarily indicative of future returns.

Recent Sales of Unregistered Securities

None.

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Issuer Repurchases of Equity Securities

There were no repurchases of common stock of AVANGRID during the fourth quarter of the year ended December 31, 2018.

Equity Compensation Plan Information

For information regarding securities authorized for issuance under equity compensation plans, see Part III, Item 12 of this Annual Report on Form 10-K.

Item 6. *Selected Financial Data*

The following selected consolidated financial data should be read in conjunction with the consolidated financial statements and the notes thereto in Item 8 of Part II, "Financial Statements and Supplementary Data," and the information contained in Item 7 of Part II, "Management's Discussion and Analysis of Financial Condition and Results of Operations." Historical results are not necessarily indicative of future results.

As a result of the adoption of the amendments to improve the presentation of net periodic pension cost and net periodic postretirement benefit cost, we have reclassified the non-service components of those costs from operations and maintenance to other expense within the consolidated statements of income for all periods. For further details, refer to Note 3 in our consolidated financial statements included in this Annual Report on Form 10-K. Accordingly, we have applied these amendments retrospectively to prior periods and the following tables include our revised selected historical consolidated statements of income data for the years ended December 31, 2017, 2016, 2015 and 2014.

	Year Ended December 31, (millions, except per share data)				
Consolidated Statements of Income Data:*	**2018**	**2017**	**2016**	**2015**	**2014**
Operating Revenues	**$ 6,478**	**$ 5,963**	**$ 6,018**	**$ 4,367**	**$ 4,594**
Operating Income	1,127	505	1,194	599	930
Income Before Income Tax	**768**	**123**	**1,009**	**302**	**707**
Income tax expense (benefit)	170	(259)	377	29	275
Net Income	**598**	**382**	**632**	**273**	**432**
Less: Net income attributable to noncontrolling interests	3	1	—	—	—
Net Income Attributable to Avangrid, Inc.	**$ 595**	**$ 381**	**$ 632**	**$ 273**	**$ 432**
Total Earnings Per Common Share, Basic and Diluted	$ 1.92	$ 1.23	$ 2.04	$ 1.07	$ 1.71
Weighted-average Number of Common Shares Outstanding:					
Basic	309,503,319	309,502,861	309,512,553	254,588,212	252,235,232
Diluted	309,712,628	309,661,883	309,817,322	254,605,111	252,235,232

Consolidated Balance Sheet Data:*	(millions)				
As of December 31,	**2018**	**2017**	**2016**	**2015**	**2014**
(Millions)					
Total Property, Plant and Equipment	**$ 23,459**	**$ 22,669**	**$ 21,548**	**$ 20,711**	**$ 17,133**
Total Other Assets	**3,675**	**3,589**	**3,976**	**3,795**	**2,075**
Total Assets	**$ 32,167**	**$ 31,671**	**$ 31,309**	**$ 30,743**	**$ 24,162**

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As of December 31, (Millions)	2018	2017	2016	2015	2014
			(millions)		
Liabilities					
Current portion of debt	$ 394	$ 183	$ 349	$ 206	$ 148
Non-current debt	5,368	5,196	4,510	4,530	2,489
Total Liabilities	**16,764**	**16,575**	**16,101**	**15,593**	**11,607**
Total Stockholders' Equity	**15,104**	**15,077**	**15,195**	**15,137**	**12,538**
Total Equity	**$ 15,403**	**$ 15,096**	**$ 15,208**	**$ 15,150**	**$ 12,555**

*Selected financial data for UIL is included from December 16, 2015.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

You should read the following discussion of our financial condition and results of operations in conjunction with the consolidated financial statements and the notes thereto included elsewhere in this Annual Report on Form 10-K . In addition to historical consolidated financial information, the following discussion contains forward-looking statements that reflect our plans, estimates and beliefs. Our actual results could differ materially from those discussed in the forward-looking statements. Factors that could cause or contribute to these differences include those discussed below and elsewhere in this Annual Report on Form 10-K, particularly in Part I, Item 1A, "Risk Factors."

AVANGRID is a leading sustainable energy company with approximately $32 billion in assets and operations in 24 states. AVANGRID has two primary lines of business - Avangrid Networks and Avangrid Renewables. Avangrid Networks owns eight electric and natural gas utilities, serving approximately 3.2 million customers in New York and New England. Avangrid Renewables owns and operates 7.2 gigawatts of electricity capacity, primarily through wind power, with a presence in 22 states across the United States. AVANGRID supports the achievement of the Sustainable Development Goals approved by the member states of the United Nations, and earned the Compliance Leader Verification certification from the Ethisphere Institute, a third party verification of its ethics and compliance program. AVANGRID employs approximately 6,500 people. Iberdrola S.A., a corporation *(sociedad anónima)* organized under the laws of the Kingdom of Spain, a worldwide leader in the energy industry, directly owns 81.5% of outstanding shares of AVANGRID common stock. AVANGRID's primary business is ownership of its operating businesses, which are described below.

Our direct, wholly-owned subsidiaries include Avangrid Networks, Inc., or Networks, and Avangrid Renewables Holdings, Inc., or ARHI. ARHI in turn holds subsidiaries including Avangrid Renewables, LLC, or Renewables. Networks owns and operates our regulated utility businesses through its subsidiaries, including electric transmission and distribution and natural gas distribution, transportation and sales. Renewables operates a portfolio of renewable energy generation facilities primarily using onshore wind power and also solar, biomass and thermal power.

In December 2017, our management committed to a plan to sell the gas storage and trading businesses because they represented non-core businesses that are not aligned with our strategic objectives. At that time, we determined that the assets and liabilities associated with our gas trading and storage businesses met the criteria for classification as assets held for sale, but did not meet the criteria for classification as discontinued operations. On March 1, 2018, the Company closed a transaction to sell Enstor Energy Services, LLC, which operated AVANGRID's gas trading business, to CCI U.S. Asset Holdings LLC, a subsidiary of Castleton Commodities International, LLC. On May 1, 2018, the Company closed a transaction to sell Enstor Gas, LLC, which operated the AVANGRID's gas storage business, to Amphora Gas Storage USA, LLC. The agreement included, among other things, a transition services agreement that obligates ARHI to provide certain transition services for up to one year after the closing date. Additional details on held for sale classification are provided in Note 26 to our consolidated financial statements contained in this Annual Report on Form 10-K.

On December 16, 2015, we completed our acquisition of UIL. Immediately following the completion of the acquisition, former UIL shareowners owned 18.5% of the outstanding shares of common stock of AVANGRID, and Iberdrola owned the remaining shares. The acquisition was accounted for as a business combination. The results of operations of UIL since December 16, 2015, the acquisition date, have been included in the consolidated results of AVANGRID. Effective as of April 30, 2016, UIL and its subsidiaries were transferred to a wholly-owned subsidiary of Networks.

Through Networks, we own electric generation, transmission and distribution companies and natural gas distribution, transportation and sales companies in New York, Maine, Connecticut and Massachusetts, delivering electricity to approximately 2.2 million electric utility customers and delivering natural gas to approximately 1.0 million natural gas public utility customers as of December 31, 2018.

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Networks, a Maine corporation, holds our regulated utility businesses, including electric transmission and distribution and natural gas distribution, transportation and sales. Networks serves as a super-regional energy services and delivery company through the eight regulated utilities it owns directly:

- New York State Electric & Gas Corporation, or NYSEG, which serves electric and natural gas customers across more than 40% of the upstate New York geographic area;
- Rochester Gas and Electric Corporation, or RG&E, which serves electric and natural gas customers within a nine-county region in western New York, centered around Rochester;
- The United Illuminating Company, or UI, which serves electric customers in southwestern Connecticut;
- Central Maine Power Company, or CMP, which serves electric customers in central and southern Maine;
- The Southern Connecticut Gas Company, or SCG, which serves natural gas customers in Connecticut;
- Connecticut Natural Gas Corporation, or CNG, which serves natural gas customers in Connecticut;
- The Berkshire Gas Company, or BGC, which serves natural gas customers in western Massachusetts; and
- Maine Natural Gas Corporation, or MNG, which serves natural gas customers in several communities in central and southern Maine.

Through Renewables, we had a combined wind, solar and thermal installed capacity of 7,218 megawatts, or MW, as of December 31, 2018, including Renewables' share of joint projects, of which 6,466 MW was installed wind capacity. Approximately 71% of the capacity was contracted as of December 31, 2018, for an average period of 8.5 years. Being among the top three largest wind operators in the United States based on installed capacity as of December 31, 2018, Renewables strives to lead the transformation of the U.S. energy industry to a sustainable, competitive, clean energy future. Renewables currently operates 57 wind farms in 21 states across the United States.

Summary of Results of Operations

Our operating revenues increased by 9%, from $5,963 million for the year ended December 31, 2017, to $6,478 million for the year ended December 31, 2018.

Networks business revenues increased due to the impact of higher customer rates and an increase in degree days. Renewables had an increase in revenue mainly due to an increase in wind generation along with higher average prices in the period.

Net income attributable to AVANGRID increased by 56% from $381 million for the year ended December 31, 2017, to $595 million for the year ended December 31, 2018, which is driven primarily by loss from measurement of assets held for sale in connection with the sale of the gas trading and storage businesses recorded in 2017. Networks net income slightly decreased primarily due to higher non-deferrable storm costs and the associated impacts including lower capitalized labor in the period. Lower net income of Renewables is primarily driven by an impact from remeasurment due to Tax Act implications in 2017.

Adjusted net income (a non-GAAP financial measure) increased by less than 1%, from $682 million for the year ended December 31, 2017 to $684 million for the year ended December 31, 2018. The increase is primarily due to a $65 million increase in Renewables due to increased wind generation in the period, offset by a $21 million decrease in Networks driven by higher non-deferrable storm costs and the associated impacts including lower capitalized labor in the period, $42 million decrease in Corporate mainly driven by lower interest income on intercompany loans due to the sale of the gas business in 2018 and higher income tax expense from an effective tax rate adjustment.

For additional information and reconciliation of the non-GAAP adjusted net income to net income attributable to AVANGRID, see "— *Non-GAAP Financial Measures*".

See "—*Results of Operations*" for further analysis of our operating results for the year.

Our financial condition and financing capability will be dependent on many factors, including the level of income and cash flow of its subsidiaries, conditions in the bank and capital markets, economic conditions, interest rates and legislative and regulatory developments.

Networks

Electric Transmission and Distribution and Natural Gas Distribution

The operating subsidiaries of Networks are regulated electric distribution and transmission and natural gas transportation and distribution utilities whose structure and operations are significantly affected by legislation and regulation. The FERC regulates, under the FPA, the interstate transmission and wholesale sale of electricity by these regulated utilities, including transmission rates and allowed ROE on transmission assets. Further, the distribution rates and allowed ROEs for Networks' regulated utilities in New York, Maine, Connecticut and Massachusetts are subject to regulation by the NYPSC, the MPUC, PURA and DPU, respectively. Legislation and regulatory decisions implementing legislation establish a framework for Networks' operations. Other

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factors affecting Networks' financial results are operational matters, such as the ability to manage expenses, uncollectibles and capital expenditures, in addition to major weather disturbances and environmental regulation. Networks expects to continue to make significant capital investments in its distribution and transmission infrastructure.

Pursuant to Maine law, CMP earns revenue for the delivery of energy to its retail customers, but is prohibited from selling power to them. CMP generally does not enter into purchase or sales arrangements for power with ISO-NE, the New England power pool, or any other ISO or similar entity. CMP generally sells all of its power entitlements under its nonutility generator and other PPAs to unrelated third parties under bilateral contracts. If the MPUC does not approve the terms of bilateral contracts, it can direct CMP to sell power entitlements that it receives from those contracts on the spot market through ISO-NE. NYSEG and RG&E enter into power purchase and sales transactions with the NYISO to have adequate supplies for their customers who choose to purchase energy directly from them. Customers may also choose to purchase energy from other energy supply companies.

Under Connecticut law, UI's retail electricity customers are able to choose their electricity supplier while UI remains their electric distribution company. UI purchases power for those of its customers under standard service rates who do not choose a retail electric supplier and have a maximum demand of less than 500 kilowatts and its customers under supplier of last resort service for those who are not eligible for standard service and who do not choose to purchase electric generation service from a retail electric supplier. The cost of the power is a "pass-through" to those customers through the generation services charge on their bills.

UI has wholesale power supply agreements in place for its entire standard service load for the first half of 2019, 80% of its standard service load for the second half of 2019 and 20% of its standard service load for the first half of 2020. Supplier of last resort service is procured on a quarterly basis and UI has a wholesale power supply agreement in place for the second quarter of 2019. However, from time to time there are no bidders in the procurement process for supplier of last resort service and in such cases UI manages the load directly.

For additional information regarding Networks, including a comprehensive overview of our regulated businesses, please see the section entitled, "Business—Networks" in Part I, Item 1 in this report.

Revenues

Networks utilizes regulatory deferrals to evaluate its financial condition and operating performance by reconciling differences between actual revenue received or cost incurred with the rate allowances provided under the tariffs set by the state utilities commissions and the FERC. Regulatory deferrals create regulatory assets and liabilities under the FERC, consistent with generally accepted accounting principles for financial reporting in the United States, or U.S. GAAP. Regulatory deferrals in New York include electric and gas supply costs, PPAs, net plant reconciliations (downward only), revenue decoupling, system benefit charges, RPS, energy efficiency portfolio standards, economic development programs, earnings sharing mechanism, low income programs, pension costs, other post-employment benefits costs, environmental remediation costs, major storm costs, distribution vegetation management costs (downward only), research and development, incremental maintenance initiatives (downward only), property taxes, Reforming the Energy Vision, or REV, initiatives, Nuclear Electric Insurance Limited credits, credit and debit card fees, exogenous costs and certain legislative, accounting, regulatory and tax related actions. Regulatory deferrals in Maine include stranded costs, revenue decoupling, power tax regulatory asset, environmental remediation, storm reserve accounting, electric thermal storage pilot costs, standard offer retainage costs, AMI opt-out program costs, AMI deferral costs, AMI legal / health proceeding costs, conservation program costs, demand side management costs, low income program costs, electric lifeline program costs, make-ready line extension costs, electric vehicle pilot program costs and transmission planning and related cost allocation.

Regulatory deferrals in Connecticut include electric and gas supply costs, PPAs, revenue decoupling, earnings sharing mechanism, system benefit charges, certain hardship bad debt expense, transmission revenue requirements, gas distribution integrity management program costs, gas system expansion costs, certain public policy costs, certain environmental remediation costs, major storm costs and certain legislative, accounting, regulatory and tax related actions.

Regulatory deferrals in Massachusetts include gas supply costs, gas supply-related bad debt costs, environmental remediation costs, arrearage management program costs, gas system enhancement program costs, energy efficiency program costs and certain other public policy costs.

NYSEG's and RG&E's electric and natural gas rate plans and CMP's and UI's electric rates and CNG's gas rates, each contain an RDM under which their actual energy delivery revenues are compared on a periodic basis with the authorized delivery revenues and the difference accrued, with interest, for refund to or recovery from customers, as applicable. Effective January 1, 2018, SCG has implemented an RDM pursuant to the PURA approved amended settlement agreement dated June 30, 2017.

NYSEG, RG&E and UI are energy delivery companies and also provide energy supply as providers of last resort. Energy costs that are set on the wholesale markets are passed on to consumers. The difference between actual energy costs that are incurred

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and those that are initially billed are reconciled in a process that results in either immediate or deferred tariff adjustments. These procedures apply to other costs, which are in most cases exceptional, such as the effects of extreme weather conditions, environmental factors, regulatory and accounting changes and treatment of vulnerable customers, that are offset in the tariff process.

Pursuant to agreements with, or decisions of the NYPSC and the MPUC, Networks' Maine and New York regulated utilities are each subject to a minimum equity ratio requirement that is tied to the capital structure assumed in establishing revenue requirements. Pursuant to these requirements, each of NYSEG, RG&E, CMP and MNG must maintain a minimum equity ratio equal to the ratio in its currently effective rate plan or decision measured using a trailing 13-month average. On a monthly basis, each utility must maintain a minimum equity ratio of no less than 300 basis points below the equity ratio used to set rates. The minimum equity ratio requirement has the effect of limiting the amount of dividends that can be paid if the minimum equity ratio is not maintained and can, under certain circumstances, require that AVANGRID contribute equity capital. For CMP and MNG, equity distributions that would result in equity falling below the minimum level are prohibited. For NYSEG and RG&E, equity distributions that would result in a 13-month average common equity less than maximum equity ratio, utilized for the earnings sharing mechanism, or ESM, are prohibited if the credit rating of NYSEG, RG&E, AVANGRID or Iberdrola are downgraded by a nationally recognized rating agency to the lowest investment grade with a negative watch or downgraded to noninvestment grade. UI, SCG, CNG and BGC may not pay dividends if paying such dividend would result in a common equity ratio lower than 300 basis points below the equity percentage used to set rates in the most recent distribution rate proceeding as measured using a trailing 13-month average calculated as of the most recent quarter end. In addition, UI, SCG, CNG and BGC are prohibited from paying dividends to their parent if the utility's credit rating, as rated by any of the three major credit rating agencies, falls below investment grade, or if the utility's credit rating, as determined by two of the three major credit rating agencies, falls to the lowest investment grade and there is a negative watch or review downgrade notice. We believe that these minimum equity ratio requirements do not present any material risk with respect to our performance, cash flow or ability to pay quarterly dividends. In the ordinary course, Networks utilities manage their capital structures to allow the maximum level of returns consistent with the levels of equity authorized to set rates, and accordingly, compliance with these requirements does not alter ordinary equity level management. Additionally, the lower monthly minimum equity ratio requirement (a cushion of 300 basis points) provides flexibility to have short-term fluctuations that result in temporary shortfalls of the maximum equity ratio in any given month. The regulated utility subsidiaries are also prohibited by regulation from lending to unregulated affiliates.

Rates

In December 2016, PURA approved distribution rate schedules for UI for three years that became effective January 1, 2017, and which, among other things, provides for annual tariff increases and an ROE of 9.10% based on a 50% equity ratio, continued UI's existing ESM pursuant to which UI and its customers share on a 50/50 basis all distribution earnings above the allowed ROE in a calendar year, continued the existing decoupling mechanism, and approved the continuation of the requested storm reserve. Any dollars due to customers from the ESM continue to be first applied against any storm regulatory asset balance (if one exists at that time) or refunded to customers through a bill credit if such storm regulatory asset balance does not exist.

In December 2017, PURA approved new tariffs for SCG effective January 1, 2018, for a three-year rate plan with rate increases of $1.5 million, $4.7 million and $5.0 million in 2018, 2019, and 2020, respectively. The new tariffs also include an RDM and Distribution Integrity Management Program, or DIMP, a mechanism similar to the mechanisms authorized for CNG, ESM, the amortization of certain regulatory liabilities (most notably accumulated hardship deferral balances and certain accumulated deferred income taxes) and tariff increases based on a ROE of 9.25% and approximately 52% equity level. Any dollars due to customers from the ESM will be first applied against any environmental regulatory asset balance as defined in the settlement agreement (if one exists at that time) or refunded to customers through a bill credit if such environmental regulatory asset balance does not exist.

On June 29, 2018, CNG filed an application with PURA for new tariffs to become effective January 1, 2019. On August 30, 2018, CNG entered into a settlement agreement with the Office of Consumer Counsel and PURA prosecutorial staff that provides for new rates effective January 1, 2019. The settlement agreement was approved by PURA on December 19, 2018. The settlement agreement included an increase in rates of $9.9 million in 2019, an incremental increase of $4.6 million in 2020 and an incremental increase of $5.2 million in 2021, for a total increase of $19.7 million over the three-year rate plan. The settlement agreement is based on an ROE of 9.30%, and an equity ratio of 54% in 2019, 54.50% in 2020 and 55% in 2021.

BGC's rates are established by the DPU. BGC's ten-year rate plan, which was approved by the DPU and included an approved ROE of 10.5%, expired on January 31, 2012. BGC continues to charge the rates that were in effect at the end of the rate plan.

On May 17, 2018, BGC filed a petition with the DPU seeking approval of a distribution rate increase to be effective January1, 2019. On December 4, 2018, BGC and the Massachusetts Attorney General's Office filed a settlement agreement with the DPU. The settlement agreement provides for a $1.6 million distribution base rate increase effective January 1, 2019, or February 1, 2019

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if the DPU did not approve the settlement agreement prior to January 1, 2019, and an additional $0.7 million base distribution increase effective November 1, 2019, if certain investments are made by BGC. The settlement agreement contained a make-whole provision if the DPU approved the agreement after January 1, 2019. The distribution rate increase is based on a 9.70% ROE and 55% equity ratio. The settlement agreement provides for the implementation of a RDM and pension expense tracker and also provides that BGC will not file to change base distribution to become effective before November 1, 2021. The settlement agreement was approved by the DPU on January 18, 2019.

On May 20, 2015, NYSEG and RG&E initiated a distribution rate case to ensure that the companies are able to continue to provide safe, adequate and reliable service, continue to make investments to modernize infrastructure, enhance low income programs and improve both gas and electric reliability, while maintaining their financial integrity. On February 19, 2016, the NYSEG, RG&E and other signatory parties filed a Joint Proposal, with the NYPSC for a three-year rate plan for electric and gas service at NYSEG and RG&E commencing May 1, 2016, which was approved on June 15, 2016 by the NYPSC. The Joint Proposal balanced the varied interests of the signatory parties including but not limited to maintaining the companies' credit quality and mitigating the rate impacts to customers. The proposal reflects many customer attributes including acceleration of the companies' natural gas leak prone main replacement programs and increased electric vegetation management to provide continued safe and reliable service. The delivery rate increase in the proposal can be summarized as follows:

	May 1, 2016		May 1, 2017		May 1, 2018	
Utility	Rate Increase (Millions)	Delivery Rate Increase %	Rate Increase (Millions)	Delivery Rate Increase %	Rate Increase (Millions)	Delivery Rate Increase %
NYSEG Electric	$ 29.6	4.10%	$ 29.9	4.10%	$ 30.3	4.10%
NYSEG Gas	$ 13.1	7.30%	$ 13.9	7.30%	$ 14.8	7.30%
RG&E Electric	$ 3.0	0.70%	$ 21.6	5.00%	$ 25.9	5.70%
RG&E Gas	$ 8.8	5.20%	$ 7.7	4.40%	$ 9.5	5.20%

The allowed rate of return on common equity for NYSEG Electric, NYSEG Gas, RG&E Electric and RG&E Gas is 9.00%. The equity ratio for each company is 48%; however, the actual equity ratio of up to 50% is used for earnings sharing calculation purposes. The customer share of any earnings above allowed levels increases as ROE increases, with customers receiving 50%, 75% and 90% of earnings over 9.5%, 10.0% and 10.5% ROE, respectively, in the first rate year covering the period May 1, 2016 – April 30, 2017. The earnings sharing levels increase in rate year two (May 1, 2017 – April 30, 2018) to 9.65%, 10.15% and 10.65% ROE, respectively. The earnings sharing levels further increase in rate year three (May 1, 2018 – April 30, 2019) to 9.75%, 10.25% and 10.75% ROE, respectively. The Joint Proposal reflects the recovery of deferred NYSEG Electric storm costs of approximately $262 million, of which $123 million will be amortized over ten years and the remaining $139 million will be amortized over five years. The Joint Proposal also continues reserve accounting for qualifying major storms ($21.4 million annually for NYSEG Electric and $2.5 million annually for RG&E Electric). Incremental maintenance costs incurred to restore service in qualifying divisions will be chargeable to the major storm reserve provided they meet certain thresholds.

The NYSEG and RG&E 2016 three-year rate plan end in April 2019. The companies intend to file rate cases in New York in the second quarter of 2019 for new tariffs effective in the second quarter of 2020.

On August 25, 2014, the MPUC approved a stipulation agreement for a CMP rate change which provided for a distribution rate increase of approximately $24.3 million effective July 1, 2014 with an allowed ROE of 9.45% and an allowed equity ratio of 50%. The stipulation provided for the implementation of an RDM, reserve accounting and sharing of incremental storm costs, a separate proceeding for recovery of a new billing system and no earnings sharing. On March 1, 2018, the MPUC issued a Notice of Investigation initiating a summary investigation into CMP's metering, billing, and customer communications practices. Due to the highly technical nature of CMP's customer billing system, on March 22, 2018 the MPUC issued an Order Initiating Audit commencing a forensic audit of CMP's customer billing system to identify any errors that have, or continue to be resulting in billing inaccuracies. On July 10, 2018, the MPUC issued an Order Modifying Scope of Audit, which expanded the scope of the audit to include the customer communication practices that were originally identified in the Commission's Notice of Investigation. On May 29, 2018, a ten-person complaint was filed with the MPUC against CMP, Networks and AVANGRID. The complaint requested that the MPUC open a rate case to determine if CMP is making excessive returns on investment and, therefore, whether CMP's retail rates should be lower. The complaint also requested the MPUC deny certain costs associated with the October 2017 windstorm. On July 24, 2018, the MPUC issued an order dismissing the complaint and its associated request to deny the recovery of costs associated with the October 2017 windstorm. The order initiated an investigation into CMP's rates and revenue requirement and directed CMP to make a filing consistent with the requirements for a general rate case no later than October 15, 2018. Consistent with the order in the ten-person complaint proceeding, on August 7, 2018, the MPUC issued a Notice of Investigation, opening

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the proceeding in which CMP would make its rate case filing and through which the MPUC will examine the rates and revenue requirements of CMP. On October 15, 2018, CMP filed a general rate case as directed by the MPUC requesting a ROE of 10% and an equity ratio of 55%. The company is proposing to use savings arising out of changes in federal taxation pursuant to the Tax Act, to keep its distribution prices stable while making its electric system more reliable. The MPUC has established a ten-month process to review CMP's filing and we expect a decision in October of 2019. CMP's general rate case filing includes a proposal to enhance the resiliency of the energy grid by expanding vegetation management and pursuing additional reliability measures such as pole replacements and addition of tree wire in selected areas. Such investments are designed to strengthen CMP's power grid so it can better stand up to severe weather. CMP is planning to use savings from the federal Tax Act to pay for the costs of resiliency programs, other investments in infrastructure and certain cost increases since 2014. On December 20, 2018, the MPUC released the findings of the forensic audit of CMP's customer billing system and customer communication practices. On January 14, 2019, the MPUC issued an Order and Notice of Investigation initiating an investigation of CMP's metering and billing practices and initiating a separate investigation of the audit of CMP's customer service and communication practices and incorporating such investigation into the general rate case. We cannot predict the outcome of this matter.

On March 5, 2015, MNG filed a rate case in order to further recover future investments and provide safe and adequate service. On May 3, 2016, all active parties to the case filed a stipulation which settled all matters at issue in the case and reflected a ten-year rate plan through April 30, 2026. The MPUC approved the stipulation on May 17, 2016, for new rates effective June 1, 2016. The settlement structure for non-Augusta customers includes a 34.6% delivery revenue increase over five years with an allowed 9.55% ROE and 50% common equity ratio. The settlement structure for Augusta customers includes a ten-year rate plan with existing Augusta customers being charged rates equal to non-Augusta customers plus a surcharge which increases annually for five years. New Augusta customers will have rates set based on an alternate fuel market model. In year seven of the rate plan MNG will submit a cost of service filing for the Augusta area to determine if the rate plan should continue. This cost of service filing will exclude $15 million of initial 2012/2013 gross plant investment, however the stipulation allows for accelerated depreciation of these assets. If the Augusta area's cost of service filing illustrates results above a 14.55% ROE then the rate plan may cease, otherwise the rate plan would continue. A disallowance for the initial 2012/2013 gross plant investment is not part of the approved stipulation. The reserve of $6 million for this case was reversed in May 2016.

CMP's and UI's electric transmission rates are determined by a tariff regulated by the FERC and administered by ISO-NE. Transmission rates are set annually pursuant to a FERC authorized formula that allows for recovery of direct and allocated transmission operating and maintenance expenses, including return of and on investment in assets. The FERC currently provides an initial base ROE of 10.57% and additional incentive adders applicable to assets based upon vintage, voltage, and other factors.

In September 2011, several New England governmental entities, including PURA, the Connecticut Attorney General and the Connecticut Office of Consumer Counsel, or OCC, filed a joint complaint with the FERC against ISO-NE and several New England Transmission Owners, or NETOs, (including CMP and UI) claiming that the current approved base ROE used in calculating formula rates for transmission service under the ISO-NE Open Access Transmission Tariff, or OATT, by the NETOs of 11.14% was not just and reasonable and seeking a reduction of the base ROE with refunds to customers for the 15-month refund periods beginning October 1, 2011 (Complaint I), December 27, 2012 (Complaint II), July 31, 2014 (Complaint III) and April 29, 2016 (Complaint IV).

Following various intermediate hearings, orders, and appellate decisions, on October 16, 2018, the FERC issued an order directing briefs and proposing a new methodology to calculate the NETOs ROE that is contained in NETOs' transmission formula rate on file at the FERC, or the October 2018 Order. The FERC proposes to use this new methodology to resolve Complaints I, II, III and IV filed by the New England state consumer advocates.

The new proposed ROE methodology set forth in the October 2018 Order considers more than just the two-step discounted cash flow, or DCF, analysis adopted in the FERC order on Complaint I vacated by the Court. The new proposed ROE methodology uses three financial analyses (i.e., DCF, the capital-asset pricing model and the expected earnings analysis) to produce a range of returns to narrow the zone of reasonableness when assessing whether a complainant has met its initial burden of demonstrating that the utility's existing ROE is unjust and unreasonable. The new proposed ROE methodology establishes a range of just and reasonable ROEs of 9.60% to 10.99% and proposes a just and reasonable base ROE of 10.41% with a new ROE cap of 13.08%. Pursuant to the October 2018 Order, the NETOs filed briefs on the proposed methodology in all four Complaints on January 11, 2019. We cannot predict the outcome of this proceeding.

Merger Settlement Agreement – Connecticut and Massachusetts

As part of the process of seeking and obtaining regulatory approval of the acquisition of UIL by AVANGRID in Connecticut and Massachusetts, AVANGRID and UIL reached settlement agreements with the OCC in Connecticut and with the Attorney General of the Commonwealth of Massachusetts and the Department of Energy Resources in Massachusetts, which settlement agreements included commitments of actions to be taken after the transaction closed.

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As a result, the following commitments were made in Connecticut:

- A one-time, $20 million rate credit to customers in 2016, allocated among UI, SCG and CNG customers based on the total number of retail customers.
- Additional rate credits of $1.25 million/year for ten years (2018-2027) to CNG customers.
- Additional rate credits of $0.75 million/year for ten years (2018-2027) to SCG customers.
- $1.6 million in savings to SCG customers, associated with SCG making additional infrastructure capital investments over a three-year period without seeking recovery until the next SCG rate case.
- Agreement not to seek to increase UI distribution base rates effective before January 1, 2017, and agreement not to seek to increase CNG and SCG distribution base rates effective before January 1, 2018.
- Contribution of $2 million/year for three years to the Connecticut Department of Energy and Environmental Protection, or DEEP, to stimulate investment in energy efficiency and clean energy technologies.
- $5 million in benefits to customers resulting from UI recovering only the debt rate rather than the equity return for two years, on an increased $50 million of investment in storm resiliency programs.
- Contribution of $1 million for disaster relief entities.
- Maintaining charitable contribution at historical contribution levels (between $500,000 and $800,000) for at least four years.
- Upon the resolution of all appeals of the PURA decision approving the acquisition, UI will withdraw its appeals of two PURA dockets relating to PURA's disallowance of certain reconciliation amounts. The appeals were withdrawn by UI in June 2016.

In connection with the acquisition proceeding, UI signed the partial consent order related to the investigation and remediation of the English Station site. To the extent that the investigation and remediation is less than $30 million, UI is required to remit to the State of Connecticut the difference between such costs and $30 million, to be applied to a public purpose as determined at the discretion of the Governor, the Attorney General of Connecticut and the Commissioner of DEEP. However, UI is obligated to comply with the consent order even if the cost of such compliance exceeds $30 million. The state may discuss options with UI on recovering or funding any cost above $30 million, such as through public funding or recovery from third parties, however it is not bound to agree to or support any means of recovery or funding.

The following commitments were made in Massachusetts:

- Customers of BGC will receive a total of $4.0 million in rate credits, to be spread over the months of November through April 2016-2017 and November through April 2017-2018.
- BGC will contribute $1 million to alternative heating programs.
- BGC will not seek to increase distribution base rates effective before June 1, 2018.

As a result of the merger settlement agreement we have recorded $44 million as regulatory liabilities relating to the rate credits and an additional $19.8 million as liabilities in 2015.

New England Clear Energy Connect

On February 14, 2018, the New England Clean Energy Connect, or NECEC, transmission project, proposed in a joint bid by CMP and Hydro-Québec, was selected by the Massachusetts electric utilities and the Massachusetts Department of Energy Resources, or DOER, in the Commonwealth of Massachusetts's 83D clean energy Request for Proposal, or RFP, to move forward as the alternative to the Northern Pass Transmission project which failed to win approval from the New Hampshire Site Evaluation Committee by March 27, 2018. On March 28, 2018, the DOER informed CMP that the conditional selection of Northern Pass Transmission project had been terminated, making the NECEC transmission project the lone winning bid in the RFP. The proposed NECEC transmission project includes a 145-mile transmission line linking the electrical grids in Québec, Canada and New England. The project, which has an estimated cost of approximately $950 million, would add 1,200 MW of transmission capacity to supply New England with power from reliable hydroelectric generation.

On June 13, 2018, CMP entered into transmission service agreements, or TSAs, with the purchasing Massachusetts electric distribution companies, or the EDCs, and H.Q. Energy Services (U.S.) Inc., or HQUS, an affiliate of Hydro-Québec, which govern the terms of service and revenue recovery for the NECEC transmission project. Simultaneous with the execution of the TSAs with CMP, the EDCs have executed certain PPAs with HQUS for sales of electricity and environmental attributes to the EDCs. The EDCs submitted the TSAs and PPAs to the DPU for approval on July 23, 2018, and CMP filed the TSAs for approval by the FERC on August 20, 2018. On October 19, 2018, FERC issued an order accepting the TSAs for filing as CMP rate schedules effective as of October 20, 2018. The DPU proceedings are ongoing with a decision from the agency expected in the second quarter of 2019.

The NECEC project requires a Certificate of Public Convenience and Necessity, or CPCN, from the MPUC in order to proceed to construction. CMP filed its petition for a certificate on September 27, 2017. In September and October, 2018, the MPUC

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held three public witness hearing on the NECEC transmission project. In October 2018 and January 2019, the MPUC held six days of evidentiary hearings, involving the cross examination of witnesses for CMP and intervening parties. As part of the hearings, the MPUC considered certain ring-fencing measures including whether CMP should be ordered to transfer the NECEC transmission project to a special project entity to separate the project's construction and operation from CMP's other transmission and distribution activities.

On February 21, 2019, CMP, along with the Maine Office of the Public Advocate, the Governor's Energy Office, Industrial Energy Consumer Group, Conservation Law Foundation, Acadia Center, Western Mountains & Rivers Corporation, City of Lewiston, Maine State Chamber of Commerce and International Brotherhood of Electrical Workers, filed a settlement stipulation agreeing that the MPUC should grant a CPCN for the NECEC transmission project, subject to certain agreed-upon conditions. The settlement conditions provide for the transfer of the NECEC transmission project from CMP to NECEC Transmission LLC, a new subsidiary of Networks.; the funding by NECEC Transmission LLC, CMP and HQUS of certain funds to provide benefits to the State of Maine, totaling approximately $241 million over the 40-year useful life of the NECEC transmission project; and other commitments. NECEC Transmission LLC is required to put in place and maintain a guaranty by AVANGRID or its successor to guarantee certain of the payment obligations of NECEC Transmission LLC under the settlement stipulation. Such guaranty will guarantee the payment of approximately $81 million. The settlement stipulation also requires CMP, NECEC Transmission LLC and HQUS to enter into a support agreement reflecting, among other, that HQUS will (i) pay NECEC Transmission LLC $3.5 million per year for 40 years beginning upon the commercial operation date of the NECEC transmission project, or the NECEC COD, which funds are to be used to fund a portion of NECEC Transmission LLC's share of the benefit commitments agreed in the settlement stipulation, (ii) contribute an additional $30 million over the first five years after the NECEC COD to fund HQUS's share of the benefit commitments, and (iii) the granting of a guaranty by Hydro-Québec or other appropriate credit support to guarantee HQUS's payment obligations under the support agreement. CMP expects a MPUC decision on its CPCN petition in March 2019.

The NECEC project also requires certain permits, including environmental, from multiple state and federal agencies and a presidential permit from the U.S. Department of Energy, authorizing the construction, operation, maintenance and connection of facilities for the transmission of electric energy at the international border between the United States and Canada. These permitting activities are ongoing. CMP expects to obtain the applicable state and federal permits by year end 2019.

New England Clean Energy Request for Proposals

On May 25, 2017, UI entered into six 20-year PPAs, totaling approximately 32 MW with developers of wind and solar generation. These PPAs originated from a three-state Clean Energy RFP, and were entered into pursuant PA 13-303, which provides that the net costs of the PPAs are recoverable through electric rates. The PPAs were approved by PURA on September 13, 2017.

On June 20, 2017, UI entered into twenty-two 20-year PPAs totaling approximately 72 MW with developers of wind and solar generation. These PPAs originated from an RFP issued by the DEEP under PA 15-107 1(b) which provides that the net costs of the PPAs are recoverable through electric rates. The PPAs were approved by PURA on September 7, 2017. One contract was terminated on October 24, 2017, resulting in UI having twenty-one remaining contracts from this solicitation totaling approximately 70 MW.

In October of 2018, UI entered into five PPAs totaling approximately 50 MW from developers of offshore wind and fuel cell generation. These PPAs originated from an RFP issued by DEEP, under PA 17-144 which provides that the net costs of the PPAs are recoverable through electric rates. The PPAs were filed for PURA approval on October 25, 2018. On December 19, 2018, PURA issued its final decision approving the five PPAs and approved UI's use of the non by-passable federally mandated congestion charges for all customers to recover the net costs of the PPAs.

On December 28, 2018, DEEP issued a directive to UI to negotiate and enter into PPAs with twelve projects, totaling approximately 12 million MWh, which were selected as a result of the Zero Carbon RFP issued by DEEP pursuant to PA 17-3, which provides that the net costs of the PPAs are recoverable through electric rates. One of the selected projects is the Millstone nuclear facility located in Waterford, Connecticut and owned by Dominion Energy, Inc. DEEP's directive provides that UI should file these PPAs for PURA by March 31, 2019. UI has not yet entered into any of these PPAs.

Reforming the Energy Vision

In April 2014, the NYPSC instituted its REV proceeding, the goals of which are to improve electric system efficiency and reliability, encourage renewable energy resources, support distributed energy resources, or DER, and empower customer choice. In this proceeding, the NYPSC is examining the establishment of a Distributed System Platform, or DSP, to manage and coordinate DER, and provide customers with market data and tools to manage their energy use. The NYPSC is also examining how its regulatory practices should be modified to incentivize utility practices to promote REV objectives. REV has been divided into two tracks, Track 1 for market design and technology, and Track 2 for regulatory reform. REV proposes regulatory changes that are intended to promote more efficient use of energy, deeper penetration of renewable energy resources such as wind and solar,

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and wider deployment of DER, such as micro grids, on-site power supplies and storage. The NYPSC order on Track 1 affirmed that utilities would serve as the DSP and required utilities to file implementation plans before the end of 2015. Track 2 is undertaken in parallel with the Track 1, and examines changes in current regulatory, tariff, market design and incentive structures to better align utility interests with achieving NYPSC's policy objectives. New York utilities will also be addressing related regulatory issues in their individual rate cases. A Track 2 order was issued in May 2016, and includes guidance related to the potential for earnings adjustment mechanisms, or EAMs, platform service revenues, innovative rate designs, and data utilization and security. The companies, in December 2016, filed a proposal for the implementation of EAMs in the areas of system efficiency, energy efficiency, interconnections and clean air. A collaborative process to review the companies' petition was suspended in 2017 and the companies expect to renew their EAM requests in their rate case filings expected in 2019.

All electric utilities were ordered to file an initial Distributed System Implementation Plan, or DSIP, by June 30, 2016. An initial DSIP was filed by NYSEG and RG&E and included information regarding the potential deployment of Automated Metering Infrastructure, or AMI. A separate petition for the cost recovery associated with full deployment of AMI was filed by NYSEG and RG&E in December 2016. In March, 2017, the NYPSC issued three separate REV-related orders. These orders created a series of filing requirements for NYSEG and RG&E beginning in March 2017 and extending through the end of 2018. The three orders involve: 1) modifications to the electric utilities' proposed interconnection earnings adjustment mechanism framework; 2) further DSIP requirements, including filing of an updated DSIP plan by mid-2018 and implementing two energy storage projects at each company by the end of 2018; and 3) Net Energy Metering Transition including implementation of Phase One of the Value of DER. In September 2017, the NYPSC issued another order related to the Value of DER, requiring tariff filings, changes to standard interconnection requirements and planning for the implementation of automated consolidated billing. In July 2018, NYSEG and RG&E submitted an updated DSIP plan consistent with guidance received from the NY Department of Public Service. As of the end of 2018, both NYSEG and RG&E had deployed two energy storage projects each, consistent with the March 2017 NYPSC order requirements. In December 2018, the NYPSC staff submitted whitepapers on standby and buyback service rate design, future value stack compensation and capacity value compensation. It is expected that the NYPSC will rule on the proposals set forth in the whitepapers in 2019. An additional staff whitepaper on rate design for mass market on-site DER projects interconnected after January 1, 2020 is scheduled to be submitted by the NYPSC Staff in the first quarter of 2019.

New York State Department of Public Service Investigation of the Preparation for and Response to the March 2017 Windstorm

On March 11, 2017, the New York State Department of Public Service, or the Department, commenced an investigation of NYSEG's and RG&E's preparation for and response to the March 2017 windstorm, which affected more than 219,000 NYSEG and RG&E customers. The Department Staff issued a report (the Staff Report) of the findings from their investigation on November 16, 2017. The Staff Report made several recommendations for future storm response and also alleged that NYSEG and RG&E had violated their own emergency response plan in a number of respects.

Also on November 16, 2017, the NYPSC issued an Order Instituting Proceeding and to Show Cause (the Order) requiring the companies to address whether the NYPSC should mandate, reject or modify, in whole or in part, the recommendations made in the Staff Report. The Order also required the companies to show cause why the NYPSC should not commence an administrative penalty proceeding. On May 18, 2018, NYSEG and RG&E filed a settlement joint proposal and investment joint proposal before the NYPSC to settle potential penalties and avoid litigation related to the March 2017 windstorm, pursuant to which, among other things, NYSEG and RG&E agreed to make $3.9 million in investments in 2018 designed to increase resiliency and improve emergency response in the areas impacted by the storm. The investments will not be reflected in rate base or operating expenses in establishing future delivery rates. The joint proposals were subject to public comment and await NYPSC approval. We cannot predict the final outcome of this matter.

MPUC Investigation into the Response by Public Utilities to the October 2017 Storm

On December 19, 2017, the MPUC issued a Notice of Investigation regarding utility response to the October 2017 storm. The wind storm of October 2017 was unprecedented in the number of customers impacted and the magnitude of the damage across the entire CMP service territory. During the event, thousands of trees were broken or uprooted and many caused damage to the electrical delivery system. The vast majority of tree related damage was from trees that were located outside of the maintenance clearance zone. Damage occurred on nearly every CMP distribution circuit, resulting in more than 1,400 broken poles. On January 18, 2018, CMP submitted a filing in compliance with the MPUC's Notice. The MPUC investigation into restoration efforts is ongoing. CMP incurred total incremental costs of approximately $68.6 million, of which approximately $24.7 million are capital costs associated with the replacement of damaged infrastructure, including poles, cross arms, transformers and related equipment and after applying the agreed upon capitalization method contained in the approved stipulation. Accordingly, the net incremental operating and maintenance costs for restoration of the distribution system were approximately $43.9 million. On June 29, 2018, the MPUC approved a stipulation agreement, which provides for the recovery of incremental storm restoration costs through CMP's distribution rates. The stipulation agreement included a revised storm capitalization amount and the value of recovery was reduced by approximately $531,000 of cumulative underspent funds on non-cycle vegetation management activities.

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On October 4, 2018, the MPUC issued an Order stating that based on the weather forecast information and the availability of storm restoration crew resources, that both CMP and Emera Maine acted reasonably in their preparation for and response to a major wind and rain storm in October 2017 and that no further investigation of this aspect of the utilities response is warranted. The MPUC also stated that there are potential improvements for future storm performance of the utilities, their systems and with respect to coordination and communication with other involved entities. On December 1, 2018, CMP filed a report required by the MPUC that details its improvement plans.

New York State Department of Public Service Investigation of the Preparation for and Response to the March 2018 Winter Storms

In March 2018, following two severe winter storms that impacted over more than a million electric utility customers in New York, including 520,000 NYSEG and RG&E customers, the NYPSC initiated a comprehensive investigation of all the New York electric utilities' preparation and response to those events. The investigation has been expanded to include other 2018 New York spring storm events. We cannot predict the final outcome of this matter.

CMP Customer Billing System Investigation and Class Action

On March 1, 2018, the MPUC issued a Notice of Investigation initiating a summary investigation into CMP's metering, billing, and customer communications practices. Due to the highly technical nature of CMP's customer billing system, on March 22, 2018 the MPUC issued an Order Initiating Audit commencing a forensic audit of CMP's customer billing system to identify any errors that have, or continue to be resulting in billing inaccuracies. On July 10, 2018, the MPUC issued an Order Modifying Scope of Audit, which expanded the scope of the audit to include CMP's customer communication practices. On December 20, 2018, the MPUC released the findings of the forensic audit of CMP's customer billing system and customer communication practices. On January 14, 2019, the MPUC issued an Order and Notice of Investigation initiating an investigation of CMP's metering and billing practices and initiating a separate investigation of the audit of CMP's customer service and communication practices and incorporating such investigation into CMP's general rate case. We cannot predict the outcome of these matters.

On August 16, 2018, an amended class action lawsuit was filed against CMP and the Company in the Cumberland County Superior Court on behalf of all CMP customers alleging that CMP's new billing software and metering system improperly overcharged customers. The plaintiff asserts this claim under the common law of unjust enrichment, breach of contract and fraudulent and intentional misrepresentation and seeks damages, punitive damages, attorney fees and costs. On September 21, 2018, we filed a Motion to Dismiss all of the claims that was opposed by the plaintiffs. On November 14, 2018, the plaintiff filed a motion for a preliminary and permanent injunction enjoining CMP from sending putative class members disconnection notices and/or disconnecting their power until this litigation is resolved. A hearing on all pending motions was held on January 29, 2019. On February 22, 2019, the Cumberland County Superior Court ordered that the proceedings be stayed until November 1, 2019 to allow resolution of the MPUC's formal investigation of CMP's billing practices and denied the plaintiff's motion for a temporary restraining order. We cannot predict the outcome of this class action lawsuit.

Tax Act Proceedings

The Tax Act significantly changed the federal taxation of business entities including, among other things, implementing a federal corporate tax rate decrease from 35% to 21% for tax years beginning after December 31, 2017. Reductions in accumulated deferred income tax balances due to the reduction in the corporate income tax rates will result in amounts previously and currently collected from utility customers for these deferred taxes to be refundable to such customers, generally through reductions in future rates. The NYPSC, MPUC, PURA, DPU and the FERC have instituted separate proceedings in New York, Maine, Connecticut, Massachusetts and the FERC, respectively, to review and address the implications of the Tax Act on the utilities.

In New York, the NYPSC staff issued a proposal on March 29, 2018, whereby the staff recommended that Tax Act benefits be returned to customers beginning October 1, 2018. Comments on this staff proposal were submitted by the Joint Utilities of New York with a separate Appendix by each respective major utility on June 27, 2018, including our New York utility companies. NYSEG and RG&E have stated that they believe Tax Act benefits should be utilized for utility programs for the benefit of customers, including for new projects such as Automated Metering Infrastructure, or AMI, other future resiliency investments and to recover deferred regulatory assets. On August 9, 2018, the NYPSC issued an Order requiring sur-credits effective October 1, 2018. The sur-credits for NYSEG and RG&E reflected the lower effective tax rate of 21%. For NYSEG Gas, RG&E Electric and RG&E Gas the NYPSC also required the sur-credit to include the return to customers of the January - September 2018 Tax Act savings over three years. The NYPSC allowed NYSEG Electric to continue to defer the January - September 2018 Tax Act savings as well as to continue to preserve the protected and unprotected Tax Act savings until the companies' next rate cases. In Connecticut, UI and SCG expect Tax Act savings to be deferred until they are reflected in tariffs in a future rate case, unless PURA determines otherwise. CNG and BGC included Tax Act savings in rate cases that were filed with PURA and the DPU, respectively, in the second quarter of 2018. In Maine, CMP adjusted rates beginning July 1, 2018 to pass back to customers the Tax Act savings after offsetting for recovery of deferred 2017 storm costs and in the general rate case filing with the MPUC is proposing to use savings

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arising out of the Tax Act to keep its distribution prices stable while making its electric system more reliable. At the FERC, CMP transmission and UI transmission adjusted their tariffs in June 2018 to reflect the income statement value of Tax Act savings.

Power Tax Audits

In 2015, we implemented power tax software to track and measure deferred tax amounts for CMP, NYSEG and RG&E. In connection with this change, we identified historical updates needed with deferred taxes recognized by CMP, NYSEG and RG&E. We increased our deferred tax liabilities in 2015, with a corresponding increase to regulatory assets, to reflect the updated amounts calculated by the power tax software. Since 2015, the NYPSC and MPUC accepted certain adjustments to deferred taxes and associated regulatory assets for this item in recent distribution rate cases, resulting in a regulatory asset balance of approximately $157 million and $160 million for this item at December 31, 2018 and 2017, respectively.

In 2017, audits of the power tax regulatory assets were commenced by the NYPSC and MPUC. On January 11, 2018, the NYPSC issued an order opening an operations audit on NYSEG and RG&E and certain other New York utilities regarding tax accounting. The audit report is expected to be completed in 2019. In January 2018, the MPUC published the power tax audit report with respect to CMP, which indicated that the auditor was unable to verify the "acquisition value" of the power tax regulatory assets. The audit report requires that CMP must provide support for the beginning balance of the regulatory assets or will be unable to recover the value of the assets, which is approximately $10 million. CMP responded in to the audit report in its rate case filing and noted that it could reconcile 99% of the tax values and therefore requested full recovery of the power tax regulatory asset. We cannot predict the outcome of this proceeding.

Ginna Reliability Support Service Agreement

Ginna Nuclear Power Plant, LLC, or GNPP, which is a subsidiary of Constellation Energy Nuclear Group, LLC, or CENG, owns and operates the R.E. Ginna Nuclear Power Plant, or Ginna Facility, and together with GNPP, Ginna, a 581 MW single-unit pressurized water reactor located in Ontario, New York. In May 2014, the NYISO and then the NYPSC ruled that the Ginna Facility was required to maintain system reliability and ordered RG&E and GNPP to negotiate a Reliability Support Service Agreement, or RSSA.

On October 21, 2015, RG&E, GNPP, New York Department of Public Service, Utility Intervention Unit and Multiple Intervenors filed a joint proposal with the NYPSC for approval of the RSSA, as modified. On February 23, 2016, the NYPSC unanimously adopted the joint proposal, which provided for a term of the RSSA from April 1, 2015, through March 31, 2017 and RG&E monthly payments to Ginna in the amount of $15.4 million. In addition, RG&E was entitled to 70% of revenues from Ginna's sales into the NYISO energy and capacity markets, while Ginna was entitled to 30% of such revenues. The NYPSC also authorized RG&E to implement a rate surcharge effective January 1, 2016, to recover amounts paid to Ginna pursuant to the RSSA. The FERC issued an order authorizing the FERC settlement agreement in the Settlement Docket on March 1, 2016 at which point the rate surcharge went into effect. RG&E used deferred rate credit amounts (regulatory liabilities) to offset the full amount of the deferred collection amount (including carrying costs), plus credit amounts to offset all RSSA costs that exceed $2.3 million per month, not to exceed a total use of credits in the amount of $110 million, applicable through June 30, 2017. The available credits were insufficient to satisfy the final payment amount from RG&E to Ginna, and consistent with the agreement with the NYPSC, the RSSA surcharge continues past March 31, 2017, to recover up to $2.3 million per month until the final payment amount has been recovered by RG&E from customers.

New York TransCo

Networks holds an approximate 20% ownership interest in New York TransCo, LLC. New York TransCo was established by the New York transmission utilities to develop, own, and operate electric transmission in New York. In December 2014, New York TransCo filed for regulatory approval of its rates, terms and conditions with the FERC.

On April 2, 2015, the FERC issued an order granting, inter alia, New York TransCo's owners' request for a 50-basis point adder for New York TransCo's membership in the NYISO RTO, subject to the adder being capped within the zone of reasonableness after a determination of where within that zone its base level ROE should be set. The FERC also set the formula rate and base ROE issue for hearing and settlement judge procedures. In addition, the FERC rejected New York TransCo's owners' cost allocation method for the transmission owner transmission solutions, or TOTS, projects because it would allocate costs to Power Supply Long Island and New York Power Authority that they did not voluntarily agree to pay.

On November 5, 2015, New York TransCo's owners filed the settlement with the FERC to resolve all outstanding issues associated with the TOTS projects, including issues related to the TOTS Projects that were set for hearing and issues pending on rehearing. The issues regarding certain other projects remain pending. The Settlement addressed the financial terms that are components of New York TransCo's revenue requirement for the proposed TOTS projects, including the base ROE of 9.50%, and

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a 50-basis point ROE adder, the capital structure of 53%, and the cost allocation under the NYISO OATT for the TOTS projects. On March 17, 2016, the FERC approved the settlement.

On August 21, 2017, New York TransCo filed a settlement with the FERC to resolve all outstanding issues associated with the alternate current transmission project, or AC Project, for which selection of the developer remains pending with NYISO. The issues contained in the settlement include those related to the AC Project that were set for hearing and issues pending on rehearing. The settlement addressed the financial terms that are components of New York TransCo's revenue requirement for the AC Project, including the base ROE of 9.65%, and a 100-basis point ROE adder, an equity ratio in the capital structure of up to 53%, risk sharing for project cost overruns, and the cost allocation under the NYISO OATT for the AC Project. On November 16, 2017, the FERC approved the settlement.

Weather Impact

The demand for electric power and natural gas is affected by seasonal differences in the weather. Statewide demand for electricity in New York, Connecticut and Maine tends to increase during the summer months to meet cooling load or in winter months for heating load while statewide demand for natural gas tends to increase during the winter to meet heating load. Market prices for both electricity and natural gas reflect the demand for these products and their availability at that time. Overall operating results of Networks do not fluctuate due to commodity costs as the regulated utilities generally recover those costs coincident with their expense or defer any differences for future recovery. Networks has historically sold less power when weather conditions are milder and may also be affected by severe weather, such as ice and snow storms, hurricanes and other natural disasters which may result in additional cost or loss of revenues that may not be recoverable from customers. However, Networks' regulated utilities, other than MNG and BGC, have approved RDMs as part of the NYPSC, PURA and MPUC rate plans in place for the period ended December 31, 2018. Effective February 1, 2019, new tariffs became effective for BGC, which include an approved RDM. The RDM allows the regulated utilities to defer for future recovery and shortfall from projected revenues whether due to weather, economic conditions, conservation or other factors.

New Renewable Source Generation

Under Connecticut law Public Act 11-80, or PA, Connecticut electric utilities are required to enter into long-term contracts to purchase Connecticut Class I Renewable Energy Credits, or RECs, from renewable generators located on customer premises. Under this program, UI is required to enter into contracts totaling approximately $200 million in commitments over an approximate 21-year period. The obligations will phase in over a six-year solicitation period, and are expected to peak at an annual commitment level of about $13.6 million per year after all selected projects are online. Upon purchase, UI accounts for the RECs as inventory. UI expects to partially mitigate the cost of these contracts through the resale of the RECs. PA 11-80 provides that the remaining costs (and any benefits) of these contracts, including any gain or loss resulting from the resale of the RECs, are fully recoverable from (or credited to) customers through electric rates. PA 17-144 and PA 18-50 added seventh and eighth years and up to $48 million in additional commitments by UI to the program.

On October 23, 2013, PURA approved UI's renewable connections program filed in accordance with PA 11-80, through which UI has developed 10 MW of renewable generation. The costs for this program will be recovered on a cost of service basis. PURA established a base ROE to be calculated as the greater of: (A) the current UI authorized distribution ROE (currently 9.10%) plus 25 basis points and (B) the current authorized distribution ROE for The Connecticut Light & Power Company (currently 9.17%), less target equivalent market revenues (reflected as 25 basis points). In addition, UI will retain a percentage of the market revenues from the project, which is expected to equate to approximately 25 basis points on a levelized basis over the life of the program. The cost of this project, a 2.8 MW fuel cell facility in New Haven, solar photovoltaic and fuel cell facilities totaling 5 MW in Bridgeport, and a 2.2 MW fuel cell facility in Woodbridge, all of which are now operational, was $41.5 million.

Pursuant to Connecticut statute, in January 2017, UI entered into a master agreement with the Connecticut Green Bank to procure Connecticut Class I RECs produced by residential solar installations in 15 year tranches, with a final tranche to commence no later than 2022. UI's contractual obligation is to procure 20% of RECs produced by about 255 MW of residential solar installations. Connecticut statutes provides that the net costs (and any benefits) of these contracts, including any gain or loss resulting from the resale of the RECs, are fully recoverable from (or credited to) customers through electric rates.

Under Maine law 35-A M.R.S.A §§ 3210-C, 3210-D, the MPUC is authorized to conduct periodic requests for proposals seeking long-term supplies of energy, capacity or RECs, from qualifying resources. The MPUC is further authorized to order Maine transmission and distribution utilities to enter into contracts with sellers selected from the MPUC's competitive solicitation process. Pursuant to a MPUC Order dated October 8, 2009, CMP entered into a 20-year agreement with Evergreen Wind Power III, LLC, or Evergreen Power, on March 31, 2010, to purchase capacity and energy from Evergreen Power's 60 MW Rollins wind farm in Penobscot County, Maine. CMP's purchase obligations under the Rollins contract are approximately $7 million per year. In accordance with subsequent MPUC orders, CMP periodically auctions the purchased Rollins energy to wholesale buyers in the New England regional market. Under applicable law, CMP is assured recovery of any differences between power purchase costs

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and achieved market revenues through a reconcilable component of its retail distribution rates. Although the MPUC has conducted multiple requests for proposals under M.R.S.A §3210-C and has tentatively accepted long-term proposals from other sellers, these selections have not yet resulted in additional currently effective contracts with CMP.

Pursuant to Maine law 35-A M.R.S.A §3604, the MPUC is authorized to direct Maine transmission and distribution utilities to enter into long-term contracts to purchase capacity, energy and RECs from up to 50 MW of qualifying community-based renewable energy facilities. In accordance with §3604, on October 22, 2016, CMP commenced purchases from Athens Energy LLC for a contract term of three years. CMP purchase obligations under the Athens contract are approximately $6 million per year. Under the provisions of §3604 and MPUC implementing orders, CMP will periodically auction the purchased products from Athens for resale to wholesale market purchasers and recover any differences between power purchase costs and resale revenues through a reconcilable component of its retail distribution rates. Although the MPUC has certified several additional community-based renewable energy generation projects under §3604 and authorized similar PPAs between these sellers and CMP, no additional facilities have advanced to operational status.

Renewables

Renewable Energy Incentives

Renewables relies, in part, upon government policies that support utility-scale renewable energy and enhance the economic feasibility of development and operating wind energy projects in regions in which Renewables operates or plans to develop and operate renewable energy facilities. In support of this, on December 18, 2015, Congress passed and President Obama signed into law the Consolidated Appropriations Act, Public Law 114-113. This law extends the qualifying dates for the production tax credit available to wind energy generating facilities (Internal Revenue Code Section 45) and the investment tax credit available to commercial solar generating facilities (Internal Revenue Code Section 48). The law also extends an option for wind generation facilities to elect to receive an investment tax credit in lieu of the production tax credit. In general, both provisions allow new wind and solar facilities to qualify for the respective credits at full value over the next several years, with reductions in the value of the authorized tax credits for facilities phased in during subsequent periods. Production tax credits were reduced to 80% for facilities commenced construction in 2017, reduced to 60% for facilities commencing construction in 2018 and will be reduced to 40% for facilities commencing construction in 2019. Investment tax credits will be 30% for projects commencing construction through 2019, then reduce to 26%, 22% and 10% for projects commencing construction in 2020, 2021 and 2022, respectively. The Internal Revenue Service, or IRS, updated its guidance related to which projects will qualify for the production tax credits, including criteria for the beginning of construction for a project and the continuous program of construction or the continuous efforts to advance the project to completion. Multi-year extension of these credits provides opportunities for Renewables to develop, construct and market new renewable generating facilities and partially repower existing renewable generating facilities in several U.S. markets.

Additionally, the federal government and many states and local jurisdictions have policies or other mechanisms, such as tax incentives or RPS that support the sale of energy from utility-scale renewable energy facilities, such as wind and solar energy facilities. As a result of budgetary constraints, political factors or otherwise, U.S., state or local governments from time to time may review their policies and other mechanisms that support renewable energy and consider actions that would make them less conducive to the development and operation of renewable energy facilities. Any reductions to, or the elimination of, governmental policies or other mechanisms that support renewable energy or the imposition of additional taxes or other assessments on renewable energy, could result in, among other items, the lack of a satisfactory market for the development of new renewable energy projects, Renewables abandoning the development of new renewable energy projects, a loss of Renewables' investments in the projects and reduced project returns, any of which could have a material adverse effect on Renewables' business, financial condition, results of operations and prospects.

Renewable Energy Demand

Since the transmission and distribution of electricity is highly concentrated in most jurisdictions, there are a limited number of possible purchasers for utility-scale quantities of electricity in a given geographic location, including transmission grid operators, state and investor-owned power companies, public utility districts, cooperatives and large commercial and industrial customers. As a result, there is a concentrated pool of potential buyers for electricity generated by Renewables' business, which may restrict their ability to negotiate favorable terms under new PPAs, and could impact their ability to find new customers for the electricity generated by their generation facilities should this become necessary. Furthermore, if the financial condition of these utilities and/or power purchasers deteriorated or the RPS programs, climate change programs or other regulations to which they are currently subject and that compel them to source renewable energy supplies change, demand for electricity produced by Renewables' businesses could be negatively impacted.

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Energy Prices

Renewables has exposure to commodity price movements through its “natural” long positions in electricity from its generation. Renewables manages the exposure to risks of commodity price movements through internal risk management policies, enforcement of established risk limits and risk management procedures.

A portion of Renewables’ fuel and energy output arrangements qualify as derivative contracts. Such derivative contracts are carried at fair value, with changes in fair value recognized to earnings as the changes occur. In 2015, Renewables began designating certain qualifying derivatives contracts as hedges. These hedge designations result in deferral of changes in fair value, to the extent the hedge is effective, to accumulated other comprehensive income until the contract settles, at which point the deferred amount is recognized to earnings.

Wind Conditions

If wind conditions are unfavorable, or if Renewables’ wind turbines are not available for operation, Renewables electricity generation and related revenue may be substantially below our expectations. Renewables’ wind projects are sited, developed and operated to maximize wind performance. Prior to siting a wind facility, detailed studies are conducted to measure the wind resource in order to estimate future production. However, wind patterns or wind resource in the future might deviate from historical patterns. These events could also degrade equipment or components and the interconnection and transmission facilities’ lives or maintenance costs. Historically, Renewables wind production is greater in the first, second and fourth quarters.

Wind Turbine Supply

Replacement and spare parts for wind turbines and key pieces of electrical equipment may be difficult or costly to acquire or may be unavailable. Although Renewables has expanded and diversified its supplier base, the loss of any of these suppliers or service providers or inability to find replacement suppliers or service providers or to purchase turbines at rates currently offered by Renewables’ existing suppliers or a change in the terms of Renewables’ supply or operations and maintenance agreements, such as increased prices for maintenance services or for spare parts, could have a material adverse effect on Renewables’ ability to construct and maintain wind farms or the profitability of wind farm development and operation.

Results of Operations

The following table sets forth financial information by segment for each of the periods indicated. Based on the quantitative assessment and due to the disposition of gas trading and storage businesses (see Note 26 to our consolidated financial statements contained in this Annual Report on Form 10-K for further discussion), the Gas business no longer meets the reportable segment criteria effective in the first quarter of 2018. As a result, the prior periods segment information has been restated to conform to the 2018 presentation. Additionally, as a result of the adoption of the amendments to improve the presentation of net periodic pension cost and net periodic postretirement benefit cost, we have reclassified the non-service components of those costs from operations and maintenance to other expense within the consolidated statements of income and applied these amendments retrospectively to prior periods. For further details, refer to Note 3 to our consolidated financial statements contained in this Annual Report on Form 10-K.

Results of operations discussed herein are based on the revised financial results for the years ended December 31, 2017 and 2016.

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	Year Ended December 31, 2018			
	Total	Networks	Renewables	Other(1)
	(in millions)			
Operating Revenues	**$ 6,478**	**$ 5,310**	**$ 1,139**	**$ 29**
Operating Expenses				
Purchased power, natural gas and fuel used	1,653	1,423	228	2
Operations and maintenance	2,248	1,880	366	2
Loss from assets held for sale	16	—	—	16
Depreciation and amortization	855	503	352	—
Taxes other than income taxes	579	529	57	(7)
Total Operating Expenses	**5,351**	**4,335**	**1,003**	**13**
Operating Income	**1,127**	**975**	**136**	**16**
Other Income (Expense)				
Other income (expense)	(66)	(79)	18	(5)
Earnings (losses) from equity method investments	10	13	(3)	—
Interest expense, net of capitalization	(303)	(260)	(33)	(10)
Income (Loss) Before Income Tax	**768**	**649**	**118**	**1**
Income tax expense (benefit)	170	169	(31)	32
Net Income (Loss)	**598**	**480**	**149**	**(31)**
Less: Net income attributable to noncontrolling interests	3	2	1	—
Net Income (Loss) Attributable to Avangrid, Inc.	**$ 595**	**$ 478**	**$ 148**	**$ (31)**

	Year Ended December 31, 2017			
	Total	Networks	Renewables	Other(1)
	(in millions)			
Operating Revenues	**$ 5,963**	**$ 4,961**	**$ 1,047**	**$ (45)**
Operating Expenses				
Purchased power, natural gas and fuel used	1,338	1,153	225	(40)
Operations and maintenance	2,091	1,721	354	16
Loss from assets held for sale	642	—	—	642
Depreciation and amortization	824	474	325	25
Taxes other than income taxes	563	499	51	13
Total Operating Expenses	**5,458**	**3,847**	**955**	**656**
Operating Income (Loss)	**505**	**1,114**	**92**	**(701)**
Other Income (Expense)				
Other income (expense)	(62)	(72)	4	6
Earnings (losses) from equity method investments	(40)	15	(55)	—
Interest expense, net of capitalization	(280)	(244)	(28)	(8)
Income (Loss) Before Income Tax	**123**	**813**	**13**	**(703)**
Income tax (benefit) expense	(259)	316	(320)	(255)
Net Income (Loss)	**382**	**497**	**333**	**(448)**
Less: Net income attributable to noncontrolling interests	1	1	—	—
Net Income (loss) Attributable to Avangrid, Inc.	**$ 381**	**$ 496**	**$ 333**	**$ (448)**

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	Year Ended December 31, 2016			
	Total	Networks	Renewables	Other(1)
	(in millions)			
Operating Revenues	**$ 6,018**	**$ 5,030**	**$ 1,015**	**$ (27)**
Operating Expenses				
Purchased power, natural gas and fuel used	1,286	1,174	152	(40)
Operations and maintenance	2,206	1,839	351	16
Depreciation and amortization	804	466	313	25
Taxes other than income taxes	528	465	50	13
Total Operating Expenses	**4,824**	**3,944**	**866**	**14**
Operating Income (Loss)	**1,194**	**1,086**	**149**	**(41)**
Other Income (Expense)				
Other income	76	46	30	—
Earnings (losses) from equity method investments	7	15	(8)	—
Interest expense, net of capitalization	(268)	(252)	(50)	34
Income Before Income Tax	**1,009**	**895**	**121**	**(7)**
Income tax expense (benefit)	377	415	7	(45)
Net Income	**632**	**480**	**114**	**38**
Less: Net income attributable to noncontrolling interests	—	—	—	—
Net Income Attributable to Avangrid, Inc.	**$ 632**	**$ 480**	**$ 114**	**$ 38**

(1)Other amounts represent Corporate, Gas and intersegment eliminations.

Comparison of Period to Period Results of Operations

Our operating revenues increased by 9%, from $5,963 million for the year ended December 31, 2017, to $6,478 million for the year ended December 31, 2018.

Our purchased power, natural gas and fuel used increased by 24%, from $1,338 million for the year ended December 31, 2017, to $1,653 million for the year ended December 31, 2018.

Our operations and maintenance increased by 8%, from $2,091 million for the year ended December 31, 2017, to $2,248 million for the year ended December 31, 2018.

Details of the period to period comparison are described below at the segment level.

Year Ended December 31, 2018 Compared to the Year Ended December 31, 2017

Networks

Operating revenues for the year ended December 31, 2018 increased by $349 million, or 7%, from $4,961 million for the year ended December 31, 2017, to $5,310 million. Electricity and gas revenues increased by $82 million and $27 million, primarily due to the impact, respectively, of increased electric and gas customer rates in the year ended December 31, 2018 compared to the same period in 2017. Electricity and gas revenues for the year ended December 31, 2018 compared to the same period in 2017, increased by $87 million and $94 million due to increased commodity prices and higher volumes largely driven by an increase in degree days. Wholesale electricity and capacity revenues increased by $59 million for the year ended December 31, 2018 compared to the same period of 2017 due to an increase in average prices. Revenue related regulatory activities in the period increased primarily due to $65 million increase in pass through components and $31 million increase in appliance revenue, both offset in operations and maintenance, increase of $13 million in earnings sharing, which is primarily offset by an adjustment of $14 million to unfunded future income tax to reflect the change from a flow through to normalization method, which was recorded in 2017 as an increase to revenue, with an offsetting and equal increase to income tax expense, a decrease of $78 million from deferrals of excess deferred income taxes due to changes in federal tax rates as a result of the Tax Act and $16 million in non-bypassable charges in the period.

Purchased power, natural gas and fuel used for the year ended December 31, 2018 increased by $270 million, or 23%, from $1,153 million for the year ended December 31, 2017, to $1,423 million. The increase is primarily driven by $175 million and

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$86 million increases in average commodity prices and overall increase in the units of electricity and gas, respectively, procured due to an increase in degree days combined with an $8 million increase in other power supply purchases.

Operations and maintenance during the year ended December 31, 2018 increased by $159 million, or 9%, from $1,721 million for the year ended December 31, 2017, to $1,880 million. The increase is primarily due to a $65 million increase in operations pass through costs and $31 million of costs related to appliance revenue, both offset in revenue, a $20 million increase due to non-deferrable storm costs, a $13 million increase in uncollectible expenses and lower capitalized labor costs of $37 million in the period, offset by a $6 million decrease in personnel costs driven by lower termination settlements compared to the same period of 2017.

Renewables

Operating revenues for the year ended December 31, 2018 increased by $92 million, or 9% from $1,047 million for the year ended December 31, 2017, to $1,139 million. The increase in operating revenues was primarily due to an increase of $88 million with wind generation output increasing 1,730 GWh, an increase in thermal revenue of $12 million driven by higher prices, an increase of $25 million resulting from the sale of a claim from a bankruptcy proceeding with a customer, an increase of $6 million resulting from the settlement of a lawsuit in the period, offset by $8 million decrease driven by cancellation of First Energy PPAs combined with unfavorable mark-to-market, or MtM, changes of $32 million on energy derivative transactions entered into for economic hedging purposes.

Purchased power, natural gas and fuel used for the year ended December 31, 2018 increased by $3 million, or 1%, from $225 million for the year ended December 31, 2017, to $228 million. The increase is primarily driven by an increase of $25 million in power purchases and transmission costs due to the addition of new capacity, offset by MtM changes on derivatives of $22 million that were favorable due to market price changes in the current period.

Operations and maintenance for the year ended December 31, 2018 increased by $12 million, or 3%, from $354 million for the year ended December 31, 2017, to $366 million, which is primarily due to a $9 million increase in wind farm operations costs driven by new capacity with the remaining increase attributable to higher intercompany charges in 2018.

Depreciation, Amortization and Impairment

Depreciation, amortization and impairment expenses for the year ended December 31, 2018 decreased by $595 million, or 41%, from $1,466 million for the year ended December 31, 2017, to $871 million. The decrease is driven by lower loss from assets held for sale of $626 million recorded in connection with management's decision in 2017 to sell the gas trading and storage businesses. Net plant additions in Networks increased depreciation expense by $27 million in the period. Renewables added $34 million to depreciation expense due to a new operating capacity and $2 million of accelerated depreciation driven by repowering, offset by $9 million lower depreciation expense due to assets lives increase recorded in 2017 and $24 million of lower depreciation expense in Other driven by the cessation of depreciation of assets held for sale.

Other Income and (Expense) and Equity Earnings

Other income and (expense) and equity earnings for the year ended December 31, 2018 increased by $46 million, or 45%, from $(102) million for the year ended December 31, 2017, to $(56) million, primarily due to the impact of an other than temporary impairment, or OTTI, of $49 million on an equity method investment and a $3 million lower write-off of certain development projects in Renewables in 2017, a $10 million gain from the sale of our interest in Coyote Ridge in 2018, offset by an $8 million increase in non-service component of pension and other post-retirement cost and a decrease of $6 million in allowance for funds used during construction and other regulatory deferrals in Networks.

Interest Expense, Net of Capitalization

Interest expense for the year ended December 31, 2018 increased by $23 million or 8% from $280 million for the year ended December 31, 2017, to $303 million. Networks and Other added $13 million and $18 million of interest expense from new debt issued in 2018 and 2017. In addition, Renewables interest expense increased by $16 million due to an intercompany loan in the current period. This is offset by $24 million lower interest expense in Other driven by sale of the gas business in 2018.

Income Tax Expense

The effective tax rate, inclusive of federal and state income tax, for the year ended December 31, 2018 was 22.1%, which is higher than the 21% statutory federal income tax rate applicable in 2018, predominantly due to $20.7 million of tax expense recorded in connection with the disposal of the Gas business and discrete adjustments recorded during the period, offset by the recognition of production tax credits associated with wind production. The effective tax rate, inclusive of federal and state income tax, for the year ended December 31, 2017, was (210.6)%, which is lower than the 35% statutory federal income tax rate

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predominately due to a $328 million tax benefit from measurement of deferred income tax balances as a result of the Tax Act. Additionally, a $14 million increase in income tax expense is due to unfunded future income tax to reflect the change from a flow through to normalization method, which was recorded as an increase to revenue, with an offsetting and equal increase to income tax expense during the year ended December 31, 2017. This increase was partially offset by other discrete tax adjustments and recognition of production tax credits associated with wind production during the same period.

Year Ended December 31, 2017 Compared to the Year Ended December 31, 2016

Networks

Operating revenues for the year ended December 31, 2017 decreased by $69 million, or 1%, from $5,030 million for the year ended December 31, 2016, to $4,961 million. Electricity and gas revenues increased by $113 million and $83 million, respectively, due to primarily the impact of higher average rates in the year ended December 31, 2017 compared to the same period of 2016, from rate case activities in New York and Connecticut. Electricity revenue for the same period decreased by $11 million due to lower volumes largely driven by decrease in cooling degree days, while gas revenues increased by $49 million in the same period due to a migration in customers moving from retail access to full service and colder weather. Additionally, wholesale electricity revenue decreased by $33 million for the year ended December 31, 2017 compared to the same period of 2016 due to a decrease in overall units sold caused by a decrease in cooling degree days. Revenue related regulatory activities decreased by $269 million primarily due to an adjustment of $126 million in 2016 and an adjustment of $14 million in 2017, to unfunded future income tax to reflect the change from a flow through to normalization method, which were recorded as an increase to revenue, with an offsetting and equal increase to income tax expense in both periods, decreases in the energy supply reconciliation of $35 million, amortization of regulatory deferrals from previous rate case of $23 million that ended in 2016, decreases in recoveries on the Ginna RSSA of $75 million, property and power tax deferral of $17 million, stranded costs of $22 million, revenue decoupling mechanism of $11 million, $16 million in transmission true-ups, offset by an increase in non by-passable charges of $42 million.

Purchased power, natural gas and fuel used for the year ended December 31, 2017 decreased by $21 million, or 2%, from $1,174 million for the year ended December 31, 2016, to $1,153 million. The decrease is primarily driven by $50 million decrease in purchases from contracts that expired in December 2016 and $59 million decreases in overall units of electricity procured due to a reduction in cooling degree days, offset by $78 million increase in average gas prices and overall units of gas procured combined with $11 million increase in gas transportation related activity driven by a higher demand in the period.

Operations and maintenance during the year ended December 31, 2017 decreased by $118 million, or less than 1%, from $1,839 million for the year ended December 31, 2016, to $1,721 million. The decrease is primarily due to a $109 million decrease in the Ginna RSSA driven by its completion and $120 million of the non-service component of pension and other post-retirement cost reclassified from operations and maintenance to other income (expense) in 2017 due to adoption of the amendments to improve the presentation of net periodic pension cost, offset by a $36 million increase in purchases of renewable and zero-emission energy certificates related to a new program to adopt clean energy standards, increase in personnel costs of $32 million driven largely by overtime associated with non-deferrable storm costs, increase of $22 million in reserves for uncollectible accounts, and $19 million in transmission and generation charges in the period.

Renewables

Operating revenues for the year ended December 31, 2017 increased by $32 million, or 3% from $1,015 million for the year ended December 31, 2016, to $1,047 million. Revenues from wind and solar facilities increased by $33 million due to increase in wind production with output increasing 353 GWh, or 2%, also driven by addition of a new capacity, and 1% increase in average prices. Additionally, favorable MtM changes of $13 million on energy derivative transactions entered into for economic hedging purposes were offset by a decline in thermal revenue of $2 million due to lower merchant prices and $12 million in other revenues mainly due to sale of transmission rights that occurred in 2016.

Purchased power, natural gas and fuel used for the year ended December 31, 2017 increased by $73 million, or 48%, from $152 million for the year ended December 31, 2016, to $225 million. Klamath power plant expense was $15 million lower due to lower production and reduced fuel costs, MtM changes on derivatives were unfavorable $48 million due to market price changes in the current period and transmission and energy purchases were higher by $40 million mainly due to the addition of a new capacity during the period.

Operations and maintenance for the year ended December 31, 2017 increased by $3 million or 1% from $351 million for the year ended December 31, 2016, to $354 million, primarily due to increase in salary costs of $3 million driven by headcount increases, $5 million additional costs from new windfarm assets, offset by $4 million lower asset retirement related expenses, as a result of the extension of the windfarm useful life in combination with revisions to expense estimates.

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Depreciation, Amortization and Impairment

Depreciation, amortization and impairment expenses for the year ended December 31, 2017 increased by $662 million or 82% from $804 million for the year ended December 31, 2016, to $1,466 million. The primary drivers were the loss of $642 million from held for sale measurement in connection with the committed plan to sell the gas trading and storage businesses. Net plant additions in Networks increased depreciation expense by $14 million, and updates to asset lives from the rate case activities decreased depreciation expense by $9 million. Renewables added $18 million to depreciation expense due to a new operating capacity, and had $3 million favorable changes primarily due to assets lives increase driven by new contracts.

Other Income and (Expense) and Equity Earnings

Other income and (expense) and equity earnings for the year ended December 31, 2017 decreased by $185 million, or 223%, from $83 million for the year ended December 31, 2016, to $(102) million, primarily due to the impact of a $31 million gain from the sale of the Iroquois equity investment during the year ended December 31, 2016, other than temporary impairment of $49 million on a Renewables equity method investment and $120 million of the non-service component of pension and other post-retirement cost reclassified from operations and maintenance to other income (expense) in 2017 due to adoption of the amendments to improve the presentation of net periodic pension cost, offset by $13 million for increased allowance for funds used during construction and other regulatory deferrals in Networks.

Interest Expense, Net of Capitalization

Interest expense for the year ended December 31, 2017 increased by $12 million or 4% from $268 million for the year ended December 31, 2016, to $280 million. Networks and Other added $14 million and $23 million of interest expense from outstanding debt during the period. Gas was $1 million favorable as a result of intercompany notes in the period. Renewables was $21 million favorable, as a result of lower tax equity investment obligations and intercompany notes. In addition, Networks had $3 million of lower interest expense on regulatory deferrals in the current period.

Income Tax Expense

The effective tax rate, inclusive of federal and state income tax, for the year ended December 31, 2017 was (210.6)%, which is lower than the 35% statutory federal income tax rate predominately due to a $328 million tax benefit from measurement of deferred income tax balances as a result of the Tax Act. Additionally, a $14 million increase in income tax expense is due to unfunded future income tax to reflect the change from a flow through to normalization method, which was recorded as an increase to revenue, with an offsetting and equal increase to income tax expense during the year ended December 31, 2017. This increase was partially offset by other discrete tax adjustments and recognition of production tax credits associated with wind production during the same period. The effective tax rate, inclusive of federal and state income tax, for the year ended December 31, 2016, was 37.6%, which is slightly higher than the 35% statutory federal income tax rate due to offsetting income tax matters. Increases were predominantly due to the impact of an adjustment of $126 million to unfunded future income tax to reflect the change from a flow through to normalization method following the approval of the Joint Proposal by the NYPSC, which was recorded in the second quarter of 2016 as an increase to income tax expense and an offsetting increase to revenue. This was offset by the recognition of production tax credits associated with wind and state income tax amounts including unitary filing amounts for our various states of operations.

Non-GAAP Financial Measures

To supplement our consolidated financial statements presented in accordance with U.S. GAAP, we consider adjusted net income and adjusted earnings per share as non-GAAP financial measures that are not prepared in accordance with U.S. GAAP. The non-GAAP financial measures we use are specific to AVANGRID and the non-GAAP financial measures of other companies may not be calculated in the same manner. We use these non-GAAP financial measures, in addition to U.S. GAAP measures, to establish operating budgets and operational goals to manage and monitor our business, evaluate our operating and financial performance and to compare such performance to prior periods and to the performance of our competitors. We believe that presenting such non-GAAP financial measures is useful because such measures can be used to analyze and compare profitability between companies and industries by eliminating the impact of certain non-cash charges. In addition, we present non-GAAP financial measures because we believe that they and other similar measures are widely used by certain investors, securities analysts and other interested parties as supplemental measures of performance.

We define adjusted net income as net income adjusted to exclude restructuring charges, mark-to-market adjustments to reflect the effect of MtM changes in the fair value of derivative instruments used by AVANGRID to economically hedge market price fluctuations in related underlying physical transactions for the purchase and sale of electricity, loss from held for sale measurement, impact of the Tax Act, accelerated depreciation derived from repowering of a windfarm, gain on the sale of equity method and other investment, other than temporary impairment, or OTTI, and adjustments for the non-core Gas storage business.

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We believe adjusted net income is more useful in understanding and evaluating actual and projected financial performance and contribution of AVANGRID core lines of business and to more fully compare and explain our results. The most directly comparable U.S. GAAP measure to adjusted net income is net income. We also define adjusted earnings per share, or adjusted EPS, as adjusted net income converted to an earnings per share amount.

The use of non-GAAP financial measures is not intended to be considered in isolation or as a substitute for, or superior to, AVANGRID's U.S. GAAP financial information, and investors are cautioned that the non-GAAP financial measures are limited in their usefulness, may be unique to AVANGRID and should be considered only as a supplement to AVANGRID's U.S. GAAP financial measures. The non-GAAP financial measures may not be comparable to other similarly titled measures of other companies and have limitations as analytical tools.

Non-GAAP financial measures are not primary measurements of our performance under U.S. GAAP and should not be considered as alternatives to operating income, net income or any other performance measures determined in accordance with U.S. GAAP.

The following tables provide a reconciliation between Net Income attributable to AVANGRID and adjusted net income (non-GAAP) by segment for the years ended December 31, 2018, 2017 and 2016, respectively:

	Year Ended December 31, 2018				
	Total	Networks	Renewables	Corporate *	Gas Storage
			(in millions)		
Net Income (Loss) Attributable to Avangrid, Inc.	**$ 595**	**$ 478**	**$ 148**	**$ (12)**	**$ (19)**
Adjustments:					
Mark-to-market adjustments - Renewables	25	—	25	—	—
Restructuring charges	4	4	—	—	—
Loss from held for sale measurement	16	—	—	—	16
Impact of the Tax Act	46	5	16	25	—
Accelerated depreciation from repowering	3	—	3	—	—
Income tax impact of adjustments (1)	6	(1)	(7)	—	14
Gas Storage, net of tax	(11)	—	—	—	(11)
Adjusted Net Income (2)	**$ 684**	**$ 486**	**$ 185**	**$ 13**	**$ —**

	Year Ended December 31, 2017				
	Total	Networks	Renewables	Corporate *	Gas Storage
			(in millions)		
Net Income (Loss) Attributable to Avangrid, Inc.	**$ 381**	**$ 496**	**$ 333**	**$ 60**	**$ (508)**
Adjustments:					
Mark-to-market adjustments - Renewables	15	—	15	—	—
Restructuring charges	20	20	—	—	—
Loss from held for sale measurement	642	—	—	—	642
Impact of the Tax Act	(328)	(2)	(301)	(5)	(20)
Impairment of equity method investment	49	—	49	—	—
Income tax impact of adjustments (1)	(162)	(8)	24	—	(179)
Gas Storage, net of tax	64	—	—	—	64
Adjusted Net Income (2)	**$ 682**	**$ 507**	**$ 120**	**$ 55**	**$ —**

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	Year Ended December 31, 2016				
	Total	Networks	Renewables	Corporate *	Gas Storage
			(in millions)		
Net Income (Loss) Attributable to Avangrid, Inc.	**$ 632**	**$ 480**	**$ 114**	**$ 80**	**$ (42)**
Adjustments:					
Sale of equity method and other investments	(36)	—	(3)	(33)	—
Impairment of investment	3	3	—	—	—
Mark-to-market adjustments - Renewables	(20)	—	(20)	—	—
Income tax impact of adjustments (1)	22	(1)	9	14	—
Gas Storage, net of tax	42	—	—	—	42
Adjusted Net Income (2)	**$ 643**	**$ 482**	**$ 100**	**$ 61**	**$ —**

(1) Income tax impact of adjustments: $(6) million from MtM adjustment, $(1) million from accelerated depreciation, $(1) million from restructuring charges, $14 million from loss from held for sale measurement for the year ended December 31, 2018. Income tax impact of $(5) million from MtM adjustment, $(8) million from restructuring charges, $(13) million from OTTI on an equity method investment, $(179) million from loss from held for sale measurement and $43 million from adjustment to unitary income taxes as a result of expected future sale of Gas for the year ended December 31, 2017. Income tax impact of $14 million from sale of equity method investment, $1 million from sale of other investment, $(1) million on impairment of investment and $8 million from MtM adjustment for the year ended December 31, 2016.

(2) Adjusted Net Income is a non-GAAP financial measure and is presented after excluding restructuring charges, gain on the sale of equity method and other investments, OTTI on equity method and other investment, loss from held for sale measurement, impact of the Tax Act, accelerated depreciation derived from repowering of a wind farm, MtM activities in Renewables and Gas storage businesses.

* Includes corporate and other non-regulated entities as well as intersegment eliminations.

Comparison of Period to Period Results of Operations

Year Ended December 31, 2018 Compared to the Year Ended December 31, 2017

Adjusted net income

Our adjusted net income increased by $2 million, or less than 1%, from $682 million for the year ended December 31, 2017 to $684 million for the year ended December 31, 2018. The increase is primarily due to a $65 million increase in Renewables due to increased wind generation in the period, offset by a $21 million decrease in Networks driven by higher non-deferrable storm costs and the associated impacts including lower capitalized labor in the period, $42 million decrease in Corporate mainly driven by lower interest income on intercompany loans due to the sale of the gas business in 2018 and higher income tax expense due to decreased unitary benefit driven by sale of gas business.

Year Ended December 31, 2017 Compared to the Year Ended December 31, 2016

Adjusted net income

Our adjusted net income increased by $38 million, or 6%, from $643 million for the year ended December 31, 2016 to $682 million for the year ended December 31, 2017. The increase is primarily due to a $25 million increase in Networks primarily due to the impact of higher average rates from rate case activities in New York and Connecticut, $20 million increase in Renewables due primarily to increased wind generation along with the addition of a new capacity, offset by $6 million decrease in Corporate mainly driven by higher interest expense from outstanding debt during the period and higher income tax expense from an effective tax rate adjustment.

The following tables reconcile Net Income attributable to AVANGRID to Adjusted Net Income (non-GAAP), and EPS attributable to AVANGRID to adjusted EPS (non-GAAP) for the years ended December 31, 2018, 2017 and 2016, respectively:

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	Years Ended December 31,		
	2018	2017	2016
		(in millions)	
Networks	$ 478	$ 496	$ 480
Renewables	148	333	114
Corporate (1)	(12)	60	80
Gas Storage	(19)	(508)	(42)
Net Income Attributable to Avangrid, Inc.	**$ 595**	**$ 381**	**$ 632**
Adjustments:			
Sale of equity method and other investments	—	—	(36)
Impairment of equity method and other investment (2)	—	49	3
Restructuring charges (3)	4	20	—
Mark-to-market adjustments - Renewables (4)	25	15	(20)
Loss from held for sale measurement (5)	16	642	—
Impact of the Tax Act (6)	46	(328)	—
Accelerated depreciation from repowering (7)	3	—	—
Income tax impact of adjustments	6	(162)	22
Gas Storage, net of tax	(11)	64	42
Adjusted Net Income (8)	**$ 684**	**$ 682**	**$ 643**

	Years Ended December 31,		
	2018	2017	2016
Networks	$ 1.54	$ 1.60	$ 1.55
Renewables	0.48	1.08	0.37
Corporate (1)	(0.04)	0.19	0.26
Gas Storage	(0.06)	(1.64)	(0.14)
Earnings Per Share	**$ 1.92**	**$ 1.23**	**$ 2.04**
Adjustments:			
Sale of equity method and other investments	—	—	(0.12)
Impairment of equity method and other investment (2)	—	0.16	0.01
Restructuring charges (3)	0.01	0.07	—
Mark-to-market adjustments - Renewables (4)	0.08	0.05	(0.06)
Loss from held for sale measurement (5)	0.05	2.08	—
Impact of the Tax Act (6)	0.15	(1.06)	—
Accelerated depreciation from repowering (7)	0.01	—	—
Income tax impact of adjustments	0.02	(0.52)	0.07
Gas Storage, net of tax	(0.04)	0.21	0.14
Adjusted Earnings Per Share (8)	**$ 2.21**	**$ 2.20**	**$ 2.08**

(1) Includes corporate and other non-regulated entities as well as intersegment eliminations.
(2) Includes OTTI on equity method investment recorded in 2017.
(3) Restructuring and severance related charges relate to costs resulted from restructuring actions involving initial targeted voluntary workforce reductions and related costs in our plan to vacate a lease, predominantly within the Networks segment.
(4) MtM adjustments relate to changes in the fair value of derivative instruments used by AVANGRID to economically hedge market price fluctuations in related underlying physical transactions for the purchase and sale of electricity and gas.
(5) Represents loss from measurement of assets and liabilities held for sale in connection with the sale of the gas trading and storage businesses.
(6) Represents the impact from measurement of deferred income tax balances as a result of the Tax Act enacted by the U.S. federal government on December 22, 2017.
(7) Represents the amount of accelerated depreciation derived from repowering of a wind farm in Renewables.
(8) Adjusted Net Income and Adjusted Earnings Per Share are non-GAAP financial measures and are presented after excluding restructuring charges, gain on the sale of equity method and other investments, OTTI on equity method and other investment, loss from held for sale measurement, impact of the Tax Act, accelerated depreciation derived from the repowering of a wind farm, MtM activities in Renewables and Gas storage businesses.

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Liquidity and Capital Resources

Our operations, capital investment and business development require significant short-term liquidity and long-term capital resources. Historically, we have used cash from operations, and borrowings under our credit facilities and commercial paper program as our primary sources of liquidity. Our long-term capital requirements have been met primarily through retention of earnings and borrowings in the investment grade debt capital markets. Continued access to these sources of liquidity and capital are critical to us. Risks may increase due to circumstances beyond our control, such as a general disruption of the financial markets and adverse economic conditions.

Liquidity Resources

At December 31, 2018, we had cash and cash equivalents of $36 million, as compared to $41 million at December 31, 2017. In addition to cash on hand, we have the capacity to borrow from third parties through a $2 billion commercial paper program, the $2.5 billion AVANGRID Credit Facility which backstops the commercial paper program and $0.5 billion from an Iberdrola Group Credit Facility, which are described below.

We optimize our liquidity within the United States through a series of arms-length intercompany lending arrangements with our subsidiaries and among our regulated utilities to provide for lending of surplus cash to subsidiaries with liquidity needs, subject to the limitation that the regulated utilities may not lend to unregulated affiliates.

We manage our overall liquidity position as part of the group of companies controlled by Iberdrola, or the Iberdrola Group, and are a party to a liquidity agreement with Bank of America, N.A. along with certain members of the Iberdrola Group. The liquidity agreement aids the Iberdrola Group in efficient cash management and reduces the need for external borrowing by the pool participants. Parties to the agreement, including us, may deposit funds with or borrow from the financial institution, provided that the net balance of funds deposited or borrowed by all pool participants in the aggregate is not less than zero. The balance in this account at December 31, 2018 was zero. Any deposit amounts would be reflected in our consolidated balance sheets under cash and cash equivalents because our deposited surplus funds under the cash pooling agreement are highly-liquid short-term investments. We also have a bi-lateral demand note agreement with a Canadian affiliate of the Iberdrola Group under which we had notes payable balance outstanding of $0 and $29 million at December 31, 2018 and December 31, 2017, respectively.

AVANGRID Commercial Paper Program

On May 13, 2016, AVANGRID established a commercial paper program with a limit of $1 billion that is backstopped by the AVANGRID Credit Facility (described below). On July 30, 2018, AVANGRID increased this limit from $1 billion to $2 billion. As of December 31, 2018 and February 27, 2019, there was $589 million and $766 million of commercial paper outstanding, respectively.

AVANGRID Credit Facility

On June 29, 2018, AVANGRID and its subsidiaries, NYSEG, RG&E, CMP, UI, CNG, SCG and BGC entered into a revolving credit facility with a syndicate of banks, or the AVANGRID Credit Facility, that provides for maximum borrowings of up to $2.5 billion in the aggregate. This AVANGRID Credit Facility replaces and supersedes the prior revolving credit facility entered into by AVANGRID and its subsidiaries, NYSEG, RG&E, CMP, UI, CNG, SCG and BGC, with a syndicate of banks on April 5, 2016 with a maturity date of April 5, 2021, which provided for maximum borrowings of up to $1.5 billion in the aggregate on substantially similar terms as the AVANGRID Credit Facility.

Under the terms of the AVANGRID Credit Facility, each joint borrower has a maximum borrowing entitlement, or sublimit, which can be periodically adjusted to address specific short-term capital funding needs, subject to the maximum limit contained in the agreement. AVANGRID's maximum sublimit is $2 billion, NYSEG, RG&E, CMP and UI have maximum sublimits of $400 million, CNG and SCG have maximum sublimits of $150 million and BGC has a maximum sublimit of $40 million. Under the AVANGRID Credit Facility, each of the borrowers will pay an annual facility fee that is dependent on their credit rating. The initial facility fees will range from 12.5 to 17.5 basis points. The maturity date for the AVANGRID Credit Facility is June 29, 2023.

Since the facility is a backstop to the AVANGRID commercial paper program, the amounts available under the facility as of December 31, 2018 and February 27, 2019, were $1,911 million and $1,734 million, respectively.

Iberdrola Group Credit Facility

On June 18, 2018, AVANGRID entered into a credit facility with Iberdrola Financiacion, S.A.U., a company of the Iberdrola Group. The facility has a limit of $500 million and matures on June 18, 2023. AVANGRID pays a facility fee of 10.5 basis points

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annually on the facility. As of both December 31, 2018 and February 27, 2019, there was no outstanding amount under this credit facility.

Long-Term Capital Resources

We expect to meet our long-term capital requirements through the use of our cash balances, credit facilities, cash from operations and long-term borrowing. We have investment grade ratings from Standard and Poor's, Moody's and Fitch and we believe that we can raise capital on competitive terms in the investment grade debt capital and/or bank markets.

On June 29, 2018, NYSEG and RG&E remarketed $326 million in aggregate principal amount of Pollution Control Revenue Bonds, issued through the New York State Energy Research and Development Authority, with mandatory tender and maturity dates ranging from 2023 to 2029 and interest rates ranging from 2.625% to 3.50%.

On October 2, 2018, UI remarketed $64.5 million in aggregate principal amount of Pollution Control Refunding Revenue Bonds, issued through the Business Finance Authority of the State of New Hampshire, with a mandatory tender date in 2023 and an interest rate of 2.80%.

In the third and fourth quarters of 2018, UI, CNG, SCG, BGC and CMP offered a total of $645 million of debt securities in the private placement market. On October 4, 2018, each of UI, CNG and BGC executed separate note purchase agreements to issue senior unsecured notes, and SCG executed a bond purchase agreement to issue first mortgage bonds. On October 4, 2018, UI issued $100 million of senior unsecured notes maturing in 2028 at an interest rate of 4.07%, and on January 15, 2019, UI, CNG, SCG and BGC issued $195 million in aggregate amount of notes/bonds with maturity dates ranging from 2029 to 2049 and interest rates ranging from 4.07% to 4.52%.

On December 12, 2018, UI issued an additional $50 million of senior unsecured notes maturing in 2025 at a fixed interest rate of 3.96% under a separate note purchase agreement. In addition, on December 27, 2018, CMP executed a bond purchase agreement to issue $300 million of first mortgage bonds and issued $60 million of such bonds maturing in 2028 at a fixed interest rate of 3.95%. The remaining $240 million in aggregate amount of CMP first mortgage bonds are expected to be issued in June 2019. Maturities range from seven to 15 years and interest rates range from 3.87% to 4.20%.

At December 31, 2018, we had $4,657 million of long-term debt (including the current portion thereof) outstanding in the Networks segment consisting of first mortgage bonds, senior unsecured notes, tax-exempt bonds and various other forms of debt. Networks' regulated utilities are required by regulatory order to maintain a minimum ratio of common equity to total capital that is tied to the capital structure used in the establishment of their revenue requirements. Pursuant to these requirements, each of NYSEG, RG&E, CMP and MNG must maintain a minimum equity ratio equal to the ratio in its currently effective rate plan or decision measured using a trailing 13-month average. On a monthly basis, each utility must maintain a minimum equity ratio of no less than 300 basis points below the equity ratio used to set rates. UI, SCG, CNG and BGC are restricted from paying dividends if paying such dividend would result in their respective common equity ratio being lower than 300 basis points below the equity percentage used to set rates in the most recent distribution rate proceeding as measured using a trailing 13-month average calculated as of the most recent quarter end. The regulated utilities periodically pay dividends to, or receive capital contributions from, AVANGRID in order to maintain the minimum equity ratio requirement. They each independently incur indebtedness by issuing investment grade debt securities. Networks' regulated utilities were in compliance with these regulatory orders as of December 31, 2018.

At December 31, 2018, we had $52 million of long-term debt (including the current portion thereof) outstanding in the Renewables segment relating to a sale-leaseback arrangement on a solar generation facility. Renewables has also sourced capital through tax equity financing arrangements associated with particular wind farm projects. The arrangements allocate taxable income and production tax credits to the tax equity investor in exchange for an initial contribution. Effective January 1, 2018, tax equity financing arrangements are recorded as a noncontrolling interest. On May 3, 2018, Renewables closed on the sale of a tax equity interest in its El Cabo wind project which resulted in proceeds of $213 million.

At December 31, 2018, we had $1,053 million of long-term debt (including the current portion thereof) outstanding in corporate. Long-term debt in corporate consists mainly of $450 million of 4.625% notes due in 2020 originally issued by UIL in 2010 and transferred to Avangrid, Inc. in December 2016 and $600 million of 3.150% notes due 2024 issued in November 2017.

In our credit facilities, long-term borrowing and tax-equity partnerships, we and our affiliates that are parties to the agreements are subject to covenants that are standard for such agreements. Affirmative covenants impose certain obligations on the borrower and negative covenants limit certain activities by the borrower. The agreements also define certain events of default, including but not limited to non-compliance with the covenants that may automatically in some circumstances, or at the option of the lenders in other circumstances, trigger acceleration of the obligations. We and our affiliates were in compliance with all such covenants at December 31, 2018.

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Capital Requirements

Funding Future Common Dividend Payments

We expect to fund any quarterly shareholder dividends primarily from the cash provided by operations of our businesses in the future. We have revolving credit facilities and a commercial paper program, as described above, to fund short-term liquidity needs and we believe that we will have access to the capital markets should additional, long-term growth capital be necessary.

Capital Expenditures

The regulated utilities' capital expenditures over the last three years have been as follows:

	2018	2017	2016
		(in millions)	
NYSEG	$ 517	$ 364	$ 282
RG&E	283	303	268
CMP	212	252	207
MNG	7	3	3
UI	153	176	170
SCG	57	53	54
CNG	55	70	73
BGC	17	18	17
Total	**$ 1,301**	**$ 1,239**	**$ 1,074**

Renewables' capital expenditures for the years set forth below were as follows:

	2018	2017	2016
		(in millions)	
Wind & solar	$ 277	$ 902	$ 751
Thermal	25	17	8
Corporate(1)	13	10	7
Total capital expenditures	**$ 315**	**$ 929**	**$ 766**

(1) Includes information technology and facilities and safety (security).

Networks increased its capital expenditures during the period from 2016 to 2018 to upgrade and expand electricity and natural gas transmission and distribution infrastructure. In 2018, NYSEG and RG&E continued their capital investments in a number of programs disclosed in Appendix P Schedule I of the Joint Proposal, including the grid automation project, distribution line project, Columbia County transmission project, Rochester Area Reliability Project, or RARP, and Gas Distribution Mains and Leak Prone Main replacement project. In 2018, CMP made capital investments in developing its new customer relationship management and billing system. UIL's capital projects remained relatively flat for the same period, and the most relevant projects were the ones related to new customers, system and corrective reliability, system resiliency, infrastructure replacement and system operations.

Renewables also made capital investments during this three-year period. In 2018, there were capital expenditures of $232 million on construction of Otter Creek, Karankawa, Montague, Wy'East Solar and other wind and solar assets, $25 million in capital expenditures on the Klamath gas-fired cogeneration facility, or the Klamath Plant, $17 million on improvements to operating wind assets and $28 million in development costs.

In 2017, there were capital expenditures of $856 million on construction of El Cabo, Tule, Twin Buttes II, Deerfield and other wind assets, $17 million in capital expenditures on the Klamath Plant, $11 million on improvements to operating wind assets and $35 million in development costs.

In 2016, there were capital expenditures of $728 million on construction of the Amazon Wind Farm US - East (formerly Desert Wind) and other wind assets, $8 million in capital expenditures on the Klamath Plant, $10 million on improvements to operating wind assets and $13 million in development costs.

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Capital Improvement Projects

An important part of our business strategy involves capital improvement projects. Through Networks we plan to invest a total of approximately $7.99 billion from 2019 to 2023 to upgrade and expand electricity and natural gas transmission and distribution infrastructure. In the next 12 months, Networks plans to invest $330 million in Maine, including the NECEC, Spectrum Project, Fleet Services, Physical and Cyber Security, Line Inspection and Waterville-Winslow Reliability Project. In addition, CMP plans to continue developing its new customer relationship management and billing system and new transmission investments in the Maine Electric Power Corporation, or MEPCO, 388 rebuild. MEPCO plans to invest $18 million in the next 12 months. NYSEG plans to invest $580 million in the next 12 months, including a number of programs disclosed in Appendix P Schedule I of the Joint Proposal dated June 15, 2016, the most relevant ones: NYSEG Grid Automation, AMI Project, NY WAN Expansion Project, BES Program - FERC Compliance, NYSEG Breaker Program, NYSEG Distribution Line Project, Phelps South Gas Replacement Project, Gas Distribution Mains and Leak Prone Main replacement. RG&E plans to invest $382 million in the next 12 months, including a number of programs disclosed in Appendix P Schedule I of the Joint Proposal dated June 15, 2016, the most relevant ones: RARP, BES Program - FERC Compliance, Station 23 115kV Substation, Telcom NY WAN Buildout, Gas Distribution Mains and Leak Prone Main replacement. UIL plans to invest $345 million in the next 12 months, including a number of programs and projects related to new customer connections, replacement of aging infrastructure, and improvement of system operations, reliability and resiliency. For gas operations, the most notable investments include cast iron/bare steel pipe replacement, infrastructure expansion and the connection of new customers, and Milford LNG facility upgrades.

Through Renewables we plan to invest a total of approximately $4.0 billion from 2019 to 2023 and add approximately 2,200 MW of generation capacity. 1,300 MW are approved for construction in 2019 and 2020 and these projects are under long-term PPA or hedge contracts.

In December 2018, Renewables, through its joint venture in Vineyard Wind, was awarded a second Massachusetts offshore lease. In February 2019, a contribution was made to a new offshore development project of $100 million to enter into the lease contract.

We expect to fund these capital improvement projects through a combination of retained earnings, cash provided by operations and access to the capital markets, including debt borrowings at either the subsidiary or holding company level. Additionally, we have a revolving credit facility, as described above, to fund short-term liquidity needs.

Cash Flows

Our cash flows depend on many factors, including general economic conditions, regulatory decisions, weather, commodity price movements and operating expense and capital spending control.

The following is a summary of the cash flows by activity for the years ended December 31, 2018, 2017 and 2016, respectively:

	Year Ended December 31,		
	2018	2017	2016
		(in millions)	
Cash Flows			
Net cash provided by operating activities	$ 1,791	$ 1,763	$ 1,561
Net cash used in investing activities	(1,564)	(2,341)	(1,527)
Net cash (used in) provided by financing activities	(230)	528	(372)
Net decrease in cash, cash equivalents and restricted cash	**$ (3)**	**$ (50)**	**$ (338)**

Operating Activities

Our primary sources of operating cash inflows are proceeds from transmission and distribution of electricity and natural gas and sales of wholesale energy and energy related products and services. Our primary operating cash outflows are power and natural gas purchases and transmission operating and maintenance expenses, as well as personnel costs and other employee-related expenditures. As our business has expanded, our working capital requirements have grown. We expect our working capital to grow as we continue to grow our business.

In 2018, net cash provided by operating activities was $1.8 billion. During the period, Renewables contributed $522 million of operating cash flow associated with wholesale sales of energy, Networks contributed $980 million of operating cash as the result of regulated transmission and distribution sales of electricity and natural gas. Additionally, $11 million in cash was used associated with corporate operating expenses in support of the operating segments and changes in working capital provided $303 million in cash. The cash from operating activities in 2018 compared to 2017 increased by $28 million, primarily attributable to increased operating revenues. The net $12 million change in operating assets and liabilities in 2018 was primarily attributable to

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a net increase of $12 million in accounts receivable and payable due to impacts from sales and purchases, increase in inventories of $14 million, cash distributions from equity method investments of $14 million, net increase of $49 million in other assets/liabilities and taxes accrued of $30 million, offset by net decrease in regulatory assets/liabilities of $79 million.

In 2017, net cash provided by operating activities was $1.8 billion. During the period, Renewables contributed $734 million of operating cash flow associated with wholesale sales of energy, Networks contributed $970 million of operating cash as the result of regulated transmission and distribution sales of electricity and natural gas. Additionally, $60 million in cash was provided in support of the operating segments and changes in working capital used $100 million in cash. The cash from operating activities in 2017 compared to 2016 increased by $202 million, primarily attributable to increased operating revenues, excluding the impact of a non-cash adjustment of unfunded future income tax discussed above. The net change in operating assets and liabilities in 2017 was primarily attributable to a net increase of $33 million in accounts receivable and payable due to impacts from sales and purchases, cash distributions from equity method investments of $16 million, increase in taxes accrued of $41 million, offset by decrease in inventories of $12 million, net decrease of $55 million in other assets/liabilities and regulatory assets/liabilities of $47 million.

In 2016, net cash provided by operating activities was $1.6 billion. During the period, Renewables contributed $420 million of operating cash flow associated with wholesale sales of energy, Networks contributed $1.0 billion of operating cash as the result of regulated transmission and distribution sales of electricity and natural gas. Additionally, $82 million in cash was provided in support of the operating segments and changes in working capital provided $40 million in cash. The cash from operating activities in 2016 compared to 2015 increased by $198 million, primarily attributable to the increased operating revenues. The $338 million net change in operating assets and liabilities in 2016 was primarily attributable to a net increase of $26 million in accounts receivable and payable due to impacts from sales and purchases, cash distributions from equity method investments of $14 million, offset by net decrease of $340 million in in other assets/liabilities, decrease in inventories of $46 million and regulatory assets/liabilities of $81 million.

Investing Activities

Our investing activities have primarily focused on enhancing, automating and reinforcing the asset base to support safety, reliability and customer growth in accordance with the regulatory markets within which we operate, as well as constructing solar and wind assets and spending on gas generation assets.

In 2018, net cash used in investing activities was $1,564 million, which was comprised of $1,377 million associated with capital expenditures at Networks and $410 million of capital expenditures at Renewables primarily associated with payments in support of the new capacity construction projects. This was offset by $60 million of contributions in aid of construction, $4 million of cash distributions from equity method investments, and proceeds from sale of assets of $204 million primarily related to the sale of assets held for sale.

In 2017, net cash used in investing activities was $2,341 million, which was comprised of $1,305 million associated with capital expenditures at Networks and $1,097 million of capital expenditures at Renewables primarily associated with payments in support of the new capacity construction projects. This was offset by $57 million of contributions in aid of construction, $4 million of cash distributions from equity method investments and proceeds of $12 million from the sale of property, plant and equipment.

In 2016, net cash used in investing activities was $1.5 billion, which was comprised of $1.1 billion associated with capital expenditures at Networks and $561 million of capital expenditures at Renewables primarily associated with payments in support of the Amazon Wind Farm US - East (formerly Desert Wind) construction project and safe harbor payments for turbines. This was offset by $69 million of contributions in aid of construction, proceeds of $57 million from the sale of our equity method investment in Iroquois and other investment, $43 million from asset sale to the New York TransCo and $7 million from sale of property.

Financing Activities

Our financing activities have primarily consisted of using our credit facilities and long-term debt issued or redeemed by our regulated Networks subsidiaries.

In 2018, financing activities used $230 million in cash reflecting primarily an issuance of non-current debt at NYSEG, RG&E, CMP and UI with the net proceeds of $597 million, contributions from non-controlling interests of $223 million, offset by a net decrease in non-current debt and current notes payable of $418 million, distributions to non-controlling interests of $76 million, payments on capital leases of $13 million and dividends of $537 million.

In 2017, financing activities provided $528 million in cash reflecting primarily an issuance of non-current debt at RG&E with the net proceeds of $294 million and notes at Avangrid, Inc. with net proceeds of $594 million, after price discount and

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issuance-related expenses, a net increase in non-current debt and current notes payable of $320 million, payments on the tax equity financing arrangements of $113 million, capital lease of $33 million and dividends of $535 million.

In 2016, cash used in financing activities was $372 million reflecting primarily an increase in non-current notes payable of $493 million less maturities and redemptions of $355 million, $88 million in payments on the tax equity financing arrangements, repurchase of common stock of $5 million and dividends of $401 million.

Contractual Obligations

As of December 31, 2018, our contractual obligations (excluding any tax reserves) were as follows:

	Total	2019	2020	2021	2022	2023	Thereafter
				(in millions)			
Operating leases(1)	$ 911	$ 31	$ 39	$ 38	$ 35	$ 33	$ 735
Projected future pension benefit plan contributions(2)	337	63	67	61	78	68	—
Long-term debt (including current maturities)(3)	5,762	394	720	308	365	489	3,486
Interest payments(4)	2,290	234	217	189	176	159	1,315
Material purchase commitments(5)	1,827	1,307	211	118	54	37	100
Total Contractual Obligations	**$ 11,127**	**$ 2,029**	**$ 1,254**	**$ 714**	**$ 708**	**$ 786**	**$ 5,636**

(1) Represents lease contracts relating to operational facilities, office building leases, and vehicle and equipment leases. These amounts represent our expected unadjusted portion of the costs to pay as amounts related to contingent payments are predominantly linked to electricity generation at the respective facilities.
(2) The qualified pension plans' contributions are generally based on the estimated minimum pension contributions required under the Employee Retirement Income Sensitivity Act of 1974, as amended, and the Pension Protection Act of 2006, as well as contributions necessary to avoid benefit restrictions and at-risk status and agreements with state regulatory agencies. These amounts represent estimates that are based on assumptions that are subject to change. The minimum required contributions for years after 2023 are not included as projections beyond 2023 are not available.
(3) Includes sinking fund obligations and obligations under capital leases. See debt payment discussion in "Long-term Capital Resources."
(4) Interest payments are estimated based on final maturity dates of debt securities outstanding at December 31, 2018, and do not reflect anticipated future refinancing, early redemptions or debt issuances. Variable rate interest obligations are estimated based on rates as of December 31, 2018.
(5) Represents forward purchase commitments under power, gas and other arrangements and contractual obligations for material and services on order but not yet delivered at December 31, 2018.

Critical Accounting Policies and Estimates

The financial statements provided herein have been prepared in accordance with U.S. GAAP and include the accounts of AVANGRID and its consolidated subsidiaries.

In preparing the accompanying financial statements, our management has made certain estimates and assumptions that affect the reported amounts of assets, liabilities, shareholder's equity, revenues and expenses and the disclosures thereof. The following accounting policies represent those that management believes are particularly important to the consolidated financial statements and that require the use of estimates, assumptions and judgments to determine matters that are inherently uncertain. Our management recorded the net assets of ARHI in these consolidated financial statements at the historical accounting basis of AVANGRID. The historical accounting basis of AVANGRID includes purchase accounting adjustments related to AVANGRID's acquisition of ARHI in 2007. Prior to the 2013 reorganization of AVANGRID, Networks was not considered to be a substantive operating entity as it did not hold any direct operations and had always been a part of AVANGRID. As a result, the net assets of Networks in these consolidated financial statements are recorded at the historical accounting basis of AVANGRID, which do not include purchase accounting adjustments related to Iberdrola, S.A.'s acquisition of AVANGRID in 2008.

Accounting for Regulated Public Utilities

U.S. GAAP allows regulated entities to give accounting recognition to the actions of regulatory authorities. In order to apply such regulatory accounting treatment and record regulatory assets and liabilities, certain criteria must be met. In determining whether the criteria are met for our operations, our management makes significant judgments, which involve (i) determining whether rates for services provided to customers are subject to approval by an independent, third-party regulator, (ii) determining whether the regulated rates are designed to recover specific costs of providing the regulated service, (iii) considering relevant historical precedents and recent decisions of the regulatory authorities and (iv) considering the fact that decisions made by regulatory commissions or legislative changes at a later date could vary from earlier interpretations made by management and that the impact of such variations could be material. Our regulated subsidiaries have deferred recognition of costs (a regulatory asset) or have recognized obligations (a regulatory liability) if it is probable that such costs will be recovered or obligations relieved in the future through the ratemaking process. Management regularly reviews our regulatory assets and liabilities to determine whether

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adjustments to its previous conclusions are necessary based on the current regulatory environment as well as recent rate orders. If our regulated subsidiaries, or a portion of their assets or operations, were to cease meeting the criteria for application of these accounting rules, accounting standards for businesses in general would become applicable and immediate recognition of any previously deferred costs would be required in the year in which such criteria are no longer met.

Accounting for Pensions and Other Post-retirement Benefits

We provide pensions and other post-retirement benefits for a significant number of employees, former employees and retirees. We account for these benefits in accordance with the accounting rules for retirement benefits. In accounting for its pension and other post-retirement benefit plans, or the AVANGRID plans, assumptions are made regarding the valuation of benefit obligations and the performance of plan assets. Delayed recognition of differences between actual results and those assumed allows for a smoother recognition of changes in benefit obligations and plan performance over the working lives of the employees who benefit under the AVANGRID plans. The primary assumptions include the discount rate, the expected return on plan assets, health care cost trend rate, mortality assumptions and demographic assumptions. We apply consistent estimation techniques regarding our actuarial assumptions, where appropriate, across the AVANGRID plans of our operating subsidiaries. The estimation technique utilized to develop the discount rate for the AVANGRID plans is based upon the settlement of such liabilities as of December 31, 2018, utilizing a hypothetical portfolio of actual, high quality bonds, which would generate cash flows required to settle the liabilities. We believe such an estimate of the discount rate accurately reflects the settlement value for plan obligations and results in cash flows which closely match the expected payments to participants.

We reflect all unrecognized prior service costs and credits and unrecognized actuarial gains and losses for the regulated utilities of Networks as regulatory assets or liabilities as it is probable that such items will be recovered through the ratemaking process in future periods.

During 2018, the Society of Actuaries issued updated mortality tables and projection scales. AVANGRID, in conjunction with its actuaries, performed an analysis to determine the appropriateness of adopting these tables and the related mortality projections. As a result, our pension and post-retirement plan liabilities as of December 31, 2018, reflect updated mortality assumptions.

Business Combinations and Assets Acquisitions

We apply the acquisition method of accounting to account for business combinations. The consideration transferred for an acquisition is the fair value of the assets transferred, the liabilities incurred by the acquirer to former owners of acquiree and the equity interests issued by the acquirer. Acquisition related costs are expensed as incurred. Identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are measured initially at their fair values at the acquisition date. The excess of the consideration transferred over the fair value of the identifiable net assets acquired is recorded as goodwill. We recognize adjustments to provisional amounts relating to a business combination that are identified during the measurement period in the reporting period in which the adjustment amounts are determined.

In contrast to a business combination, we classify a transaction as an asset acquisition when substantially all of the fair value of the gross assets acquired is concentrated in a single identifiable asset or group of similar identifiable assets or otherwise does not meet the definition of a business.

Goodwill

Goodwill is not amortized, but is subject to an assessment for impairment at least annually or more frequently if events occur or circumstances change that will more likely than not reduce the fair value of the reporting unit below its carrying amount. A reporting unit is an operating segment or one level below an operating segment and is the level at which goodwill is tested for impairment.

In assessing goodwill for impairment, we have the option of first performing a qualitative assessment to determine whether a quantitative assessment is necessary, or step zero. If it is determined, on the basis of qualitative factors, that the fair value of the reporting unit is more likely than not greater than the carrying amount, no further testing is required. If we bypass step zero or perform the qualitative assessment but determine that it is more likely than not that its fair value is less than its carrying amount, a quantitative two step, fair value based test is performed. Step one compares the fair value of the reporting unit to its carrying amount, including goodwill. If the carrying amount of the reporting unit exceeds its fair value, step two is performed. Step two requires an allocation of fair value to the individual assets and liabilities using business combination accounting guidance to determine the implied fair value of goodwill. If the implied fair value of goodwill is less than its carrying amount, an impairment loss is recorded as a reduction to goodwill and a charge to operating expense.

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Our step zero qualitative assessment involves evaluating key events and circumstances that could affect the fair value of our reporting units, as well as other factors. Events and circumstances evaluated include macroeconomic conditions, industry, regulatory and market considerations, cost factors and their effect on earnings and cash flows, overall financial performance as compared with projected results and actual results of relevant prior periods, other relevant entity specific events, and events affecting a reporting unit.

Our step one impairment testing, and step two if required, includes various assumptions, primarily the discount rate, which is based on an estimate of our marginal, weighted average cost of capital, and forecasted cash flows. We test the reasonableness of the conclusions of our step one impairment testing using a range of discount rates and a range of assumptions for long term cash flows.

Impairment of Long Lived Assets

We evaluate property, plant and equipment and other long lived assets for impairment when events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is required to be recognized if the carrying amount of the asset exceeds the undiscounted future net cash flows associated with that asset.

We determine the fair value of a long-lived asset (asset group) by applying the approaches prescribed under the fair value measurement accounting framework. Generally, the market approach and income approach are most relevant in the fair value measurement of our long-lived assets; however, due to the lack of available relevant observable market information in many circumstances, we often rely on the income approach. We develop the underlying assumptions consistent with our internal budgets and forecasts for such valuations. We use an internal discounted cash flow valuation model, or the DCF model, based on the principles of present value techniques, to estimate the fair value of our long-lived assets under the income approach. The DCF model estimates fair value by discounting AVANGRID's cash flow forecasts at an appropriate discount rate. Management applies considerable judgment in selecting several input assumptions during the development of our internal budgets and cash flow forecasts. Examples of the input assumptions that our budgets and forecasts are sensitive to include macroeconomic factors such as growth rates, industry demand, inflation, power prices and commodity prices. Whenever appropriate, management obtains these input assumptions from observable market data sources and extrapolates the market information if an input assumption is not observable for the entire forecast period. Many of these input assumptions are dependent on other economic assumptions, which are often derived from statistical economic models with inherent limitations such as estimation differences. Further, several input assumptions are based on historical trends which often do not recur. The input assumptions most significant to our budgets and cash flows are based on expectations of macroeconomic factors which may be volatile. The use of a different set of input assumptions could produce significantly different budgets and cash flow forecasts.

A considerable amount of judgment is also applied in the estimation of the discount rate used in the DCF model. To the extent practical, inputs to the discount rate are obtained from market data sources.

Fair value of a long-lived asset (asset group) is sensitive to both input assumptions related to our budgets and cash flow forecasts and the discount rate. Further, estimates of long-term growth and terminal value are often critical to the fair value determination. As part of the impairment evaluation process, management analyzes the sensitivity of fair value to various underlying assumptions. The level of scrutiny increases as the gap between fair value and carrying amount decreases. Changes in any of these assumptions could result in management reaching a different conclusion regarding the potential impairment, which could be material. Our impairment evaluations inherently involve uncertainties from uncontrollable events that could positively or negatively impact the anticipated future economic and operating conditions.

Capitalization and Recovery of Project Development Costs

Development and construction of our various facilities are carried out in stages. Project costs are expensed during early stage development activities. Once certain development milestones are achieved and it is probable that we can obtain future economic benefits from a project, salaries and wages for persons directly involved in the project, and engineering, permits, licenses, wind measurement and insurance costs are capitalized.

Development projects in construction are reviewed periodically for any indications of impairment. Furthermore, we assess the recoverability of development costs that have been capitalized using several criteria to assess economic recoverability and probability of future economic benefit including energy prices, government regulation, and the internal rate of return to be earned on the project. If based on these factors, we conclude that we will not proceed with the related project, or that the project is no longer viable, the cost of the project is expensed in full.

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Fair Value Measurement

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants as of the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place in either the principal market for the asset or liability, or, in the absence of a principal market, in the most advantageous market for the asset or liability.

We use valuation techniques and methodologies that maximize the use of observable inputs and minimize the use of unobservable inputs. Where available, fair value is based on observable market prices or parameters or derived from such prices or parameters. Where observable prices are not available, valuation models are applied to estimate the fair value using the available observable inputs. The valuation techniques involve some level of management estimation and judgment, the degree of which is dependent on the price transparency for the instruments or market and the instruments' complexity.

To increase consistency and enhance disclosure of the fair value of financial instruments, the fair value measurement standard includes a fair value hierarchy to prioritize the inputs used to measure fair value into three categories. An asset or liability's level within the fair value hierarchy is based on the lowest level of input significant to the fair value measurement, where Level 1 is the highest and Level 3 is the lowest.

Income Tax

AVANGRID will file a consolidated federal income tax return that includes the taxable income or loss of all its subsidiaries for the 2018 tax period, which is consistent with the 2017 and 2016 tax periods.

For the 2015 tax year, AVANGRID filed a consolidated federal income tax return, which included the UIL taxable income or loss for the period from December 17, 2015 to December 31, 2015. UIL filed a separate consolidated federal income tax return for the period from January 1, 2015 to December 16, 2015.

AVANGRID filed a consolidated federal income tax return that includes the taxable income or loss of all its subsidiaries (excluding UIL), including ARHI, which are 80% or more owned for the 2014 tax period. UIL filed separate consolidated federal income tax returns including the income or loss of its subsidiaries for all tax years including the filed 2014 return.

AVANGRID (excluding ARHI and UIL) and ARHI each filed separate consolidated federal income tax returns that included the taxable income or loss of all their respective subsidiaries, which are 80% or more owned, for all tax periods prior to 2013.

We use the liability method of accounting for income taxes. Deferred tax assets and liabilities reflect the expected future tax consequences based on enacted tax law of temporary differences between the tax basis of assets and liabilities and their financial reporting amounts. In accordance with U.S. GAAP for regulated industries, our regulated subsidiaries have established a regulatory asset for the net revenue requirements to be recovered from customers for the related future tax expense associated with certain of these temporary differences. The investment tax credits are deferred when used and amortized over the estimated lives of the related assets.

Deferred tax assets and liabilities are measured at the expected tax rate for the period in which the asset or liability will be realized or settled, based on legislation enacted as of the balance sheet date. Changes in deferred income tax assets and liabilities that are associated with components of other comprehensive income, or OCI, are charged or credited directly to OCI. Significant judgment is required in determining income tax provisions and evaluating tax positions. Our tax positions are evaluated under a more-likely-than-not recognition threshold before they are recognized for financial reporting purposes. Valuation allowances are recorded to reduce deferred tax assets when it is more likely than not that all or a portion of a tax benefit will not be realized.

The excess of state franchise tax computed as the higher of a tax based on income or a tax based on capital is recorded in "Taxes other than income taxes" and "Taxes accrued" in the accompanying consolidated financial statements.

Positions taken or expected to be taken on tax returns, including the decision to exclude certain income or transactions from a return, are recognized in the financial statements when it is more likely than not the tax position can be sustained based solely on the technical merits of the position. The amount of a tax return position that is not recognized in the financial statements is disclosed as an unrecognized tax benefit. Changes in assumptions on tax benefits may also impact interest expense or interest income and may result in the recognition of tax penalties. Interest and penalties related to unrecognized tax benefits are recorded within "Interest expense, net of capitalization" and "Other income and (expense)" of the consolidated statements of income.

Uncertain tax positions have been classified as noncurrent unless expected to be paid within one year. Our policy is to recognize interest and penalties on uncertain tax positions as a component of interest expense in the consolidated statements of income.

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Federal production tax credits applicable to our renewable facilities, that are not part of a tax equity financing arrangement, are shown in the financial statements as a reduction in income tax expense and as a reduction in deferred income tax liabilities.

Our income tax expense, deferred tax assets and liabilities and liabilities for unrecognized tax benefits reflect management's best assessment of estimated current and future taxes to be paid. Significant judgments and estimates are required in determining the consolidated income tax components of the financial statements.

Upon enactment of the Tax Act, the Company remeasured its existing deferred income tax balances as of December 31, 2017 to reflect the decrease in the corporate income tax rate from 35% to 21%, which resulted in a material decrease to its net deferred income tax liability balances. In connection with the Tax Act, the U.S. Securities and Exchange Commission issued guidance in Staff Accounting Bulletin 118, or SAB 118, which clarified accounting for income taxes under ASC 740, Income Taxes, if information was not yet available or complete and provided up to a one year measurement period in which to complete the required analyses and accounting. Following SAB 118 guidance, the Company recorded provisional income tax amounts as of December 31, 2017 related to the Tax Act based on reasonable estimates that could be determined at that time. As of December 31, 2018, the Company has completed the measurement and accounting of certain effects of the Tax Act which have been reflected in the December 31, 2018 financial statements.

Off-Balance Sheet Arrangements

December 31, 2018, we had approximately $2.8 billion of standby letters of credit, surety bonds, guarantees and indemnifications outstanding, which include guarantees of our own performance. These instruments provide financial assurance to the business and trading partners of AVANGRID and its subsidiaries in their normal course of business. The instruments only represent liabilities if AVANGRID or its subsidiaries fail to deliver on contractual obligations. We therefore believe it is unlikely that any material liabilities associated with these instruments will be incurred and, accordingly, as of December 31, 2018, neither we nor our subsidiaries have any liabilities recorded for these instruments.

New Accounting Standards

For discussion of new accounting pronouncements that affect AVANGRID, refer to Note 3 to our consolidated financial statements contained in this Annual Report on Form 10-K.

Item 7A. ***Quantitative and Qualitative Disclosures About Market Risk.***

We are exposed to risks associated with adverse changes in commodity prices, interest rates and equity prices. Financial instruments and positions affecting our financial statements described below are held primarily for purposes other than trading. Market risk is measured as the potential loss in fair value resulting from hypothetical reasonably possible changes in commodity prices, interest rates or equity prices over the next year. Management has established risk management policies to monitor and manage such market risks, as well as credit risks.

Commodity Price Risk

Renewables faces a number of energy market risk exposures, including fixed price, basis (both location and time) and heat rate risk.

Long-term supply contracts reduce our exposure to market fluctuations. We have electricity commodity purchases and sales contracts for energy (physical contracts) that have been designated and qualify for the normal purchase normal sale exemption in accordance with the accounting requirements concerning derivative instruments and hedging activities.

Renewables merchant wind facilities are subject to fixed price power risk, which is hedged with fixed price power trades. Its combined cycle power plant is subject to heat rate risk, which is hedged with fixed price power and fixed price gas and basis positions. Those measures mitigate our commodity price exposure, but do not completely eliminate it. Some long-term hedges do not qualify for hedge accounting. This introduces some MtM volatility into yearly profit and losses accounts.

Renewables uses a Monte Carlo simulation value-at-risk, or VaR, technique to measure and control the level of risk it undertakes. VaR is a statistical technique used to measure and quantify the level of risk within a portfolio over a given timeframe and within a specified level of confidence. VaR is primarily composed of three variables: the measured amount of potential loss, the probability of not exceeding the amount of potential loss and the portfolio holding period.

Renewables uses a 99% probability level over a five-day holding period, indicating that it can be 99% confident that losses over five days would not exceed that value. The average VaR for 2018 was $18.7 million compared to a 2017 average of $15.0 million.

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As noted above, VaR is a statistical technique and is not intended to be a guarantee of the maximum loss Renewables may incur.

Networks also experiences commodity price risk, due to volatility in the wholesale energy markets. Networks manages that risk through a combination of regulatory mechanisms, such as the pass-through of the market price of electricity and natural gas to customers, and through comprehensive risk management processes. Those measures mitigate our commodity price exposure, but do not completely eliminate it. Networks also uses electricity contracts as deemed appropriate, both physical and financial, to manage fluctuations in electricity commodity prices in order to provide price stability to customers. It also uses natural gas futures and forwards to manage fluctuations in natural gas commodity prices in order to provide price stability to customers. It includes the cost or benefit of those contracts in the amount expensed for electricity or natural gas purchased when the related electricity is sold.

Because all gains or losses on Networks' commodity contracts will ultimately be passed on to retail customers, no sensitivity analysis is performed for Networks. Further information regarding the derivative financial instruments and sensitivity analysis is provided in Notes 11 and 12 of our consolidated financial statements contained in this Annual Report on Form 10-K.

Interest Rate Risk

Total debt outstanding, including commercial paper of $589 million, was $6.3 billion at December 31, 2018, of which $589 million had a floating interest rate; a change of 25 basis points in this interest rate would result in an interest expense fluctuation of approximately $1.5 million annually. The estimated fair value of our long-term debt at December 31, 2018 was $5.9 billion, in comparison to a book value of $5.8 billion.

AVANGRID uses financial derivative instruments from time to time to alter its fixed and floating rate debt balances or to hedge fixed rates in anticipation of future fixed rate issuances. In the second quarter of 2018, AVANGRID entered into two forward interest rate swaps, with a total notional amount of $500 million, to hedge the issuance of forecasted fixed rate debt in 2019. The forward interest rate swaps are designated and qualify as cash flow hedges, have mandatory termination dates of June 28, 2019, and are expected to be settled upon the forecasted debt issuance. The effective portion of the gain or loss on the interest rate swap derivative is reported as a component of accumulated OCI and reclassified into earnings in the period or periods during which related interest payments of the forecasted debt will occur. Further information regarding the interest rate derivative financial instruments is provided in Note 12 of our consolidated financial statements contained in this Annual Report on Form 10-K. There were no interest rate derivative contracts outstanding at December 31, 2017.

Pension and Post-Retirement Plans

We provide pensions and other post-retirement benefits for a significant number of employees, former employees and retirees. In applying relevant accounting policies, we have made critical estimates related to actuarial assumptions, including assumptions of expected returns on plan assets, discount rates, health care cost trends and future compensation. The cost of pension and other post-retirement benefits in future periods will depend on actual returns on plan assets, assumptions for future periods, contributions and benefit experience. In 2018, we contributed $48 million to our pension plans. Our contribution to the pension plans in 2019 is expected to be approximately $62 million.

The discount rate used in accounting for pension and other benefit obligations in 2018 ranged from 3.63% to 4.09%. The expected rate of return on plan assets for qualified pension benefits in 2018 ranged from 5.50% to 7.40%. The following tables reflect the estimated sensitivity associated with a change in certain significant actuarial assumptions (each assumption change is presented mutually exclusive of other assumption changes):

		Impact on 2018 Pension Expense Increase (Decrease)	
	Change in Assumption	**Pension Benefits**	**Post Retirement**
		(in millions)	
Increase in discount rate	50 basis points	$ (18)	$ (2)
Decrease in discount rate	50 basis points	$ 18	$ 2
Increase in return on plan asset	50 basis points	$ (14)	$ (1)
Decrease in return on plan asset	50 basis points	$ 14	$ 1

Credit Risk

This risk is defined as the risk that a third party will not fulfill its contractual obligations and, therefore, generate losses for AVANGRID. Networks is exposed to nonpayment of customer bills. Standard debt recovery procedures are in place, in accordance

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with best practices and in compliance with applicable state regulations and embedded tariff mechanisms to manage uncollectable expense. Our credit department, based on guidelines approved by our board, establishes and manages its counterparty credit limits. We have developed a matrix of unsecured credit thresholds that are dependent on a counterparty's or the counterparty guarantor's applicable credit rating. Credit risk is mitigated by contracting with multiple counterparties and limiting exposure to individual counterparties or counterparty families to clearly defined limits based upon the risk of counterparty default. At the counterparty level, we employ specific eligibility criteria in determining appropriate limits for each prospective counterparty and supplement this with netting and collateral agreements, including margining, guarantees, letters of credit and cash deposits, where appropriate.

Renewables is also exposed to credit risk through its energy management operations. We manage counterparty credit risk for our subsidiaries with energy management through established policies, including counterparty credit limits, and in some cases credit enhancements, such as cash prepayments, letters of credit, cash and other collateral and guarantees.

Some relevant considerations when assessing the credit risk exposure of the energy management are as follows:

- Operations are primarily concentrated in the energy industry.
- Trade receivables and other financial instruments are predominately with energy, utility and financial services related companies, as well as municipalities, cooperatives and other trading companies in the U.S., although there is a growing segment of long term power sales (PPAs) signed with commercial and industrial customers of high credit quality.
- Overall credit risk is managed through established credit policies by a Credit Risk Management group that is independent of the energy management function.
- Prospective and existing customers are reviewed for creditworthiness based upon established standards, with customers not meeting minimum standards providing various credit enhancements or secured payment terms, such as guarantees, letters of credit or the posting of margin cash collateral.
- Master netting agreements are used, where appropriate, to offset cash and non-cash gains and losses arising from derivative instruments with the same counterparty.

Based on our policies and risk exposures related to credit risk from its management in Renewables, we do not anticipate a material adverse effect on our financial statements as a result of counterparty nonperformance. As of December 31, 2018, approximately 97% of our energy management counterparty credit risk exposure is associated with companies that have investment grade credit ratings.

The following table displays the credit quality of our energy management counterparties as of December 31, 2018:

	Credit Exposure Before Cash Collateral	Cash Collateral	Net Credit Exposure
		(in millions)	
A- and Greater	$ 1,904	$ —	$ 1,904
BBB+ and BBB	345	—	345
BBB- (5)	22	—	22
Total Investment Grade(1) (5)	2,271	—	2,271
Non-investment grade(2) (3) (4)	72	11	61
Total	$ 2,343	$ 11	$ 2,332

(1) This category includes counterparties with minimum credit ratings of Baa3 assigned by Moody's and BBB- assigned by Standard & Poor's, if rated by both agencies. The five largest counterparty exposures, combined, for this category represented approximately 37.6% of the total gross credit exposure.
(2) This category includes one counterparty with a credit ratings that is below investment grade which represents less than 0.1% of the total gross credit exposure.
(3) This category includes counterparties that have not been rated by Moody's or Standard & Poor's, but are considered investment grade based on our internal evaluation of the counterparty's creditworthiness. The five largest counterparty exposures, combined, represented approximately 0.5% of the total gross credit exposure.
(4) This category includes counterparties that have not been rated by Moody's or Standard & Poor's, and are considered non-investment grade based on our internal evaluation of the counterparty's creditworthiness. The five largest counterparty exposures, combined, represented approximately 2.4% of the total gross credit exposure.
(5) This category includes exposure under four separate agreements, the counterparty of which filed for bankruptcy under Chapter 11 subsequent to December 31, 2018. The current combined estimated termination value under the four agreements represents less than 2% of the total gross credit exposure.

Treasury Management (including Liquidity Risk)

We manage our overall liquidity position as part of the group of companies controlled by the Iberdrola Group, and are a party to a liquidity agreement with a financial institution, along with certain members of the Iberdrola Group. We optimize our liquidity within the United States through a series of arms-length intercompany lending arrangements with our subsidiaries and among the regulated utilities to provide for lending of surplus cash to subsidiaries with liquidity needs, subject to the limitation

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that the regulated utilities may not lend to unregulated affiliates. These arrangements minimize overall short-term funding costs and maximize returns on the temporary cash investments of the subsidiaries. We also have a bi-lateral demand note agreement with a Canadian affiliate of the Iberdrola Group. We have the capacity to borrow from third parties through a $2 billion commercial paper program, the $2.5 billion AVANGRID Credit Facility which backstops the commercial paper program and $0.5 billion from an Iberdrola Group Credit Facility. For more information, see the section entitled "—Liquidity and Capital Resources—Liquidity Resources" of this Annual Report on Form 10-K.

Networks

Networks' regulated utilities fund their operations independently, except to the extent that they borrow on a short-term basis from unregulated affiliates and from each other when circumstances warrant in order to minimize short-term funding costs and maximize returns on temporary cash investments. The regulated utilities are prohibited by regulatory order from lending to unregulated affiliates. Networks' regulated utilities each independently access the investment grade debt capital markets for long-term funding and each are borrowers under the AVANGRID Credit Facility described in "—Liquidity and Capital Resources—Liquidity Resources" of this Annual Report on Form 10-K.

Networks' regulated utilities are subjected by regulatory order to certain credit quality maintenance measures, including minimum equity ratios, that are linked to the level of equity assumed in the establishment of revenue requirements. The companies maintain their equity ratios at or above the minimum through dividend declarations or, when necessary, capital contributions from AVANGRID.

Renewables

Prior to becoming a subsidiary of AVANGRID in November 2013, Renewables was principally funded by equity contributions from Iberdrola, S.A. The last such equity contribution of $800 million was made in February 2013. Renewables has also raised a small percentage of its capital through tax equity partnerships, project loans and sale-leaseback arrangements. The obligations created under the tax equity financing arrangements effective January 1, 2018, are recorded as a noncontrolling interest. The outstanding balance of leases was $52 million at December 31, 2018.

Presently, Renewables is a party to a cash pooling arrangement with Avangrid, Inc. All Renewables revenues are concentrated in and all Renewables disbursements are made from Avangrid, Inc. Net cash surpluses or deficits at Renewables are recorded as intercompany receivables or payables and these balances are periodically reduced to zero through dividends or capital contributions. In July 2018, Renewables recorded a net dividend of $758 million to Avangrid, Inc. to zero out account balances that had principally accumulated prior to June 2018.

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Item 8. Financial Statements and Supplementary Data

Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors

Avangrid, Inc.:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Avangrid, Inc. and subsidiaries (the Company) as of December 31, 2018 and 2017, the related consolidated statements of income, comprehensive income, changes in equity, and cash flows for each of the years in the two-year period ended December 31, 2018, and the related notes and financial statement schedule I (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the years in the two-year period ended December 31, 2018, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated March 1, 2019 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ KPMG LLP

We have served as the Company's auditor since 2017.

New York, New York
March 1, 2019

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Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors

Avangrid, Inc.:

Opinion on Internal Control Over Financial Reporting

We have audited Avangrid, Inc. and subsidiaries' (the Company) internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2018 and 2017, the related consolidated statements of income, comprehensive income, changes in equity, and cash flows for each of the years in the two-year period ended December 31, 2018, and the related notes and financial statement schedule I (collectively, the consolidated financial statements), and our report dated March 1, 2019 expressed an unqualified opinion on those consolidated financial statements.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Report of Management on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ KPMG LLP

New York, New York
March 1, 2019

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Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of Avangrid, Inc.

We have audited the accompanying consolidated statements of income, comprehensive income, changes in equity and cash flows of Avangrid, Inc. and subsidiaries (the "Company") for the year ended December 31, 2016. Our audit also included the financial statement schedule listed in the Index at Item 15(a). These financial statements and schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements and schedule based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated results of operations of Avangrid, Inc. and subsidiaries and its cash flows for the year ended December 31, 2016, in conformity with U.S. generally accepted accounting principles. Also, in our opinion, the related financial statement schedule, when considered in relation to the basic financial statements taken as a whole, presents fairly in all material respects the information set forth therein.

/s/ Ernst & Young LLP

New York, New York
March 10, 2017

except for the paragraph in Note 2 titled Previously Reported Immaterial Corrections to Prior Periods, as to which the date is
March 26, 2018

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Avangrid, Inc. and Subsidiaries
Consolidated Statements of Income

Years Ended December 31,	2018	2017	2016
(Millions, except for number of shares and per share data)			
Operating Revenues	**$ 6,478**	**$ 5,963**	**$ 6,018**
Operating Expenses			
Purchased power, natural gas and fuel used	1,653	1,338	1,286
Operations and maintenance	2,248	2,091	2,206
Loss from assets held for sale	16	642	—
Depreciation and amortization	855	824	804
Taxes other than income taxes, net	579	563	528
Total Operating Expenses	**5,351**	**5,458**	**4,824**
Operating Income	**1,127**	**505**	**1,194**
Other Income and (Expense)			
Other (expense) income	(66)	(62)	76
Earnings from equity method investments	10	(40)	7
Interest expense, net of capitalization	(303)	(280)	(268)
Income Before Income Tax	**768**	**123**	**1,009**
Income tax expense (benefit)	170	(259)	377
Net Income	**598**	**382**	**632**
Less: Net income attributable to noncontrolling interests	3	1	—
Net Income Attributable to Avangrid, Inc.	**$ 595**	**$ 381**	**$ 632**
Earnings Per Common Share, Basic	**$ 1.92**	**$ 1.23**	**$ 2.04**
Earnings Per Common Share, Diluted	**$ 1.92**	**$ 1.23**	**$ 2.04**
Weighted-average Number of Common Shares Outstanding:			
Basic	309,503,319	309,502,861	309,512,553
Diluted	309,712,628	309,661,883	309,817,322

The accompanying notes are an integral part of our consolidated financial statements.

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Avangrid, Inc. and Subsidiaries
Consolidated Statements of Comprehensive Income

Years Ended December 31,	2018	2017	2016
(Millions)			
Net Income	**$ 598**	**$ 382**	**$ 632**
Other Comprehensive (Loss) Income, Net of Tax			
Gain on defined benefit plans, net of income taxes of $1.1 and $4.3, respectively	3	—	7
Amortization of pension cost for nonqualified plans, net of income taxes of $0.3, $0.2 and $0.4, respectively	1	1	1
Unrealized (losses) gains during the year on derivatives qualifying as cash flow hedges, net of income taxes of $(6.6), $15.2 and $(15.8), respectively	(21)	25	(26)
Reclassification to net income of (gains) losses on cash flow hedges, net of income taxes of $(6.5), $9.3 and $(11.0), respectively	(8)	14	(16)
Total Other Comprehensive (Loss) Income, Net of Tax	**(25)**	**40**	**(34)**
Comprehensive Income	573	422	598
Less: Net income attributable to noncontrolling interests	3	1	—
Comprehensive Income Attributable to Avangrid, Inc.	**$ 570**	**$ 421**	**$ 598**

The accompanying notes are an integral part of our consolidated financial statements.

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Avangrid, Inc. and Subsidiaries
Consolidated Balance Sheets

As of December 31,	2018	2017
(Millions)		
Assets		
Current Assets		
Cash and cash equivalents	$ 36	$ 41
Accounts receivable and unbilled revenues, net	1,142	1,040
Accounts receivable from affiliates	6	10
Derivative assets	16	18
Fuel and gas in storage	109	99
Materials and supplies	126	115
Prepayments and other current assets	229	273
Assets held for sale	—	357
Regulatory assets	299	307
Total Current Assets	**1,963**	**2,260**
Total Property, Plant and Equipment ($726 and $1,303 related to VIEs, respectively)	**23,459**	**22,669**
Equity method investments	366	352
Other investments	58	63
Regulatory assets	2,640	2,738
Deferred income taxes regulatory	6	—
Other Assets		
Goodwill	3,127	3,127
Intangible assets	323	328
Derivative assets	63	63
Other	162	71
Total Other Assets	**3,675**	**3,589**
Total Assets	**$ 32,167**	**$ 31,671**

The accompanying notes are an integral part of our consolidated financial statements.

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Avangrid, Inc. and Subsidiaries
Consolidated Balance Sheets

As of December 31,	2018	2017
(Millions, except share information)		
Liabilities		
Current Liabilities		
Current portion of debt	$ 394	$ 183
Tax equity financing arrangements - VIEs	—	38
Notes payable	587	757
Notes payable to affiliates	—	29
Interest accrued	62	57
Accounts payable and accrued liabilities	1,132	1,071
Accounts payable to affiliates	58	89
Dividends payable	136	134
Taxes accrued	59	89
Derivative liabilities	44	22
Liabilities held for sale	—	137
Other current liabilities	327	330
Regulatory liabilities	205	178
Total Current Liabilities	**3,004**	**3,114**
Regulatory liabilities	3,223	3,239
Deferred income taxes regulatory	—	13
Other Non-current Liabilities		
Deferred income taxes	1,530	1,452
Deferred income	1,385	1,446
Pension and other postretirement	1,102	1,049
Tax equity financing arrangements - VIEs	—	60
Derivative liabilities	97	92
Asset retirement obligations	217	196
Environmental remediation costs	339	358
Other	499	360
Total Other Non-current Liabilities	**5,169**	**5,013**
Non-current debt	5,368	5,196
Total Non-current Liabilities	**13,760**	**13,461**
Total Liabilities	**16,764**	**16,575**
Commitments and Contingencies	—	—
Equity		
Stockholders' Equity:		
Common stock, $.01 par value, 500,000,000 shares authorized, 309,752,140 and 309,670,932 shares issued; 309,005,272 shares outstanding, respectively	3	3
Additional paid-in capital	13,657	13,653
Treasury stock	(12)	(8)
Retained earnings	1,528	1,475
Accumulated other comprehensive loss	(72)	(46)
Total Stockholders' Equity	**15,104**	**15,077**
Noncontrolling interests	299	19
Total Equity	**15,403**	**15,096**
Total Liabilities and Equity	**$ 32,167**	**$ 31,671**

The accompanying notes are an integral part of our consolidated financial statements.

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Consolidated Statements of Cash Flows
Avangrid, Inc. and Subsidiaries
Consolidated Statements of Cash Flows

Years Ended December 31,	2018	2017	2016
(Millions)			
Cash Flow from Operating Activities:			
Net income	**$ 598**	**$ 382**	**$ 632**
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	855	824	804
Loss from assets held for sale	16	642	—
Accretion expenses	12	10	10
Regulatory assets/liabilities amortization	64	47	49
Regulatory assets/liabilities carrying cost	9	15	13
Pension cost	123	112	110
Stock-based compensation	2	1	1
Earnings from equity method investments	(10)	40	(7)
Amortization of debt premium	(4)	(5)	(28)
Gain on disposal of property and equity method investment	(10)	(2)	(33)
Unrealized losses (gains) on marked to market derivative contracts	22	17	(4)
Deferred taxes	151	(251)	375
Other non-cash items	(25)	(69)	(23)
Changes in operating assets and liabilities:			
Accounts receivable and unbilled revenues	(97)	(48)	(158)
Inventories	(14)	12	46
Other assets	(54)	(3)	107
Cash distribution from equity method investments	14	16	14
Accounts payable and accrued liabilities	85	81	184
Other liabilities	103	(52)	(447)
Taxes accrued	30	41	(3)
Regulatory assets/liabilities	(79)	(47)	(81)
Net Cash Provided by Operating Activities	**1,791**	**1,763**	**1,561**
Cash Flow from Investing Activities:			
Capital expenditures	(1,787)	(2,416)	(1,707)
Contributions in aid of construction	60	57	69
Proceeds from sale of equity method and other investment	186	—	57
Proceeds from sale of property, plant and equipment	18	12	50
Receipts from affiliates	—	—	6
Cash distribution from equity method investments	4	4	6
Other investments and equity method investments, net	(45)	2	(8)
Net Cash Used in Investing Activities	**(1,564)**	**(2,341)**	**(1,527)**
Cash Flow from Financing Activities:			
Non-current note issuances	597	888	493
Repayments of non-current debt	(217)	(305)	(355)
(Repayments) proceeds of other short-term debt, net	(201)	625	(2)
Repayments of capital leases	(13)	(33)	(12)
Payments on tax equity financing arrangements	—	(113)	(88)
Repurchase of common stock	(4)	(3)	(5)
Issuance of common stock	(2)	(1)	(2)
Distributions to noncontrolling interests	(76)	—	—
Contributions from noncontrolling interests	223	5	—
Dividends paid	(537)	(535)	(401)
Net Cash (Used in) Provided by Financing Activities	**(230)**	**528**	**(372)**
Net Decrease in Cash, Cash Equivalents and Restricted Cash	**(3)**	**(50)**	**(338)**
Cash, Cash Equivalents and Restricted Cash, Beginning of Year	**46**	**96**	**434**
Cash, Cash Equivalents and Restricted Cash, End of Year	**$ 43**	**$ 46**	**$ 96**
Supplemental Cash Flow Information			
Cash paid for interest, net of amounts capitalized	$ 224	$ 202	$ 229

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Cash (refund) payment for income taxes	$ (13)	$ 13	$ 9

The accompanying notes are an integral part of our consolidated financial statements.

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Avangrid, Inc. and Subsidiaries
Consolidated Statements of Changes in Equity

	Avangrid, Inc. Stockholders								
(Millions, except for number of shares)	**Number of shares (*)**	**Common Stock**	**Additional paid-in capital**	**Treasury Stock**	**Retained Earnings**	**Accumulated Other Comprehensive Income (Loss)**	**Total Stockholders' Equity**	**Non-controlling Interests**	**Total Equity**
Balances, December 31, 2015	**308,864,609**	**$ 3**	**$ 13,653**	**$ —**	**$ 1,533**	**$ (52)**	**$ 15,137**	**$ 13**	**$ 15,150**
Net income	—	—	—	—	632	—	632	—	632
Other comprehensive loss, net of tax of $(22.1)	—	—	—	—	—	(34)	(34)	—	(34)
Comprehensive income									598
Dividends declared, $1.728/share	—	—	—	—	(535)	—	(535)	—	(535)
Release of common stock held in trust	135,014	—	—	—	—	—	—	—	—
Issuance of common stock	109,357	—	(2)	—	—	—	(2)	—	(2)
Repurchase of common stock	(115,831)	—	—	(5)	—	—	(5)	—	(5)
Stock-based compensation	—	—	2	—	—	—	2	—	2
Balances, December 31, 2016	**308,993,149**	**3**	**13,653**	**(5)**	**1,630**	**(86)**	**15,195**	**13**	**15,208**
Net income	—	—	—	—	381	—	381	1	382
Other comprehensive income, net of tax of $24.7	—	—	—	—	—	40	40	—	40
Comprehensive income									422
Dividends declared, $1.728/share	—	—	—	—	(535)	—	(535)	—	(535)
Release of common stock held in trust	5,649	—	—	—	—	—	—	—	—
Issuance of common stock	70,493	—	(1)	—	—	—	(1)	—	(1)
Repurchase of common stock	(64,019)	—	—	(3)	—	—	(3)	—	(3)
Stock-based compensation	—	—	1	—	—	—	1	—	1
Transaction with noncontrolling interests	—	—	—	—	(1)	—	(1)	5	4
Balances, December 31, 2017	**309,005,272**	**3**	**13,653**	**(8)**	**1,475**	**(46)**	**15,077**	**19**	**15,096**
Adoption of accounting standards	—	—	—	—	(3)	(1)	(4)	140	136
Net income	—	—	—	—	595	—	595	3	598
Other comprehensive loss, net of tax of $(11.7)	—	—	—	—	—	(25)	(25)	—	(25)
Comprehensive income									573
Dividends declared, $1.744/share	—	—	—	—	(540)	—	(540)	—	(540)
Issuance of common stock	81,208	—	1	—	(3)	—	(2)	—	(2)
Repurchase of common stock	(81,208)	—	—	(4)	—	—	(4)	—	(4)
Stock-based compensation	—	—	3	—	—	—	3	—	3
Distributions to noncontrolling interests	—	—	—	—	—	—	—	(76)	(76)
Contributions from noncontrolling interests	—	—	—	—	4	—	4	213	217
Balances, December 31, 2018	**309,005,272**	**$ 3**	**$ 13,657**	**$ (12)**	**$ 1,528**	**$ (72)**	**$ 15,104**	**$ 299**	**$ 15,403**

(*) Par value of share amounts is $.01

The accompanying notes are an integral part of our consolidated financial statements.

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Note 1. Background and Nature of Operations

Avangrid, Inc., formerly Iberdrola USA, Inc. (AVANGRID, we or the Company), is an energy services holding company engaged in the regulated energy distribution business through its principal subsidiary Avangrid Networks, Inc. (Networks) and in the renewable energy generation business through its principal subsidiary, Avangrid Renewables Holding, Inc. (ARHI). ARHI in turn holds subsidiaries including Avangrid Renewables, LLC (Renewables). Iberdrola, S.A. (Iberdrola), a corporation organized under the laws of the Kingdom of Spain, owns 81.5% of the outstanding common stock of AVANGRID. The remaining outstanding shares are publicly traded on the New York Stock Exchange and owned by various shareholders. AVANGRID was organized in 1997 as NGE Resources, Inc. under the laws of New York as the holding company for its principal operating utility companies.

In December 2017, management committed to a plan to sell the gas storage and trading businesses because they represented non-core businesses that were not aligned with our strategic objectives. At that time, we determined that the assets and liabilities associated with our gas trading and storage businesses met the criteria for classification as assets held for sale, but did not meet the criteria for classification as discontinued operations. On March 1, 2018, the Company closed a transaction to sell Enstor Energy Services, LLC, which operated AVANGRID's gas trading business, to CCI U.S. Asset Holdings LLC, a subsidiary of Castleton Commodities International, LLC (CCI). On May 1, 2018, the Company closed a transaction to sell Enstor Gas, LLC (Gas), which operated AVANGRID's gas storage business, to Amphora Gas Storage USA, LLC. Additional details on held for sale classification are provided in Note 26 to our consolidated financial statements.

Note 2. Basis of Presentation

The accompanying consolidated financial statements have been prepared in accordance with U.S. GAAP and are presented on a consolidated basis, and therefore include the accounts of AVANGRID and its consolidated subsidiaries, Networks and ARHI. All intercompany transactions and accounts have been eliminated in all periods presented.

Previously Reported Immaterial Corrections to Prior Periods

As previously reported in the consolidated financial statements included in the 2017 Annual Report on Form 10-K, during 2017 we identified immaterial corrections to prior periods related to our deferred income tax liabilities associated with our tax equity financing arrangements in our Renewables reportable segment. We evaluated the effects of these corrections on our previously-issued consolidated financial statements, individually and in the aggregate, and concluded that no prior period was materially misstated. Accordingly, we revised our consolidated financial statements for the prior periods presented in the 2017 Annual Report on Form 10-K.

Note 3. Summary of Significant Accounting Policies, New Accounting Pronouncements and Use of Estimates

Significant Accounting Policies

We consider the following policies to be the most critical in understanding the judgments that are involved in preparing our consolidated financial statements:

(a) Principles of consolidation

We consolidate the entities in which we have a controlling financial interest, after the elimination of intercompany transactions. Investments in common stock where we have the ability to exercise significant influence, but not control, are accounted for using the equity method of accounting.

(b) Revenue recognition

We recognize revenues when we transfer control of promised goods or services to our customers in an amount that reflects the consideration we expect to be entitled to in exchange for those goods or services. Refer to Note 4 for further details.

(c) Regulatory accounting

We account for our regulated utilities operations in accordance with the authoritative guidance applicable to entities with regulated operations that meet the following criteria: (i) rates are established or approved by a third-party regulator; (ii) rates are designed to recover the entity's cost of providing regulated services or products and; (iii) there is a reasonable expectation that rates are set at levels that will recover the entity's costs and be collected from customers. Regulatory assets represent incurred costs that have been deferred because of their probable future recovery from customers through regulated rates. Regulatory liabilities represent:

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(i) the excess recovery of costs or accrued credits that have been deferred because it is probable such amounts will be returned to customers through future regulated rates; or (ii) billings in advance of expenditures for approved regulatory programs.

Regulatory assets and liabilities are amortized and the related expense or revenue is recognized in the consolidated statements of income consistent with the recovery or refund included in customer rates. We believe that it is probable that our currently recorded regulatory assets and liabilities will be recovered or settled in future rates.

(d) Business combinations and assets acquisitions

We apply the acquisition method of accounting to account for business combinations. The consideration transferred for an acquisition is the fair value of the assets transferred, the liabilities incurred by the acquirer to former owners of acquiree and the equity interests issued by the acquirer. Acquisition related costs are expensed as incurred. Identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are measured initially at their fair values at the acquisition date. The excess of the consideration transferred over the fair value of the identifiable net assets acquired is recorded as goodwill. We recognize adjustments to provisional amounts relating to a business combination that are identified during the measurement period in the reporting period in which the adjustment amounts are determined.

In contrast to a business combination, we classify a transaction as an asset acquisition when substantially all of the fair value of the gross assets acquired is concentrated in a single identifiable asset or group of similar identifiable assets or otherwise does not meet the definition of a business.

(e) Noncontrolling interests

Noncontrolling interests represent the portion of our net income (loss), comprehensive income (loss) and net assets that is not allocable to us and is calculated based on our ownership percentage. For holdings where the economic allocations are not based pro rata on ownership percentages, we use the balance sheet-oriented hypothetical liquidation at book value (HLBV) method, to reflect the substantive profit sharing arrangement.

Under the HLBV method, the amounts reported as "Noncontrolling interests" and "Net income (loss) attributable to noncontrolling interests" in the consolidated balance sheets and consolidated statements of income represent the amounts the noncontrolling interest would hypothetically receive at each balance sheet reporting date under the liquidation provisions of each holding's ownership agreement assuming the net assets of the projects were liquidated at recorded amounts determined in accordance with U.S. GAAP and distributed to the investors. The noncontrolling interest in the statements of income and comprehensive income is determined as the difference in noncontrolling interests in the consolidated balance sheets at the start, or at inception of the noncontrolling interest if applicable, and end of each reporting period, after taking into account any capital transactions between the holdings and the third party. The noncontrolling interest balances in the holdings are reported as a component of equity in the consolidated balance sheets.

(f) Equity method investments

We account for joint ventures that do not meet consolidation criteria using the equity method. We reflect earnings (losses) recognized under the equity method in the consolidated statements of income as "Earnings (losses) from equity method investments." We recognize dividends received from joint ventures as a reduction in the carrying amount of the investment and not as dividend income. We assess and record an impairment of our equity method investments in earnings for a decline in value that is determined to be other than temporary (OTTI).

(g) Goodwill and other intangible assets

Goodwill represents future economic benefits arising from other assets acquired in a business combination that are not individually identified and separately recognized. Goodwill is initially measured at cost, being the excess of the aggregate of the consideration transferred, the fair value of any noncontrolling interest and the acquisition date fair value of any previously held equity interest in the acquiree over the fair value of the net identifiable assets acquired and liabilities assumed.

Goodwill is not amortized, but is subject to an assessment for impairment at least annually or more frequently if events occur or circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying amount. A reporting unit is an operating segment or one level below an operating segment and is the level at which goodwill is tested for impairment. In assessing goodwill for impairment, we have the option of first performing a qualitative assessment to determine whether a quantitative assessment is necessary (step zero). If it is determined, on the basis of qualitative factors, that the fair value of the reporting unit is more likely than not greater than the carrying amount, no further testing is required. If we bypass step zero or perform the qualitative assessment, but determine that it is more likely than not that its fair value is less than its carrying amount, a quantitative two step fair value based test is performed. Step one compares the fair value of the reporting unit to its carrying amount, including goodwill. If the carrying amount of the reporting unit exceeds its fair value, step two is performed. Step two

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requires an allocation of fair value to the individual assets and liabilities using business combination accounting guidance to determine the implied fair value of goodwill. If the implied fair value of goodwill is less than its carrying amount, an impairment loss is recorded as a reduction to goodwill and a charge to operating expenses.

Intangible assets acquired separately are measured on initial recognition at cost. The cost of intangible assets acquired in a business combination is their fair value at the date of acquisition. Following initial recognition, intangible assets are carried at cost less any accumulated amortization and impairment losses. The useful lives of intangible assets are assessed as either finite or indefinite.

Intangible assets with finite lives are amortized on a straight-line basis over the useful economic life, which ranges from four to forty years, and assessed for impairment whenever there is an indication that the intangible asset may be impaired. The amortization expense on intangible assets with finite lives is recognized in the consolidated statements of income as the expense category that is consistent with the function of the intangible assets.

(h) Property, plant and equipment

Property, plant and equipment are accounted for at historical cost. In cases where we are required to dismantle installations or to recondition the site on which they are located, the estimated cost of removal or reconditioning is recorded as an asset retirement obligation (ARO) and an equal amount is added to the carrying amount of the asset.

Development and construction of our various facilities are carried out in stages. Project costs are expensed during early stage development activities. Once certain development milestones are achieved and it is probable that we can obtain future economic benefits from a project, salaries and wages for persons directly involved in the project, and engineering, permits, licenses, wind measurement and insurance costs are capitalized. Development projects in construction are reviewed periodically for any indications of impairment.

Assets are transferred from “Construction work in progress” to “Property, plant and equipment” when they are available for service.

Wind turbine and related equipment costs, other project construction costs and interest costs related to the project are capitalized during the construction period through substantial completion. AROs are recorded at the date projects achieve commercial operation.

The cost of plant and equipment in use is depreciated on a straight-line basis, less any estimated residual value. The main asset categories are depreciated over the following estimated useful lives:

Major class	Asset Category	Estimated Useful Life (years)
	Combined cycle plants	35-75
	Hydroelectric power stations	35-90
Plant	Wind power stations	20-40
	Transport facilities	40-75
	Distribution facilities	5-82
Equipment	Conventional meters and measuring devices	10-41
	Computer software	4-25
Other	Buildings	30-82
	Operations offices	5-75

Networks determines depreciation expense using the straight-line method, based on the average service lives of groups of depreciable property, which include estimated cost of removal, in service at each operating company. Consistent with FERC accounting requirements, Networks charges the original cost of utility plant retired or otherwise disposed of to accumulated depreciation. The Networks composite rates for depreciation were 2.8% of average depreciable property for 2018 and 2.9% for 2017.

We charge repairs and minor replacements to operating expenses, and capitalize renewals and betterments, including certain indirect costs.

Allowance for funds used during construction (AFUDC), applicable to Networks' entities applying regulatory accounting, is a noncash item which represents the allowed cost of capital, including a return on equity (ROE), used to finance construction projects. The portion of AFUDC attributable to borrowed funds is recorded as a reduction of interest expense and the remainder is recorded as other income.

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(i) Impairment of long lived assets

We evaluate property, plant and equipment and other long lived assets for impairment when events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is required to be recognized if the carrying amount of the asset exceeds the undiscounted future net cash flows associated with that asset.

The impairment loss to be recognized is the amount by which the carrying amount of the long lived asset exceeds the asset's fair value. Depending on the asset, fair value may be determined by use of a discounted cash flow model, or DCF.

(j) Fair value measurement

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants as of the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place in either the principal market for the asset or liability, or, in the absence of a principal market, in the most advantageous market for the asset or liability.

The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest. A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset according to its highest and best use, or by selling it to another market participant that would use the asset according to its highest and best use.

We use valuation techniques that are appropriate in the circumstances and for which sufficient data is available to measure fair value, maximizing the use of relevant observable inputs and minimizing the use of unobservable inputs. All assets and liabilities for which fair value is measured or disclosed in the consolidated financial statements are categorized within the fair value hierarchy based on the transparency of input to the valuation of an asset or liability as of the measurement date.

The three input levels of the fair value hierarchy are as follows:

- Level 1 - inputs to the valuation methodology are quoted prices (unadjusted) for identical assets or liabilities in active markets.
- Level 2 - inputs to the valuation methodology include quoted prices for similar assets and liabilities in active markets, and inputs that are observable for the asset or liability either directly or indirectly, for substantially the full term of the contract.
- Level 3 - one or more inputs to the valuation methodology are unobservable or cannot be corroborated with market data.

Categorization within the fair value hierarchy is based on the lowest level of input that is significant to the fair value measurement. Certain investments are not categorized within the fair value hierarchy. These investments are measured based on the fair value of the underlying investments but may not be readily redeemable at that fair value.

(k) Equity investments with readily determinable fair values

We measure equity investments with readily determinable fair values at fair value, with changes in fair value reported in net income.

(l) Derivatives and hedge accounting

Derivatives are recognized on the balance sheets at their fair value, except for certain electricity commodity purchases and sales contracts for both capacity and energy (physical contracts) that qualify for, and are elected under, the normal purchases and normal sales exception. To be a derivative under the accounting standards for derivatives and hedging, an agreement would need to have a notional and an underlying, require little or no initial net investment and could be net settled. Changes in the fair value of a derivative contract are recognized in earnings unless specific hedge accounting criteria are met.

Derivatives that qualify and are designated for hedge accounting are classified as cash flow hedges. For cash flow hedges, the portion of the derivative gain or loss that is effective in offsetting the change in the hedged cash flows of the underlying exposure is deferred in Other Comprehensive Income (OCI) and later reclassified into earnings when the underlying transaction occurs. For all designated and qualifying hedges, we maintain formal documentation of the hedge and effectiveness testing in accordance with the accounting standards for derivatives and hedging. If we determine that the derivative is no longer highly effective as a hedge, hedge accounting will be discontinued prospectively. For cash flow hedges of forecasted transactions, we estimate the future cash flows of the forecasted transactions and evaluate the probability of the occurrence and timing of such transactions. If we determine it is probable that the forecasted transaction will not occur, hedge gains and losses previously recorded in OCI are immediately recognized in earnings.

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Changes in conditions or the occurrence of unforeseen events could require discontinuance of the hedge accounting or could affect the timing of the reclassification of gains or losses on cash flow hedges from OCI into earnings. Gains and losses from the ineffective portion of any hedge are recognized in earnings immediately. Changes in the fair value of electric and natural gas hedge contracts are recorded to derivative assets or liabilities with an offset to regulatory assets or regulatory liabilities for our regulated operations.

We offset fair value amounts recognized for derivative instruments and fair value amounts recognized for the right to reclaim cash collateral or the obligation to return cash collateral arising from derivative instruments executed with the same counterparty under a master netting arrangement.

(m) Cash and cash equivalents

Cash and cash equivalents comprises cash, bank accounts, and other highly-liquid short-term investments. We consider all highly liquid investments with a maturity date of three months or less when acquired to be cash equivalents and those investments are included in “Cash and cash equivalents.” Restricted cash represents cash legally set aside for a specified purpose or as part of an agreement with a third party. Restricted cash is included in “Other non-current assets” on the consolidated balance sheets. Book overdrafts representing outstanding checks in excess of funds on deposit are classified as “Accounts payable and accrued liabilities” on the consolidated balance sheets. Changes in book overdrafts are reported in the operating activities section of the consolidated statements of cash flows.

(n) Accounts receivable and unbilled revenue, net

We record accounts receivable at amounts billed to customers. Certain accounts receivable and payable related to our wholesale activities associated with generation and delivery of electric energy and associated environmental attributes, origination and marketing, natural gas storage, hub services, and energy management, are subject to master netting agreements with counterparties, whereby we have the legal right to offset the balances, which are settled on a net basis. Receivables and payables subject to such agreements are presented in our consolidated balance sheets on a net basis.

Accounts receivable include amounts due under Deferred Payment Arrangements (DPA). A DPA allows the account balance to be paid in installments over an extended period of time without interest, which generally exceeds one year, by negotiating mutually acceptable payment terms. The utility companies generally must continue to serve a customer who cannot pay an account balance in full if the customer (i) pays a reasonable portion of the balance; (ii) agrees to pay the balance in installments; and (iii) agrees to pay future bills within thirty days until the DPA is paid in full. Failure to make payments on a DPA results in the full amount of a receivable under a DPA being due. These accounts are part of the regular operating cycle and are classified as short term.

The allowance for bad debts account is established by using both historical average loss percentages to project future losses, and a specific allowance is established for known credit issues. Amounts are written off when we believe that a receivable will not be recovered.

(o) Variable interest entities

An entity is considered to be a variable interest entity (VIE) when its total equity investment at risk is not sufficient to permit the entity to finance its activities without additional subordinated financial support, or its equity investors, as a group, lack the characteristics of having a controlling financial interest. A reporting company is required to consolidate a VIE as its primary beneficiary when it has both the power to direct the activities of the VIE that most significantly impact the VIE's economic performance, and the obligation to absorb losses or the right to receive benefits from the VIE that could potentially be significant to the VIE. We evaluate whether an entity is a VIE whenever reconsideration events as defined by the accounting guidance occur (See Note 19).

We have undertaken several structured institutional partnership investment transactions that bring in external investors in certain of our wind farms in exchange for cash. Following an analysis of the economic substance of these transactions, we classify the consideration received at the inception of the arrangement as noncontrolling interests in the consolidated balance sheets. Subsequently, the HLBV method allocates earnings to the noncontrolling interest, which considers the cash and tax benefits provided to the tax equity investors.

(p) Debentures, bonds and bank borrowings

Bonds, debentures and bank borrowings are recorded as a liability equal to the proceeds of the borrowings. The difference between the proceeds and the face amount of the issued liability is treated as discount or premium and is accreted as interest expense or income over the life of the instrument. Incremental costs associated with issuance of the debt instruments are deferred and amortized over the same period as debt discount or premium. Bonds, debentures and bank borrowings are presented net of unamortized discount, premium and debt issuance costs on the consolidated balance sheets.

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(q) Inventory

Inventory comprises fuel and gas in storage and materials and supplies. Through our gas trading operations, we own natural gas that is stored in both self-owned and third-party owned underground storage facilities. This gas is recorded as inventory. Injections of inventory into storage are priced at the market purchase cost at the time of injection, and withdrawals of working gas from storage are priced at the weighted-average cost in storage. We continuously monitor the weighted-average cost of gas value to ensure it remains at the lower of cost and net realizable value. Inventories to support gas operations are reported in the consolidated balance sheets within "Fuel and gas in storage."

We also have materials and supplies inventories that are used for construction of new facilities and repairs of existing facilities. These inventories are carried and withdrawn at the lower of cost and net realizable value and reported in the consolidated balance sheets within "Materials and supplies."

Inventory items are combined for the statement of cash flow presentation purposes.

(r) Government grants

Our unregulated subsidiaries record government grants related to depreciable assets within deferred income and subsequently amortize them to earnings consistent with the useful life of the related asset. Our regulated subsidiaries record government grants as a reduction to utility plant to be recovered through rate base, in accordance with the prescribed FERC accounting.

In accounting for government grants related to operating and maintenance costs, amounts receivable are recognized as an offset to expenses in the consolidated statements of income in the period in which the expenses are incurred.

(s) Deferred income

Apart from government grants, we occasionally receive revenues from transactions in advance of the resulting performance obligations arising from the transaction. It is our policy to defer such revenues on the consolidated balance sheets and amortize them to earnings when revenue recognition criteria are met.

(t) Asset retirement obligations

The fair value of the liability for an ARO and a conditional ARO is recorded in the period in which it is incurred, capitalizing the cost by increasing the carrying amount of the related long lived asset. The ARO is associated with our long lived assets and primarily consists of obligations related to removal or retirement of asbestos, polychlorinated biphenyl-contaminated equipment, gas pipeline, cast iron gas mains and electricity generation facilities. The liability is adjusted periodically to reflect revisions to either the timing or amount of the original estimated undiscounted cash flows over time. The liability is accreted to its present value each period and the capitalized cost is depreciated over the useful life of the related asset. Upon settlement, the obligation will be either settled at its recorded amount or a gain or a loss will be incurred. Our regulated utilities defer any timing differences between rate recovery and depreciation expense and accretion as either a regulatory asset or a regulatory liability.

The term conditional ARO refers to an entity's legal obligation to perform an asset retirement activity in which the timing or method of settlement are conditional on a future event that may or may not be within the entity's control. If an entity has sufficient information to reasonably estimate the fair value of the liability for a conditional ARO, it must recognize that liability at the time the liability is incurred.

Our regulated utilities meet the requirements concerning accounting for regulated operations and we recognize a regulatory liability for the difference between removal costs collected in rates and actual costs incurred. These are classified as accrued removal obligations.

(u) Environmental remediation liability

In recording our liabilities for environmental remediation costs the amount of liability for a site is the best estimate, when determinable; otherwise it is based on the minimum liability or the lower end of the range when there is a range of estimated losses. Our environmental liabilities are recorded on an undiscounted basis. Our environmental liability accruals are expected to be paid through the year 2055.

(v) Post-employment and other employee benefits

We sponsor defined benefit pension plans that cover the majority of our employees. We also provide health care and life insurance benefits through various postretirement plans for eligible retirees.

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We evaluate our actuarial assumptions on an annual basis and consider changes based on market conditions and other factors. All of our qualified defined benefit plans are funded in amounts calculated by independent actuaries, based on actuarial assumptions proposed by management.

We account for defined benefit pension or other postretirement plans, recognizing an asset or liability for the overfunded or underfunded plan status. For a pension plan, the asset or liability is the difference between the fair value of the plan's assets and the projected benefit obligation. For any other postretirement benefit plan, the asset or liability is the difference between the fair value of the plan's assets and the accumulated postretirement benefit obligation. Our utility operations reflect all unrecognized prior service costs and credits and unrecognized actuarial gains and losses as regulatory assets rather than in other comprehensive income, as management believes it is probable that such items will be recoverable through the ratemaking process. We use a December 31st measurement date for our benefits plans.

We amortize prior service costs for both the pension and other postretirement benefits plans on a straight-line basis over the average remaining service period of participants expected to receive benefits. For NYSEG, RG&E and UIL, we amortize unrecognized actuarial gains and losses over ten years from the time they are incurred as required by the NYPSC, PURA and DPU. For our other companies we use the standard amortization methodology under which amounts in excess of ten percent of the greater of the projected benefit obligation or market related value are amortized over the plan participants' average remaining service to retirement. Our policy is to calculate the expected return on plan assets using the market related value of assets. That value is determined by recognizing the difference between actual returns and expected returns over a five year period.

(w) Income tax

We use the asset and liability method of accounting for income taxes. Deferred tax assets and liabilities reflect the expected future tax consequences, based on enacted tax laws, of temporary differences between the tax basis of assets and liabilities and their financial reporting amounts. In accordance with generally accepted accounting principles for regulated industries, certain of our regulated subsidiaries have established a regulatory asset for the net revenue requirements to be recovered from customers for the related future tax expense associated with certain of these temporary differences. The investment tax credits are deferred when earned and amortized over the estimated lives of the related assets. We also recognize the income tax consequences of intra-entity transfers of assets other than inventory when the transfer occurs.

Deferred tax assets and liabilities are measured at the expected tax rate for the period in which the asset or liability will be realized or settled, based on legislation enacted as of the balance sheet date. Changes in deferred income tax assets and liabilities that are associated with components of OCI are charged or credited directly to OCI. Significant judgment is required in determining income tax provisions and evaluating tax positions. Our tax positions are evaluated under a more-likely-than-not recognition threshold before they are recognized for financial reporting purposes. Valuation allowances are recorded to reduce deferred tax assets when it is more likely than not that all or a portion of a tax benefit will not be realized. Deferred tax assets and liabilities are classified as non-current in the consolidated balance sheets.

The excess of state franchise tax computed as the higher of a tax based on income or a tax based on capital is recorded in "Taxes other than income taxes" and "Taxes accrued" in the accompanying consolidated financial statements.

Positions taken or expected to be taken on tax returns, including the decision to exclude certain income or transactions from a return, are recognized in the financial statements when it is more likely than not the tax position can be sustained based solely on the technical merits of the position. The amount of a tax return position that is not recognized in the financial statements is disclosed as an unrecognized tax benefit. Changes in assumptions on tax benefits may also impact interest expense or interest income and may result in the recognition of tax penalties. Interest and penalties related to unrecognized tax benefits are recorded within "Interest expense, net of capitalization" and "Other income and (expense)" of the consolidated statements of income.

Uncertain tax positions have been classified as non-current unless expected to be paid within one year. Our policy is to recognize interest and penalties on uncertain tax positions as a component of interest expense in the consolidated statements of income.

Federal production tax credits applicable to our renewable energy facilities, and not part of a tax equity financing arrangement, are recognized as a reduction in income tax expense with a corresponding reduction in deferred income tax liabilities.

Our income tax expense, deferred tax assets and liabilities, and liabilities for unrecognized tax benefits reflect management's best assessment of estimated current and future taxes to be paid. Significant judgments and estimates are required in determining the consolidated income tax components of the financial statements.

The "Tax Cuts and Jobs Act" (the Tax Act) enacted on December 22, 2017 includes significant changes to the Internal Revenue Code of 1986 (as amended, the Code), including amendments which significantly change the taxation of business entities, and includes specific provisions related to regulated public utilities. The most significant change that impacted the Company was the

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permanent reduction in the corporate federal income tax rate from 35% to 21%, which required us to measure existing net deferred tax liabilities using the lower rate in the period of enactment, resulting in an income tax benefit. The specific provisions in the Tax Act related to regulated public utilities generally allow for the continued deductibility of interest expense, the elimination of full expensing for tax purposes of certain property acquired after September 27, 2017, and continues certain rate normalization requirements for accelerated depreciation benefits.

Upon enactment of the Company remeasured its existing deferred income tax balances as of December 31, 2017 to reflect the decrease in the corporate income tax rate from 35% to 21%, which resulted in a material decrease to its net deferred income tax liability balances. In connection with the Tax Act, the U.S. Securities and Exchange Commission (SEC) issued guidance in Staff Accounting Bulletin 118, or SAB 118, which clarified accounting for income taxes under Accounting Standards Codification (ASC) 740, Income Taxes, if information was not yet available or complete and provided up to a one year measurement period in which to complete the required analyses and accounting. Following SAB 118 guidance, the Company recorded provisional income tax amounts as of December 31, 2017 related to the Tax Act based on reasonable estimates that could be determined at that time. As of December 31, 2018, the Company has completed the measurement and accounting of certain effects of the Tax Act which have been reflected in the December 31, 2018 financial statements. The Company will continue to monitor guidance and interpretations as they are issued.

(x) Stock-based compensation

Stock-based compensation represents costs related to stock-based awards granted to employees. We account for stock-based payment transactions based on the estimated fair value of awards reflecting forfeitures when they occur. The recognition period for these costs begin at either the applicable service inception date or grant date and continues throughout the requisite service period, or until the employee becomes retirement eligible, if earlier.

(y) Assets held for sale

We record assets held for sale at the lower of the carrying value or fair value less costs to sell. The following criteria are used to determine if an entity or a group of components of an entity is held for sale: (i) management has the authority and commits to a plan to sell the entity; (ii) the entity is available for immediate sale in its present condition; (iii) there is an active program to locate a buyer and the plan to sell the entity has been initiated; (iv) the sale of the entity is probable within one year; (v) the entity is being actively marketed at a reasonable price relative to its current fair value; and (vi) it is unlikely that the plan to sell will be withdrawn or that significant changes to the plan will be made.

In determining the fair value of the assets less costs to sell, we consider factors including recent market analysis studies, recent offers and fair value models. If the estimated fair value less costs to sell of an entity is less than its current carrying value, the entity is written down to its estimated fair value less costs to sell. Due to uncertainties in the estimation process, actual results could differ from the estimates used in our historical analysis. We estimate the fair values of assets held for sale based on current market and industry conditions, which include assumptions made by management, which may differ from actual results and may result in additional impairments if market conditions deteriorate.

Once assets are classified as held for sale, we do not record depreciation or amortization for our property, plant and equipment and intangible assets.

Adoption of New Accounting Pronouncements

(a) Revenue from contracts with customers

In May 2014, the Financial Accounting Standards Board (FASB) issued ASC Topic 606, Revenue from Contracts with Customers (ASC 606) replacing the existing accounting standard and industry specific guidance for revenue recognition with a five-step model for recognizing and measuring revenue from contracts with customers. The FASB further amended ASC 606 through various updates issued thereafter. The core principle is for an entity to recognize revenue to represent the transfer of promised goods or services to customers in amounts that reflect the consideration to which the entity expects to be entitled in exchange for those goods or services. We adopted ASC 606 effective January 1, 2018, and applied the modified retrospective method, for which we did not have a cumulative effect adjustment to retained earnings for initial application of the guidance. Refer to Note 4 for further details.

(b) Clarifying the scope of asset derecognition guidance and accounting for partial sales of nonfinancial assets

The FASB issued amendments in February 2017 concerning asset derecognition and partial sales of nonfinancial assets. The amendments clarify the scope of asset derecognition guidance and accounting for partial sales of nonfinancial assets, and also define in-substance nonfinancial assets. Those amendments apply to a company that: sells nonfinancial assets (land, buildings, materials and supplies, intangible assets) to noncustomers; sells nonfinancial assets and financial assets (cash, receivables) when the value is concentrated in the nonfinancial assets; or sells partial ownership interests in nonfinancial assets. The amendments

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do not apply to sales to customers or to sales of businesses. The new guidance in ASC 610-20 on accounting for derecognition of a nonfinancial asset and an in-substance nonfinancial asset applies only when the asset (or asset group) does not meet the definition of a business and is not a not-for-profit activity. An entity must apply the amendments at the same time that it applies the new ASC 606 revenue recognition standard. We adopted ASC 610-20 effective January 1, 2018, and applied the modified retrospective method, which affected the accounting for our tax equity investments. As shown in the table below, we recorded a cumulative adjustment that decreased retained earnings. The cumulative adjustment relates to the reclassification of our tax equity investments to noncontrolling interests. As a result, we recorded our tax equity investments based on the HLBV accounting method and we will record changes in the HLBV at each reporting period within net income (loss) attributable to noncontrolling interests.

The cumulative effects of the changes to our consolidated balance sheet as of January 1, 2018, for our adoption of ASC 606 and ASC 610-20 were as follows:

Balance Sheet	Balance at December 31, 2017	Adjustments Due to ASC 606	Adjustments Due to ASC 610-20	Balance at January 1, 2018
(Millions)				
Liabilities				
Tax equity financing arrangements - VIEs	$ 98	$ —	$ (98)	$ —
Deferred income taxes	1,452	—	(40)	1,412
Equity				
Retained earnings	1,475	—	(2)	1,473
Non-controlling interests	$ 19	$ —	$ 140	$ 159

We also adopted the following standards as of their effective date of January 1, 2018, none of which had a material effect on our consolidated results of operations, financial position, cash flows and disclosures.

(c) Classifying and measuring financial instruments

In January 2016, the FASB issued final guidance on the classification and measurement of financial instruments. As a result of our adoption, we reclassified immaterial amounts from AOCI to retained earnings.

(d) Certain classifications in the statement of cash flows

In August 2016, the FASB issued amendments to address existing diversity in practice concerning the classification of certain cash receipts and payments on the statement of cash flows, which must be applied on a full retrospective basis. Upon adoption, we had no changes to our cash flow classifications and disclosures in our consolidated financial statements.

(e) Improving the presentation of net periodic benefit costs

In March 2017, the FASB issued amendments to improve the presentation of net periodic pension cost and net periodic postretirement benefit cost in the financial statements. We retrospectively adopted the amendments that require us to present the service cost component separately from the other (non-service) components of net benefit cost, to report the service cost component in the income statement line item where we report the corresponding compensation cost and to present all non-service components outside of operating cost. As a result, we have reclassified the non-service components – interest cost, expected return on plan assets, amortization of prior service cost (benefit), amortization of net loss and settlement charge – from "Operations and maintenance" to "Other income/(expense)" within the consolidated statements of income. Prospectively, from adoption, we capitalize only the service cost component when applicable (for example, as a cost of a self-constructed asset). We elected to apply the practical expedient that allows us to retrospectively apply the amendments on adoption to net benefit costs for comparative periods by using the amounts disclosed in our notes to financial statements for Post-retirement and Similar Obligations as the basis for those periods. In addition to those amounts, we included amortization of net benefit costs recorded as regulatory deferrals as a result of purchase accounting in a prior year. In connection with applying the practical expedient, in periods after adoption we continue to include in operating income all legacy net benefit costs previously capitalized as a cost of self-constructed assets and other deferred regulatory costs. Our adoption of the amendments did not affect prior period net income attributable to AVANGRID. Beginning in 2018, non-service cost components incurred by the Networks utilities are no longer eligible for construction capitalization, but such costs can be deferred and included as a component of customer rates if permitted by their regulator. For the year ended December 31, 2018, we incurred additional immaterial expense as a result of the adoption of this standard.

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As a result of these amendments, "Operations and maintenance" and "Other (expense) income" decreased by $120 million within the consolidated statement of income for the year ended December 31, 2017. The effect of the change in retrospective presentation related to the net periodic cost of our defined benefit pension and other postretirement employee benefits plans on our consolidated statement of income for the year ended December 31, 2016 was not material.

We have also revised the segment information related to our Networks reportable segment provided in Note 23 to reflect the change as a result of the adoption of these amendments.

(f) Customer accounting for implementation costs incurred in a cloud computing arrangement

The FASB issued amendments in August 2018 to clarify the accounting for implementation costs of a cloud computing arrangement (also referred to as a hosting arrangement) that is a service contract. Implementation costs, which include implementation, setup and other upfront costs, are either to be deferred or expensed as incurred, in accordance with existing internal-use software guidance for similar costs. The amendments require a customer to expense capitalized implementation costs over the contractual term of the arrangement, including any optional renewal periods the customer is reasonably certain it will exercise. An entity is to present deferred implementation costs on the balance sheet, income statement and cash flows consistent with the subscription fees associated with the arrangement. The amendments enhance disclosures to include certain qualitative and quantitative information about implementation costs for internal-use software and all hosting arrangements, not just hosting arrangements that are service contracts. The amendments are effective for public business entities for fiscal years beginning after December 15, 2019, and interim periods within those fiscal years. Early adoption is permitted, including adoption in any interim period for which financial statements have not been issued. An entity may apply the amendments either retrospectively or prospectively to all implementation costs incurred after the date of adoption. We early adopted the amendments as of October 1, 2018, and are applying the amendments prospectively to all implementation costs after the date of adoption. Upon adoption, there were no material effects to our consolidated results of operations, financial position, cash flows and disclosures.

Accounting Pronouncements Issued But Not Yet Adopted

The following are new accounting pronouncements issued as indicated, that we have evaluated or are evaluating to determine their effect on our consolidated financial statements.

(a) Leases

In February 2016, the FASB issued new guidance, and issued subsequent amendments during 2018, that affects all companies and organizations that lease assets, and requires them to record on their balance sheet right-of-use assets and lease liabilities for the rights and obligations created by those leases. Under the new guidance, a lease is an arrangement that conveys the right to control the use of an identified asset for a period of time in exchange for consideration. The amendments retain a distinction between finance leases and operating leases, while requiring both types of leases to be recognized on the balance sheet. The classification criteria for distinguishing between finance leases and operating leases are substantially similar to the criteria for distinguishing between capital leases and operating leases in legacy U.S. GAAP. Lessor accounting will remain substantially the same as legacy U.S. GAAP, but with some targeted improvements to align lessor accounting with the lessee accounting model and with the revised revenue recognition guidance under Topic 606. The standard and amendments require new qualitative and quantitative disclosures for both lessees and lessors. The new leases guidance, including the subsequent amendments issued during 2018, is effective for public entities for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years, and early application is permitted.

We adopted the new leases guidance effective January 1, 2019, and have elected the optional transition method under which we will initially apply the standard on that date without adjusting amounts presented for prior periods, and record the cumulative effect of applying the new guidance as an adjustment to beginning retained earnings. We expect the adjustment to retained earnings will be immaterial. Concerning certain transition and other practical expedients:

- we did not elect the package of three practical expedients available under the transition provisions, including (i) not reassessing whether expired or existing contracts contain leases, (ii) lease classification, and (iii) not revaluing initial direct costs for existing leases;
- we elected the land easement practical expedient and did not reassess land easements that we did not account for as leases prior to our adoption of the new leases guidance;
- we used hindsight for specified determinations and assessments in applying the new leases guidance;
- we will not recognize lease assets and liabilities for short-term leases (less than one year), for all classes of underlying assets; and
- we did not separate lease and associated nonlease components for transitioned leases, but will instead account for them together as a single lease component.

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Of our portfolio of operating leases as of December 31, 2018, we expect to recognize approximately $85 - $105 million of right-of-use assets and corresponding liabilities in our consolidated balance sheet as of January 1, 2019. In comparison to our operating leases obligation disclosures as of December 31, 2018, certain land easement contracts previously classified as a lease will no longer meet the definition of a lease under the new guidance and are therefore excluded from the transition adjustment. Separate from our contracts classified as leases under existing U.S. GAAP, we are still finalizing our adoption procedures as the scope of our assessment of contracts is broader than it would have otherwise been having not elected the package of three practical expedients. Overall, we expect our adoption will not materially affect our consolidated results of operations or cash flows, as we do not expect significant changes to our pattern of expense recognition. We will have expanded disclosures to comply with the new leases guidance.

(b) Measurement of credit losses on financial instruments

The FASB issued an accounting standards update in June 2016 that requires more timely recording of credit losses on loans and other financial instruments. The amendments affect entities that hold financial assets and net investment in leases that are not accounted for at fair value through net income (loans, debt securities, trade receivables, net investments in leases, off-balance-sheet credit exposures, etc.). They require an entity to present a financial asset (or group of financial assets) that is measured at amortized cost basis at the net amount expected to be collected. The allowance for credit losses is a valuation account that is deducted from the amortized cost basis of the financial asset(s) to present the net carrying value at the amount expected to be collected on the financial asset. The income statement reflects the measurement of credit losses for newly recognized financial assets, as well as the expected increases or decreases of expected credit losses that have taken place during the period. The measurement of expected credit losses is based on relevant information about past events, including historical experience, current conditions, and reasonable and supportable forecasts that affect the collectability of the reported amount. An entity must use judgment in determining the relevant information and estimation methods appropriate in its circumstances. In November 2018, the FASB issued an update to this new guidance to clarify that receivables arising from operating leases are not within the scope of the credit losses standard. Instead, impairment of receivables arising from operating leases should be accounted for in accordance with the leases standard. The amendments are effective for public entities that are SEC filers for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years, with early adoption permitted. Entities are to apply the amendments on a modified retrospective basis for most instruments. We expect our adoption will not materially affect our consolidated results of operations, financial position and cash flows.

(c) Simplifying the test for goodwill impairment

In January 2017, the FASB issued amendments to simplify the test for goodwill impairment, which are required for public entities and certain other entities that have goodwill reported in their financial statements. The amendments simplify the subsequent measurement of goodwill by eliminating Step 2 from the goodwill impairment test, which requires the valuation of assets acquired and liabilities assumed using business combination accounting guidance. Under the new guidance, an entity should perform its annual, or interim, goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount. An entity should recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit's fair value; but the loss recognized should not exceed the total amount of goodwill allocated to that reporting unit. Also, an entity should consider income tax effects from any tax deductible goodwill on the carrying amount of the reporting unit when measuring the goodwill impairment loss, if applicable. Certain requirements are eliminated for any reporting unit with a zero or negative carrying amount, therefore the same impairment assessment applies to all reporting units. An entity still has the option to perform the qualitative assessment for a reporting unit to determine if the quantitative impairment test is necessary. The amendments are effective for public entities for annual and interim periods in fiscal years beginning after December 15, 2019, with the amendments applied on a prospective basis. Early adoption is allowed. We expect our adoption of the amendments will not materially affect our results of operations, financial position, cash flows, and disclosures.

(d) Targeted improvements to accounting for hedging activities

In August 2017, the FASB issued targeted amendments with the objective to better align hedge accounting with an entity's risk management activities in the financial statements, and to simplify the application of hedge accounting. The amendments address concerns of financial statement preparers over difficulties with applying hedge accounting and limitations for hedging both nonfinancial and financial risks and concerns of financial statement users over how hedging activities are reported in financial statements. Changes to the hedge accounting guidance to address those concerns will: 1) expand hedge accounting for nonfinancial and financial risk components and amend measurement methodologies to more closely align hedge accounting with an entity's risk management activities; 2) eliminate the separate measurement and reporting of hedge ineffectiveness, to reduce the complexity of preparing and understanding hedge results; 3) enhance disclosures and change the presentation of hedge results to align the effects of the hedging instrument and the hedged item in order to enhance transparency, comparability, and understandability of hedge results; and 4) simplify the way assessments of hedge effectiveness may be performed to reduce the cost and complexity of applying hedge accounting. The amendments are effective for public entities for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years. For cash flow and net investment hedges existing at the date of adoption, a

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company must apply a cumulative-effect adjustment related to the separate measurement of ineffectiveness to accumulated other comprehensive income (AOCI) with a corresponding adjustment to the opening balance of retained earnings as of the beginning of the fiscal year of adoption. The amended presentation and disclosure guidance is required only prospectively. In October 2018, the FASB issued amendments that are effective concurrently with the above targeted improvements. These additional amendments permit use of the Overnight Index Swap rate based on the Secured Overnight Financing Rate as a U.S. benchmark interest rate for hedge accounting purposes. Use of that rate is in addition to the already eligible benchmark interest rates, which are: interest rates on direct Treasury obligations of the U.S. government, the London Interbank Offered Rate swap rate, the OIS Rate based on the Fed Funds Effective Rate, and the Securities Industry and Financial Markets Association Municipal Swap Rate. Our adoption of the amendments on January 1, 2019, will not materially affect our consolidated results of operations, financial position or cash flows, but the amendments will ease the administrative burden of hedge documentation requirements and assessing hedge effectiveness going forward.

(e) Reclassification of certain tax effects from accumulated other comprehensive income

In February 2018, the FASB issued amendments to address a narrow-scope financial reporting issue that arose as a consequence of the Tax Cuts and Jobs Act of 2017 (the Tax Act) enacted on December 22, 2017, by the U.S. federal government. Under current guidance, the adjustment of deferred taxes for the effect of a change in tax laws or rates is required to be included in income from continuing operations, thus the associated tax effects of items within AOCI (referred to as stranded tax effects) do not reflect the appropriate tax rate. The amendments allow a reclassification from AOCI to retained earnings for stranded tax effects resulting from the Tax Act. As a result, the amendments eliminate the stranded tax effects resulting from the Tax Act and will improve the usefulness of information reported to financial statement users. The amendments only relate to the reclassification of the income tax effects of the Tax Act, and do not affect the underlying guidance that requires the effect of a change in tax laws or rates to be included in income from continuing operations. The amendments are effective for all entities for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years. Early adoption is permitted including, for public entities, adoption in any interim period for which financial statements have not been issued. An entity has the option to apply the amendments either in the period of adoption or retrospectively to each period (or periods) in which it recognizes the effect of the change in the U.S. federal corporate income tax rate in the Tax Act. An entity is required to disclose its accounting policy election, including its policy for reclassifying material stranded tax effects in AOCI to earnings (specific identification or portfolio method). Our adoption of the amendments on January 1, 2019, will not materially affect our consolidated results of operations, financial position, cash flows and disclosures.

(f) Changes to the disclosure requirements for fair value measurement and defined benefit plans

In August 2018, the FASB issued amendments related to disclosure requirements for both fair value measurement and defined benefit plans. The amendments concerning fair value measurement remove, modify and add certain disclosure requirements, in order to improve the overall usefulness of the disclosures and reduce unnecessary costs to companies to prepare the disclosures. The amendments to fair value measurement disclosures are effective for all entities for fiscal years beginning after December 15, 2019, and interim periods within those fiscal years. Early adoption is permitted as specified. Certain amendments are to be applied prospectively, and all others are to be applied retrospectively. We do not expect our adoption of the amendments to materially affect our disclosures.

The amendments concerning disclosure requirements for defined benefit plans are narrow in scope and apply to all employers that sponsor defined benefit pension or other postretirement plans. They remove disclosures that are no longer considered cost beneficial, add certain new relevant disclosures and clarify specific requirements of disclosures concerning information for defined benefit pension plans. The amendments to defined benefit plan disclosures are effective for fiscal years ending after December 15, 2020. Early adoption is permitted and application is to be on a retrospective basis. We do not expect our adoption of the amendments to materially affect our disclosures.

(g) Targeted improvements to related party guidance for VIEs

In October 2018, the FASB issued amendments that affect reporting entities that are required to determine whether they should consolidate a legal entity under the consolidation guidance applicable to VIEs. The targeted improvements specifically applicable to public business entities clarify that indirect interests held through related parties in common control arrangements should be considered on a proportional basis for determining whether fees paid to decision makers and service providers are variable interests. The amendments are effective for public business entities for fiscal years beginning after December 15, 2019, and interim periods within those fiscal years. Early adoption is permitted. We expect our adoption of the amendments will not materially affect our consolidated results of operations, financial position, cash flows and disclosures.

(h) Clarifying guidance for certain collaborative arrangements with respect to revenue recognition

The FASB issued amendments in November 2018 to clarify the interaction between the guidance for certain collaborative arrangements and the guidance applicable to ASC 606. A collaborative arrangement is a contractual arrangement under which two

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or more parties actively participate in a joint operating activity and are exposed to significant risks and rewards that depend on the activity's commercial success. The targeted improvements clarify that certain transactions between collaborative arrangement participants are within the scope of ASC 606 and thus subject to all of its guidance. The amendments are effective for public business entities for fiscal years beginning after December 15, 2019, and interim periods within those fiscal years. Early adoption is permitted, including adoption in any interim period for which financial statements have not been issued. Retrospective application to the date of initial application of ASC 606 is required. We expect our adoption of the amendments will not materially affect our consolidated results of operations, financial position, cash flows and disclosures.

Use of Estimates and Assumptions

The preparation of our consolidated financial statements in conformity with U.S. GAAP requires the use of estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the consolidated financial statements, and the reported amounts of revenues and expenses during the reporting periods. Significant estimates and assumptions are used for, but not limited to: (1) allowance for doubtful accounts and unbilled revenues; (2) asset impairments, including goodwill; (3) investments in equity instruments; (4) depreciable lives of assets; (5) income tax valuation allowances; (6) uncertain tax positions; (7) reserves for professional, workers' compensation and comprehensive general insurance liability risks; (8) contingency and litigation reserves; (9) fair value measurements; (10) earnings sharing mechanisms; (11) environmental remediation liabilities; (12) AROs; (13) pension and other postretirement employee benefits and (14) noncontrolling interest balances. Future events and their effects cannot be predicted with certainty; accordingly, our accounting estimates require the exercise of judgment. The accounting estimates used in the preparation of our consolidated financial statements will change as new events occur, as more experience is acquired, as additional information is obtained and as our operating environment changes. We evaluate and update our assumptions and estimates on an ongoing basis and may employ outside specialists to assist in our evaluations, as necessary. Actual results could differ from those estimates.

Union collective bargaining agreements

We have approximately 48.3% of the employees covered by a collective bargaining agreement. Agreements which will expire within the coming year apply to approximately 1.6% of our employees.

Note 4. Revenue

On January 1, 2018, we adopted ASC 606 and all related amendments using the modified retrospective method, which we applied only to contracts that were not completed as of January 1, 2018. For reporting periods beginning on January 1, 2018, we present revenue in accordance with ASC 606, and have not adjusted comparative prior period information, which we continue to report under the legacy accounting standards in effect for those prior periods. For the year ended December 31, 2018, the effect of applying ASC 606 to recognize revenue as compared to applying the legacy accounting standards was not material.

We recognize revenue when we have satisfied our obligations under the terms of a contract with a customer, which generally occurs when the control of promised goods or services transfers to the customer. We measure revenue as the amount of consideration we expect to receive in exchange for providing those goods or services. Contracts with customers may include multiple performance obligations. For such contracts, we allocate revenue to each performance obligation based on its relative standalone selling price. We generally determine standalone selling prices based on the prices charged to customers. Certain revenues are not within the scope of ASC 606, such as revenues from leasing, derivatives, other revenues that are not from contracts with customers and other contractual rights or obligations, and we account for such revenues in accordance with the applicable accounting standards. We exclude from revenue amounts collected on behalf of third parties, including any such taxes collected from customers and remitted to governmental authorities. We do not have any material significant payment terms because we receive payment at or shortly after the point of sale.

The following describes the principal activities, by reportable segment, from which we generate revenue. For more detailed information about reportable segments, refer to Note 23.

Networks Segment

Networks derives its revenue primarily from tariff-based sales of electricity and natural gas service to customers in New York, Connecticut, Maine and Massachusetts, with no defined contractual term. For such revenues, we recognize revenues in an amount derived from the commodities delivered to customers. Other major sources of revenue are electricity transmission and wholesale sales of electricity and natural gas.

Tariff-based sales are subject to the corresponding state regulatory authorities, which determine prices and other terms of service through the ratemaking process. Maine state law prohibits the utility from providing the electricity commodity to customers. In New York, Connecticut and Massachusetts, customers have the option to obtain the electricity or natural gas commodity directly from the utility or from another supplier. For customers that receive their commodity from another supplier, the utility acts as an

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agent and delivers the electricity or natural gas provided by that supplier. Revenue in those cases is only for providing the service of delivery of the commodity. Networks entities calculate revenue earned but not yet billed based on the number of days not billed in the month, the estimated amount of energy delivered during those days and the estimated average price per customer class for that month. Differences between actual and estimated unbilled revenue are immaterial.

Transmission revenue results from others' use of the utility's transmission system to transmit electricity and is subject to Federal Energy Regulatory Commission (FERC) regulation, which establishes the prices and other terms of service. Long-term wholesale sales of electricity are based on individual bilateral contracts. Short-term wholesale sales of electricity are generally on a daily basis based on market prices and are administered by the Independent System Operator-New England (ISO-NE) and the New York Independent System Operator (NYISO), or PJM Interconnection, L.L.C. (PJM), as applicable. Wholesale sales of natural gas are generally short-term based on market prices through contracts with the specific customer.

The performance obligation in all arrangements is satisfied over time because the customer simultaneously receives and consumes the benefits as Networks delivers or sells the electricity or natural gas or provides the transmission service. We record revenue for all of those sales based upon the regulatory-approved tariff and the volume delivered or transmitted, which corresponds to the amount that we have a right to invoice. There are no material initial incremental costs of obtaining a contract in any of the arrangements. Networks does not adjust the promised consideration for the effects of a significant financing component if it expects, at contract inception, that the time between the delivery of promised goods or service and customer payment will be one year or less. Networks does not have any material significant payment terms because it receives payment at or shortly after the point of sale. For its New York utilities, Networks assesses its deferred payment arrangements at each balance sheet date for the existence of significant financing components, but has had no material adjustments as a result.

Certain Networks entities record revenue from Alternative Revenue Programs (ARPs), which is not ASC 606 revenue. Such programs represent contracts between the utilities and their regulators. The Networks ARPs include revenue decoupling mechanisms, other ratemaking mechanisms, annual revenue requirement reconciliations, and other demand side management programs. The Networks entities recognize and record only the initial recognition of "originating" ARP revenues (when the regulatory-specified conditions for recognition have been met). When they subsequently include those amounts in the price of utility service billed to customers, they record such amounts as a recovery of the associated regulatory asset or liability. When they owe amounts to customers in connection with ARPs, they evaluate those amounts on a quarterly basis and include them in the price of utility service billed to customers and do not reduce ARP revenues.

Networks also has various other sources of revenue including billing, collection, other administrative charges, sundry billings, rent of utility property, and miscellaneous revenue. It classifies such revenues as Other ASC 606 revenues to the extent they are not related to revenue generating activities from leasing, derivatives, or ARPs.

Renewables Segment

Renewables derives its revenue primarily from the sale of energy, transmission, capacity and other related charges from its renewable wind, solar, and thermal energy generating sources. For such revenues, we will recognize revenues in an amount derived from the commodities delivered and from services as they are made available. Renewables has bundled power purchase agreements consisting of electric energy, transmission, capacity and/or renewable energy credits (RECs). The related contracts are generally long-term with no stated contract amount, that is, the customer is entitled to all of the unit's output. Renewables also has unbundled sales of electric energy and capacity, RECs and natural gas, which are generally for periods of less than a year. The performance obligations in substantially all of both bundled and unbundled arrangements for electricity and natural gas are satisfied over time, for which we record revenue based on the amount invoiced to the customer for the actual energy delivered. The performance obligation for stand-alone RECs is satisfied at a point in time, for which we record revenue when the performance obligation is satisfied upon delivery of the REC. Renewables does not have any material significant payment terms because it receives payment at or shortly after the point of sale. There are no material initial incremental costs of obtaining a contract or significant financing elements in any of the arrangements.

Renewables classifies certain contracts for the sale of electricity as either leases or derivatives, in accordance with the applicable accounting standards. Renewables also has revenue from its energy trading operations, which it generally classifies as derivative revenue. However, trading contracts not classified as derivatives are within the scope of ASC 606, with the performance obligation of the delivery of energy (electricity, natural gas) and settlement of the contracts satisfied at a point in time at which time we recognize the revenue. Renewables also has Other ASC 606 revenue, which we recognize based on the amount invoiced to the customer.

Certain customers may receive cash credits, which we account for as variable consideration. Renewables estimates those amounts based on the expected amount to be provided to customers and reduces revenues recognized. We believe that there will not be significant changes to our estimates of variable consideration.

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Other

Other, which does not represent a segment, derives its revenues primarily from providing natural gas storage services to customers, gas trading operations generally classified as derivative revenue in accordance with the applicable accounting standards, gas trading contracts not classified as derivatives, and other miscellaneous revenues including intersegment eliminations. See Note 26 – Assets Held For Sale for further discussion of the sale of the gas storage and trading businesses.

Contract Costs, Contract Liabilities and Practical Expedient

We recognize an asset for incremental costs of obtaining a contract with a customer when we expect the benefit of those costs to be longer than one year. Costs incurred prior to 2018 were insignificant and not capitalized. We have contract assets for costs from development success fees, which we paid for during the solar asset development period in 2018, and will amortize ratably into expense over the 15-year life of the power purchase agreement, expected to commence in December 2021 upon commercial operation. Contract assets totaled $9 million at December 31, 2018 and are presented in "Other non-current assets" on our consolidated balance sheet.

We have contract liabilities for revenue from transmission congestion contract (TCC) auctions, which we receive payment for at the beginning of an auction period, and amortize ratably each month into revenue over the applicable auction period. The auction periods range from six months to two years. TCC contract liabilities totaled $9 million at December 31, 2018, and $8 million at January 1, 2018, and are presented in "Other current liabilities". We recognized $13 million as revenue during 2018, of which $8 million was included in contract liabilities at January 1, 2018.

We apply a practical expedient to expense as incurred costs to obtain a contract when the amortization period is one year or less. We record costs incurred to obtain a contract within operating expenses, including amortization of capitalized costs.

Revenues disaggregated by major source for our reportable segments for the year ended December 31, 2018 are as follows:

	Year Ended December 31, 2018			
	Networks	Renewables	Other (b)	Total
(Millions)				
Regulated operations – electricity	$ 3,641	$ —	$ —	$ 3,641
Regulated operations – natural gas	1,473	—	—	1,473
Nonregulated operations – wind	—	637	—	637
Nonregulated operations – solar	—	17	—	17
Nonregulated operations – thermal	—	47	—	47
Nonregulated operations – gas storage	—	—	10	10
Other(a)	58	(68)	9	(1)
Revenue from contracts with customers	**5,172**	**633**	**19**	**5,824**
Leasing revenue	38	346	—	384
Derivative revenue	—	124	10	134
Alternative revenue programs	80	—	—	80
Other revenue	20	36	—	56
Total operating revenues	**$ 5,310**	**$ 1,139**	**$ 29**	**$ 6,478**

(a) Primarily includes certain intra-month trading activities, billing, collection, and administrative charges, sundry billings and other miscellaneous revenue.

(b) Does not represent a segment. Includes Corporate, Gas and intersegment eliminations.

As of December 31, 2018, accounts receivable balances related to contracts with customers were approximately $1,118 million, including $374 million of unbilled revenue, which are included in “Accounts receivable and unbilled revenues, net” on our consolidated balance sheets.

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As of December 31, 2018, the aggregate amount of the transaction price allocated to performance obligations that are unsatisfied (or partially unsatisfied) were as follows:

As of December 31, 2018	2019	2020	2021	2022	2023	Thereafter	Total
(Millions)							
Revenue expected to be recognized on multiyear retail energy sales contracts in place	$ 5	$ 1	$ 1	$ 1	$ 1	$ 1	$ 10
Revenue expected to be recognized on multiyear fixed price, fixed volume renewable energy credit sales contracts in place	17	12	9	5	4	12	59
Revenue expected to be recognized on multiyear fixed volume, fixed price carbon-free energy sales contracts in place	13	5	—	—	—	—	18
Total operating revenues	**$ 35**	**$ 18**	**$ 10**	**$ 6**	**$ 5**	**$ 13**	**$ 87**

We do not disclose information about remaining performance obligations for contracts for which we recognize revenue in the amount to which we have the right to invoice (e.g., usage-based pricing terms).

Note 5. Industry Regulation

Electricity and Natural Gas Distribution – Maine, New York, Connecticut and Massachusetts

The Maine distribution rate case and associated proceedings, the Federal Energy Regulatory Commission (FERC) Transmission Return on Equity (ROE) case, the New York and Connecticut rate plans, Reforming Energy Vision (REV), the Storm proceedings in NY and ME and the Tax Act are some of the most important specific regulatory processes that currently affect Networks.

The revenues of Networks companies are essentially regulated, being based on tariffs established in accordance with administrative procedures set by the various regulatory bodies. The tariffs applied to the Networks companies are approved by the regulatory commissions of the different states and are based on the cost of providing service. The revenues of each of the Networks companies are set to be sufficient to cover its operating costs, including energy costs, finance costs and the costs of equity, the last of which reflects our capital ratio and a reasonable ROE.

Energy costs that are set on the New York and New England wholesale markets are passed on to consumers. The difference between energy costs that are budgeted and those that are actually incurred by the utilities is offset by applying compensation procedures that result in either immediate or deferred tariff adjustments. These procedures apply to other costs, which are in most cases exceptional, such as the effects of extreme weather conditions, environmental factors, regulatory and accounting changes, and treatment of vulnerable customers, that are offset in the tariff process. Any New York and Connecticut revenues that allow a utility to exceed target returns, usually the result of better than expected cost efficiency, are generally shared between the utility and its customers, resulting in future tariff reductions.

Each of Networks' eight utility companies must comply with regulatory procedures that differ in form but in all cases conform to the basic framework outlined above. Generally, tariff reviews cover various years and provide for a reasonable ROE, protection and automatic adjustments for exceptional costs incurred and efficiency incentives. The distribution rates and allowed ROEs for Networks' regulated utilities in New York are subject to regulation by the New York Public Service Commission (NYPSC), in Maine by the Maine Public Utilities Commission (MPUC), in Connecticut by the Connecticut Public Utilities Regulatory Authority (PURA) and in Massachusetts by the Department of Public Utilities (DPU).

CMP Distribution Rate Case and New Renewable Source Generation

On May 1, 2013, CMP submitted its required distribution rate request with the MPUC. On July 3, 2014, after a fourteen month review process, CMP filed a rate stipulation agreement on the majority of the financial matters with the MPUC. The stipulation agreement was approved by the MPUC on August 25, 2014. The stipulation agreement also noted that certain rate design matters would be litigated, which the MPUC ruled on October 14, 2014.

The rate stipulation agreement provided for an annual CMP distribution tariff increase of 10.7% or $24.3 million. The rate increase was based on a 9.45% ROE and 50% equity capital. CMP was authorized to implement a Rate Decoupling Mechanism (RDM) which reduces distribution revenue variations associated with energy efficiency and weather impacts on sales volumes. CMP also adjusted its storm costs recovery mechanism whereby it is allowed to collect in rates a storm allowance and to defer actual storm

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costs when such storm event costs exceed $3.5 million. CMP and customers share storm costs that exceed a certain balance on a fifty-fifty basis, with CMP's exposure limited to $3 million annually.

CMP has made a separate regulatory filing for a new customer billing system replacement. In accordance with the stipulation agreement, a new billing system was needed and CMP made its filing on February 27, 2015 to request a separate rate recovery mechanism. On October 20, 2015, the MPUC issued an order approving a stipulation agreement authorizing CMP to proceed with the customer billing system investment. The approved stipulation allows CMP to recover the system costs effective July 1, 2017.

The rate stipulation does not have a predetermined rate term. CMP had the option to file for new distribution rates at its own discretion. The rate stipulation does not contain service quality targets or penalties. The rate stipulation also does not contain any earning sharing requirements.

On May 29, 2018, a ten-person complaint was filed with the MPUC against CMP, Networks and AVANGRID. The complaint requested that the MPUC open a rate case to determine if CMP is making excessive returns on investment and, therefore, whether CMP's retail rates should be lower. The complaint also requested the MPUC deny certain costs associated with the October 2017 windstorm. On July 24, 2018, the MPUC issued an order dismissing the complaint and its associated request to deny the recovery of costs associated with the October 2017 windstorm. The order initiated an investigation into CMP's rates and revenue requirement and directed CMP to make a filing consistent with the requirements for a general rate case no later than October 15, 2018. Consistent with the order in the ten-person complaint proceeding, on August 7, 2018, the MPUC issued a Notice of Investigation, opening the proceeding in which CMP would make its rate case filing and through which the MPUC will examine the rates and revenue requirements of CMP. On October 15, 2018, CMP filed a general rate case as directed by the MPUC requesting a ROE of 10% and an equity ratio of 55%. The company is proposing to use savings arising out of changes in federal taxation pursuant to the Tax Act to keep its distribution prices stable while making its electric system more reliable. The MPUC has established a ten-month process to review CMP's filing and we expect a decision in October of 2019. CMP's general rate case filing includes a proposal to enhance the resiliency of the energy grid by expanding vegetation management and pursuing additional reliability measures such as pole replacements and addition of tree wire in selected areas. Such investments are designed to strengthen CMP's power grid so it can better stand up to severe weather. CMP is planning to use savings from the federal Tax Act to pay for the costs of resiliency programs, other investments in infrastructure and certain cost increases since 2014. We cannot predict the outcome of this matter.

Under Maine law 35-A M.R.S.A §§ 3210-C, 3210-D, the MPUC is authorized to conduct periodic requests for proposals seeking long-term supplies of energy, capacity or Renewable Energy Certificates, or RECs, from qualifying resources. The MPUC is further authorized to order Maine transmission and distribution utilities to enter into contracts with sellers selected from the MPUC's competitive solicitation process. Pursuant to a MPUC Order dated October 8, 2009, CMP entered into a 20-year agreement with Evergreen Wind Power III, LLC, on March 31, 2010, to purchase capacity and energy from Evergreen's 60 Megawatt (MW) Rollins wind farm in Penobscot County, Maine. CMP's purchase obligations under the Rollins contract are approximately $7 million per year. In accordance with subsequent MPUC orders, CMP periodically auctions the purchased Rollins energy to wholesale buyers in the New England regional market. Under applicable law, CMP is assured recovery of any differences between power purchase costs and achieved market revenues through a reconcilable component of its retail distribution rates. Although the MPUC has conducted multiple requests for proposals under M.R.S.A §3210-C and has tentatively accepted long-term proposals from other sellers, these selections have not yet resulted in additional currently effective contracts with CMP.

NYSEG and RG&E Rate Plans

On May 20, 2015, NYSEG and RG&E filed electric and gas rate cases with the NYPSC. The companies requested rate increases for NYSEG electric, NYSEG gas and RG&E gas. RG&E electric proposed a rate decrease.

On February 19, 2016, NYSEG, RG&E and other signatory parties filed a Joint Proposal with the NYPSC for a three-year rate plan for electric and gas service at NYSEG and RG&E commencing May 1, 2016. The Joint Proposal, which was approved by the NYPSC on June 15, 2016, balanced the varied interests of the signatory parties including but not limited to maintaining the companies' credit quality and mitigating the rate impacts to customers. The Joint Proposal reflects many customer benefits including: acceleration of the companies' natural gas leak prone main replacement programs and increased funding for electric vegetation management to provide continued safe and reliable service. The delivery rate increase in the Joint Proposal can be summarized as follows:

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Utility	May 1, 2016 Rate Increase (Millions)	May 1, 2016 Delivery Rate Increase %	May 1, 2017 Rate Increase (Millions)	May 1, 2017 Delivery Rate Increase %	May 1, 2018 Rate Increase (Millions)	May 1, 2018 Delivery Rate Increase %
NYSEG Electric	$ 29.6	4.10%	$ 29.9	4.10%	$ 30.3	4.10%
NYSEG Gas	$ 13.1	7.30%	$ 13.9	7.30%	$ 14.8	7.30%
RG&E Electric	$ 3.0	0.70%	$ 21.6	5.00%	$ 25.9	5.70%
RG&E Gas	$ 8.8	5.20%	$ 7.7	4.40%	$ 9.5	5.20%

The allowed rate of return on common equity for NYSEG Electric, NYSEG Gas, RG&E Electric and RG&E Gas is 9.00%. The equity ratio for each company is 48%; however, the equity ratio is set at the actual up to 50% for earnings sharing calculation purposes. The customer share of any earnings above allowed levels increases as the ROE increases, with customers receiving 50%, 75% and 90% of earnings over 9.5%, 10.0% and 10.5% ROE, respectively, in the first rate year covering the period May 1, 2016 – April 30, 2017. The earnings sharing levels increase in rate year two (May 1, 2017 – April 30, 2018) to 9.65%, 10.15% and 10.65% ROE, respectively. The earnings sharing levels further increase in rate year three (May 1, 2018 – April 30, 2019) to 9.75%, 10.25% and 10.75% ROE, respectively. The rate plans also include the implementation of a rate adjustment mechanism (RAM) designed to return or collect certain defined reconciled revenues and costs, new depreciation rates and continuation of the existing RDM for each business. The Joint Proposal reflects the recovery of deferred NYSEG Electric storm costs of approximately $262 million, of which $123 million is being amortized over ten years and the remaining $139 million is being amortized over five years. The proposal also continues reserve accounting for qualifying Major Storms ($21.4 million annually for NYSEG Electric and $2.5 million annually for RG&E Electric). Incremental maintenance costs incurred to restore service in qualifying divisions will be chargeable to the Major Storm Reserve provided they meet certain thresholds.

The Joint Proposal maintains NYSEG's and RG&E's current electric reliability performance measures (and associated potential negative revenue adjustments for failing to meet established performance levels) which include the system average interruption frequency index (SAIFI) and the customer average interruption duration index (CAIDI). The Joint Proposal also modifies certain gas safety performance measures at the companies, including those relating to the replacement of leak prone mains, leak backlog management, emergency response and damage prevention. The proposal establishes threshold performance levels for designated aspects of customer service quality and continues and expands NYSEG's and RG&E's bill reduction and arrears forgiveness Low Income Programs with increased funding levels included in the proposal. The Joint Proposal provides for the implementation of NYSEG's Energy Smart Community (ESC) Project in the Ithaca region which will serve as a test-bed for implementation and deployment of Reforming the Energy Vision (REV) initiatives. The ESC Project will be supported by NYSEG's planned Distribution Automation upgrades and Advanced Metering Infrastructure (AMI) implementation for customers on circuits in the Ithaca region. The companies will also pursue Non-Wires Alternative projects as described in the proposal. Other REV-related incremental costs and fees will be included in the RAM to the extent cost recovery is not provided for elsewhere. Under the proposal, each company will implement the RAM, which will be applicable to all customers, to return or collect RAM Eligible Deferrals and Costs, including: (1) property taxes; (2) Major Storm deferral balances; (3) gas leak prone pipe replacement; (4) REV costs and fees which are not covered by other recovery mechanisms; and (5) NYSEG Electric Pole Attachment revenues. RG&E implemented a RAM in July 2018 since certain eligibility thresholds were exceeded.

The Joint Proposal provides for partial or full reconciliation of certain expenses including, but not limited to: pensions and other postretirement benefits; property taxes; variable rate debt and new fixed rate debt; gas research and development; environmental remediation costs; major storms; nuclear electric insurance limited credits; economic development; and low income programs. The Joint Proposal also includes a downward-only Net Plant reconciliation. In addition, the Joint Proposal includes downward-only reconciliations for the costs of: electric distribution and gas vegetation management; pipeline integrity; and incremental maintenance. The Joint Proposal provides that NYSEG and RG&E continue their electric RDMs on a total revenue per class basis and their gas RDMs on a revenue per customer basis.

UI, CNG, SCG and BGC Rate Plans

Under Connecticut law, The United Illuminating Company's (UI) retail electricity customers are able to choose their electricity supplier while UI remains their electric distribution company. UI purchases power for those of its customers under standard service rates who do not choose a retail electric supplier and have a maximum demand of less than 500 kilowatts and its customers under supplier of last resort service for those who are not eligible for standard service and who do not choose to purchase electric generation service from a retail electric supplier. The cost of the power is a "pass-through" to those customers through the Generation Service Charge on their bills.

UI has wholesale power supply agreements in place for its entire standard service load for the first half of 2019, 80% of its standard service load for the second half of 2019 and 20% of its standard service load for the first half of 2020. Supplier of last resort service

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is procured on a quarterly basis and UI has wholesale power supply agreement in place for the second quarter of 2019. However, from time to time there are no bidders in the procurement process for supplier of last resort service and in such cases UI manages the load directly.

In December 2016, the PURA approved new distribution rate schedules for UI for three years, which became effective January 1, 2017, and which, among other things, provides for annual tariff increases and an ROE of 9.10% based on a 50% equity ratio, continued UI's existing ESM pursuant to which UI and its customers share on a fifty-fifty basis all distribution earnings above the allowed ROE in a calendar year, continued the existing decoupling mechanism and approved the continuation of the requested storm reserve. Any dollars due to customers from the ESM continue to be first applied against any storm regulatory asset balance (if one exists at that time) or refunded to customers through a bill credit if such storm regulatory asset balance does not exist.

In December 2017, PURA approved new tariffs for the Southern Connecticut Gas Company (SCG) effective January 1, 2018 for a three-year rate plan with rate increases of $1.5 million, $4.7 million and $5.0 million in 2018, 2019 and 2020, respectively. The new tariffs also include an RDM and Distribution Integrity Management Program (DIMP) mechanism similar to the mechanisms authorized for Connecticut Natural Gas Corporation (CNG), ESM, the amortization of certain regulatory liabilities (most notably accumulated hardship deferral balances and certain accumulated deferred income taxes) and tariff increases based on a ROE of 9.25% and approximately 52% equity level. Any dollars due to customers from the ESM will be first applied against any environmental regulatory asset balance as defined in the settlement agreement (if one exists at that time) or refunded to customers through a bill credit if such environmental regulatory asset balance does not exist.

On June 29, 2018, CNG filed an application with PURA for new tariffs to become effective January 1, 2019. On August 30, 2018, CNG entered into a settlement agreement with the Office of Consumer Counsel and PURA prosecutorial staff that provides for new rates effective January 1, 2019. The settlement agreement was approved by PURA on December 19, 2018. The settlement agreement included an increase in rates of $9.9 million in 2019, an incremental increase of $4.6 million in 2020 and an incremental increase of $5.2 million in 2021, for a total increase of $19.7 million over the three-year rate plan. The settlement agreement is based on an ROE of 9.30%, and an equity ratio of 54% in 2019, 54.50% in 2020, and 55% in 2021.

The Berkshire Gas Company's (BGC) rates are established by the DPU. BGC's ten-year rate plan, which was approved by the DPU and included an approved ROE of 10.5%, expired on January 31, 2012. BGC continues to charge the rates that were in effect at the end of the rate plan.

On May 17, 2018, BGC filed a petition with the DPU seeking approval of a distribution rate increase to be effective January 1, 2019. On December 4, 2018, BGC and the Massachusetts Attorney General's Office filed a settlement agreement with the DPU. The settlement agreement provides for a $1.6 million distribution base rate increase effective January 1, 2019, or February 1, 2019 if the DPU did not approve the settlement agreement prior to January 1, 2019, and an additional $0.7 million base distribution increase effective November 1, 2019, if certain investments are made by BGC. The settlement agreement contained a make-whole provision if the DPU approved the agreement after January 1, 2019. The distribution rate increase is based on a 9.70% ROE and 55% equity ratio. The settlement agreement provides for the implementation of a RDM and pension expense tracker and also provides that BGC will not file to change base distribution to become effective before November 1, 2021. The settlement agreement was approved by the DPU on January 18, 2019.

Transmission - FERC ROE Proceeding

See Note 13 - Commitments and Contingent Liabilities for further discussion.

CMP's and UI's transmission rates are determined by a tariff regulated by the FERC and administered by ISO New England, Inc. (ISO-NE). Transmission rates are set annually pursuant to a FERC authorized formula that allows for recovery of direct and allocated transmission operating and maintenance expenses, and for a return of and on investment in assets.

On December 28, 2015, the FERC issued an order instituting section 206 proceedings and establishing hearing and settlement judge procedures. Pursuant to section 206 of the FPA, the FERC instituted proceedings because it found that ISO-NE Transmission, Markets and Services Tariff is unjust, unreasonable and unduly discriminatory or preferential. The FERC stated that ISO-NE's Tariff lacks adequate transparency and challenge procedures with regard to the formula rates for ISO-NE Participating Transmission Owners (PTOs), including UI, Maine Electric Power Corporation (MEPCO) and CMP. The FERC also found that the current Regional Network Service (RNS) and Local Network Service (LNS) formula rates appear to be unjust, unreasonable, unduly discriminatory or preferential or otherwise unlawful as the formula rates appear to lack sufficient detail in order to determine how certain costs are derived and recovered in the formula rates. The FERC assigned the proceeding to a settlement judge. On August 17, 2018, the PTOs submitted a formula rate settlement opposed by certain parties and supported by the settlement judge. We are unable to predict the outcome of this proceeding at this time.

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REV

In April 2014, the NYPSC commenced a proceeding entitled REV, which is a wide ranging initiative to reform New York State's energy industry and regulatory practices. REV has been divided into two tracks, Track 1 for Market Design and Technology, and Track 2 for Regulatory Reform. REV and its related proceedings have and will continue to propose regulatory changes that are intended to promote more efficient use of energy, deeper penetration of renewable energy resources such as wind and solar and wider deployment of distributed energy resources (DER), such as micro grids, on-site power supplies and storage.

REV is also intended to promote greater use of advanced energy management products to enhance demand elasticity and efficiencies. Track 1 of this initiative involves a collaborative process to examine the role of distribution utilities in enabling market based deployment of DER to promote load management and greater system efficiency, including peak load reductions. NYSEG and RG&E are participating in the initiative with other New York utilities and are providing their unique perspective. The NYPSC issued a 2015 order in Track 1, which acknowledges the utilities' role as a Distribution System Platform (DSP) provider, and required the utilities to file an initial Distribution System Implementation Plan (DSIP) by June 30, 2016. The companies filed the DSIP, which also included information regarding the potential deployment of Automated Metering Infrastructure (AMI) across its entire service territory. The companies, in December 2016, filed a petition to the NYPSC requesting approval for cost recovery associated with the full deployment of AMI, and a collaborative associated with this petition began in in the first quarter of 2017, was suspended in the second quarter of 2017, resumed in the first quarter of 2018 and then further suspended. NYSEG and RG&E expect to renew their AMI requests in their rate case filings expected in 2019.

Other various proceedings have also been initiated by the NYPSC which are REV related, and each proceeding has its own schedule. These proceedings include the Clean Energy Standard, Value of DER and Net Energy Metering, Demand Response Tariffs and Community Choice Aggregation. As part of the Clean Energy Standard proceeding, all electric utilities were ordered to begin payments to New York State Energy Research and Development Authority (NYSERDA) for RECs and Zero Emissions Credits beginning in 2017.

Track 2 of the REV initiative is also underway, and through a NYPSC staff whitepaper review process, is examining potential changes in current regulatory, tariff, market design and incentive structures which could better align utility interests with achieving New York state and NYPSC's policy objectives. New York utilities will also be addressing related regulatory issues in their individual rate cases. A Track 2 order was issued in May 2016, and includes guidance related to the potential for Earnings Adjustment Mechanisms (EAMs), Platform Service Revenues, innovative rate designs and data utilization and security. The companies, in December 2016, filed a proposal for the implementation of EAMs in the areas of System Efficiency, Energy Efficiency, Interconnections and Clean Air. A collaborative process to review the companies' petition was suspended in 2017 and the NYSEG and RG&E expect to renew their EAM requests in their rate case filings expected in 2019.

In March 2017, the NYPSC issued three separate REV-related orders. These orders created a series of filing requirements for NYSEG and RG&E beginning in March 2017 and extending through the end of 2018. The three orders involve: 1) modifications to the electric utilities' proposed interconnection EAM framework; 2) further DSIP requirements, including filing of an updated DSIP plan by mid-2018 and implementing two energy storage projects at each company by the end of 2018; and 3) Net Energy Metering Transition including implementation of Phase One of the Value of DER. In September 2017, the NYPSC issued another order related to the Value of DER, requiring tariff filings, changes to Standard Interconnection Requirements and planning for the implementation of automated consolidated billing. In July 2018, NYSEG and RG&E submitted an updated DSIP plan consistent with guidance received from the NY Department of Public Service. As of the end of 2018, both NYSEG and RG&E had deployed two energy storage projects each, consistent with the March 2017 NYPSC order requirements. In December 2018, the NYPSC staff submitted whitepapers on standby and buyback service rate design, future value stack compensation and capacity value compensation. It is expected that the NYPSC will rule on the proposals set forth in the whitepapers in 2019. An additional staff whitepaper on Rate Design for Mass Market On-Site DER projects interconnected after January 1, 2020 is scheduled to be submitted by the NYPSC Staff in the first quarter of 2019.

New York State Department of Public Service Investigation of the Preparation for and Response to the March 2017 Windstorm

On March 11, 2017, the New York State Department of Public Service (the Department) commenced an investigation of NYSEG's and RG&E's preparation for and response to the March 2017 windstorm, which affected more than 219,000 NYSEG and RG&E customers. The Department Staff issued a report (the Staff Report) of the findings from their investigation on November 16, 2017. The Staff Report made several recommendations for future storm response and also alleged that NYSEG and RG&E had violated their own emergency response plan in a number of respects.

Also on November 16, 2017, the NYPSC issued an Order Instituting Proceeding and to Show Cause (the Order) requiring the companies to address whether the NYPSC should mandate, reject or modify, in whole or in part the recommendations made in the Staff Report. The Order also required the companies to show cause why the NYPSC should not commence an administrative

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penalty proceeding. On May 18, 2018, NYSEG and RG&E filed a settlement joint proposal and investment joint proposal before the NYPSC to settle potential penalties and avoid litigation related to the March 2017 windstorm, pursuant to which, among other things, NYSEG and RG&E have agreed to make $3.9 million in investments in 2018 designed to increase resiliency and improve emergency response in the areas impacted by the storm. The investments will not be reflected in rate base or operating expenses in establishing future delivery rates. The joint proposals were subject to public comment and await NYPSC approval. We cannot predict the final outcome of this matter.

New York State Department of Public Service Investigation of the Preparation for and Response to the March 2018 Winter Storms

In March 2018, following two severe winter storms that impacted over more than a million electric utility customers in New York, including 520,000 NYSEG and RG&E customers, the NYPSC initiated a comprehensive investigation of all the New York electric utilities' preparation and response to those events. The investigation has been expanded to include other 2018 New York spring storm events. We cannot predict the final outcome of this matter.

MPUC Investigation into the Response by Public Utilities to the October 2017 Storm

On December 19, 2017, the MPUC issued a Notice of Investigation regarding utility response to the October 2017 Storm. The wind storm of October 2017 was unprecedented in the number of customers impacted and the magnitude of the damage across the entire CMP service territory. During the event, thousands of trees were broken or uprooted and many caused damage to the electrical delivery system. The vast majority of tree related damage was from trees that were located outside of the maintenance clearance zone. Damage occurred on nearly every CMP distribution circuit, resulting in more than 1,400 broken poles. On January 18, 2018, CMP submitted a filing in compliance with the MPUC's Notice. The MPUC investigation into restoration efforts is ongoing. CMP incurred total incremental costs of approximately $68.6 million, of which approximately $24.7 million are capital costs associated with the replacement of damaged infrastructure, including poles, cross arms, transformers and related equipment and after applying the agreed up capitalization method contained in the approved stipulation. Accordingly, the net incremental operating and maintenance costs for restoration of the distribution system were approximately $43.9 million. On June 29, 2018, the MPUC approved a stipulation agreement, which provides for the recovery of incremental storm restoration costs through CMP's distribution rates. The stipulation agreement included a revised storm capitalization amount and the value of recovery was reduced by approximately $531,000 of cumulative underspent funds on non-cycle vegetation management activities.

On October 4, 2018, the MPUC issued an Order stating that based on the weather forecast information and the availability of storm restoration crew resources, that both CMP and Emera Maine acted reasonably in their preparation for and response to a major wind and rain storm in October 2017 and that no further investigation of this aspect of the utilities response is warranted. The MPUC also stated that there are potential for improvements for future storm performance of the utilities, their systems, and with respect to coordination and communication with other involved entities. On December 1, 2018, CMP filed a report required by the MPUC that details its improvement plans.

CMP Customer Billing System Investigation

On March 1, 2018, the MPUC issued a Notice of Investigation initiating a summary investigation into CMP's metering, billing and customer communications practices. Due to the highly technical nature of CMP's customer billing system, on March 22, 2018 the MPUC issued an Order Initiating Audit commencing a forensic audit of CMP's customer billing system to identify any errors that have, or continue to be resulting in billing inaccuracies. On July 10, 2018, the MPUC issued an Order Modifying Scope of Audit, which expanded the scope of the audit to include CMP's customer communication practices. On December 20, 2018, the MPUC released the findings of the forensic audit of CMP's customer billing system and customer communication practices. On January 14, 2019, the MPUC issued an Order and Notice of Investigation initiating an investigation of CMP's metering and billing, practices and initiating a separate investigation of the audit of CMP's customer service and communication practices and incorporating such investigation into CMP's general rate case. We cannot predict the outcome of these matters.

Tax Cuts and Jobs Act

On December 22, 2017, the Tax Cuts and Jobs Act of 2017 (the Tax Act) was signed into law. The Tax Act significantly changed the federal taxation of business entities including, among other things, implementing a federal corporate tax rate decrease from 35% to 21% for tax years beginning after December 31, 2017. Reductions in accumulated deferred income tax balances due to the reduction in the corporate income tax rates will result in amounts previously and currently collected from utility customers for these deferred taxes to be refundable to such customers, generally through reductions in future rates. The NYPSC, MPUC, PURA, DPU and the FERC have instituted separate proceedings in New York, Maine, Connecticut, Massachusetts and the FERC, respectively, to review and address the implications of the Tax Act on the utilities.

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In New York, the NYPSC staff issued a proposal on March 29, 2018, whereby the staff recommended that Tax Act benefits be returned to customers beginning October 1, 2018. Comments on this staff proposal were submitted by the Joint Utilities of New York with a separate Appendix by each respective major utility on June 27, 2018, including our New York utility companies. NYSEG and RG&E have stated that they believe Tax Act benefits should be utilized for utility programs for the benefit of customers, including for new projects such as AMI, other future resiliency investments and to recover deferred regulatory assets. On August 9, 2018, the NYPSC issued an Order requiring sur-credits effective October 1, 2018. The sur-credits for NYSEG and RG&E reflected the lower effective tax rate of 21%. For NYSEG Gas, RG&E Electric and RG&E Gas the NYPSC also required the sur-credit to include the return to customers of the January - September 2018 Tax Act savings over three years. The NYPSC allowed NYSEG Electric to continue to defer the January - September 2018 Tax Act savings as well as to continue to preserve the protected and unprotected Tax Act savings until the companies' next rate cases. In Connecticut, UI and SCG expect Tax Act savings to be deferred until they are reflected in tariffs in a future rate case, unless PURA determines otherwise. CNG and Berkshire included Tax Act savings in rate cases that were filed with PURA and the DPU, respectively, in the second quarter of 2018. In Maine, CMP adjusted rates beginning July 1, 2018 to pass back to customers the Tax Act savings after offsetting for recovery of deferred 2017 storm costs. At the FERC, CMP transmission and UI transmission adjusted their tariffs in June 2018 to reflect the income statement value of Tax Act savings.

Power Tax Audits

In 2015, we implemented power tax software to track and measure deferred tax amounts for CMP, NYSEG and RG&E. In connection with this change, we identified historical updates needed with deferred taxes recognized by CMP, NYSEG and RG&E. We increased our deferred tax liabilities in 2015, with a corresponding increase to regulatory assets, to reflect the updated amounts calculated by the power tax software. Since 2015, the NYPSC and MPUC accepted certain adjustments to deferred taxes and associated regulatory assets for this item in recent distribution rate cases, resulting in a regulatory asset balance of approximately $157 million and $160 million for this item at December 31, 2018 and 2017, respectively.

In 2017, audits of the power tax regulatory assets were commenced by the NYPSC and MPUC. On January 11, 2018, the NYPSC issued an order opening an operations audit on NYSEG and RG&E and certain other New York utilities regarding tax accounting. The audit report is expected to be completed in 2019. In January 2018, the MPUC published the power tax audit report with respect to CMP, which indicated that the auditor was unable to verify the “acquisition value” of the power tax regulatory assets. The audit report requires that CMP must provide support for the beginning balance of the regulatory assets or will be unable to recover the value of the assets, which is approximately $10 million. CMP responded in to the audit report in its rate case filing and noted that it could reconcile 99% of the tax values and therefore requested full recovery of the power tax regulatory asset. We cannot predict the outcome of this proceeding.

Ginna Reliability Support Service Agreement

Ginna Nuclear Power Plant, LLC (GNPP), which is a subsidiary of Constellation Energy Nuclear Group, LLC (CENG), owns and operates the R.E. Ginna Nuclear Power Plant (Ginna Facility and together with GNPP, Ginna), a 581 MW single-unit pressurized water reactor located in Ontario, New York. In May 2014, the NYISO and then the NYPSC ruled that the Ginna Facility was required to maintain system reliability and ordered RG&E and GNPP to negotiate an Reliability Support Service Agreement (RSSA).

On October 21, 2015, RG&E, GNPP, New York Department of Public Service, Utility Intervention Unit and Multiple Intervenors filed a Joint Proposal with the NYPSC for approval of the RSSA, as modified. On February 23, 2016, the NYPSC unanimously adopted the joint proposal, which provided for a term of the RSSA from April 1, 2015 through March 31, 2017 and RG&E monthly payments to Ginna in the amount of $15.4 million. In addition, RG&E was entitled to 70% of revenues from Ginna’s sales into the NYISO energy and capacity markets, while Ginna was entitled to 30% of such revenues. The NYPSC also authorized RG&E to implement a rate surcharge effective January 1, 2016, to recover amounts paid to Ginna pursuant to the RSSA. The FERC issued an order authorizing the FERC Settlement agreement in the Settlement Docket on March 1, 2016, at which point the rate surcharge went into effect. RG&E used deferred rate credit amounts (regulatory liabilities) to offset the full amount of the Deferred Collection Amount (including carrying costs), plus credit amounts to offset all RSSA costs that exceed $2.3 million per month, not to exceed a total use of credits in the amount of $110 million, applicable through June 30, 2017. The available credits were insufficient to satisfy the final payment amount from RG&E to Ginna, and consistent with the agreement with the NYPSC, the RSSA surcharge continues past March 31, 2017, to recover up to $2.3 million per month until the final payment has been recovered by RG&E from customers.

New York TransCo

Networks holds an approximate 20% ownership interest in the New York TransCo, LLC (New York TransCo). New York TransCo was established by the New York transmission utilities to develop, own and operate electric transmission in New York. In December 2014, New York TransCo filed for regulatory approval of its rates, terms, and conditions with the FERC.

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On April 2, 2015, the FERC issued an order granting, inter alia, New York TransCo's owners' request for a 50-basis point adder for New York TransCo's membership in the NYISO regional transmission organization (RTO), subject to the adder being capped within the zone of reasonableness after a determination of where within that zone its base level ROE should be set. The FERC also set the formula rate and base ROE issue for hearing and settlement judge procedures. In addition, the FERC rejected New York TransCo's owners' cost allocation method for the Transmission Owner Transmission Solutions (TOTS) Projects because it would allocate costs to Power Supply Long Island (LIPA) and New York Power Authority (NYPA) that they did not voluntarily agree to pay.

On November 5, 2015, the New York TransCo's owners, filed the Settlement with the FERC to resolve all outstanding issues associated with the TOTS Projects, including issues related to the TOTS Projects that were set for hearing and issues pending on rehearing. The issues regarding certain other projects remain pending. The Settlement addressed the financial terms that are components of New York TransCo's revenue requirement for the proposed TOTS Projects, including the base ROE of 9.50%, and a 50-basis point ROE adder, the capital structure of 53%, and the cost allocation under the NYISO Open Access Transmission Tariff (OATT) for the TOTS Projects. On March 17, 2016, the FERC approved the Settlement.

On August 21, 2017, New York TransCo filed a settlement with the FERC to resolve all outstanding issues associated with the alternate current transmission project (AC Project) for which selection of the developer remains pending with NYISO. The issues contained in the settlement include those related to the AC Project that were set for hearing and issues pending on rehearing. The Settlement addressed the financial terms that are components of New York TransCo's revenue requirement for the AC Project, including the base ROE of 9.65%, and a 100-basis point ROE adder, an equity ratio in the capital structure of up to 53%, risk sharing for project cost overruns, and the cost allocation under the NYISO Open Access Transmission Tariff (OATT) for the AC Project. On November 16, 2017, the FERC approved the settlement.

Minimum Equity Requirements for Regulated Subsidiaries

Our regulated utility subsidiaries of Maine and New York (NYSEG, RG&E, CMP and MNG) are each subject to a minimum equity ratio requirement that is tied to the capital structure assumed in establishing revenue requirements. Pursuant to these requirements, each of NYSEG, RG&E, CMP and MNG must maintain a minimum equity ratio equal to the ratio in its currently effective rate plan or decision measured using a trailing 13-month average. On a monthly basis, each utility must maintain a minimum equity ratio of no less than 300 basis points below the equity ratio used to set rates. The minimum equity ratio requirement has the effect of limiting the amount of dividends that may be paid and may, under certain circumstances, require that the parent contribute equity capital. These regulated utility subsidiaries are prohibited by regulation from lending to unregulated affiliates. These regulated utility subsidiaries have also agreed to minimum equity ratio requirements in certain borrowing agreements. These requirements are lower than the regulatory requirements.

Pursuant to agreements with the relevant utility commission, UI, SCG, CNG and BGC are restricted from paying dividends if paying such dividend would result in a common equity ratio lower than 300 basis points below the equity percentage used to set rates in the most recent distribution rate proceeding as measured using a trailing 13-month average calculated as of the most recent quarter end. In addition, UI, SCG, CNG and BGC are prohibited from paying dividends to their parent if the utility's credit rating, as rated by any of the three major credit rating agencies, falls below investment grade, or if the utility's credit rating, as determined by two of the three major credit rating agencies, falls to the lowest investment grade and there is a negative watch or review downgrade notice.

We had restricted net assets of approximately $4,626 million associated with the minimum equity requirements as of December 31, 2018.

Movement of capital from our wholly owned unregulated subsidiaries is unrestricted.

New Renewable Source Generation

Under Connecticut Public Act (PA) 11-80, Connecticut electric utilities are required to enter into long-term contracts to purchase Connecticut Class I RECs from renewable generators located on customer premises. Under this program, UI is required to enter into contracts totaling approximately $200 million in commitments over an approximate 21-year period. The obligations will phase in over a six-year solicitation period, and are expected to peak at an annual commitment level of about $13.6 million per year after all selected projects are online. Upon purchase, UI accounts for the RECs as inventory. UI expects to partially mitigate the cost of these contracts through the resale of the RECs. PA 11-80 provides that the remaining costs (and any benefits) of these contracts, including any gain or loss resulting from the resale of the RECs, are fully recoverable from (or credited to) customers through electric rates. PA 17-144 and PA18-50 added seventh and eighth years, and up to $48 million in additional commitments by UI, to the program.

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Pursuant to Connecticut statute, in January 2017, UI entered into a master agreement with the Connecticut Green Bank to procure Connecticut Class I RECs produced by residential solar installations in 15 year tranches, with a final tranche to commence no later than 2022. UI's contractual obligation is to procure 20% of RECs produced by about 255 MW of residential solar installations. Connecticut statutes provides that the net costs (and any benefits) of these contracts, including any gain or loss resulting from the resale of the RECs, are fully recoverable from (or credited to) customers through electric rates.

On October 23, 2013, PURA approved UI's renewable connections program filed in accordance with PA 11-80, through which UI has developed 10 MW of renewable generation. The costs for this program will be recovered on a cost of service basis. PURA established a base ROE to be calculated as the greater of: (A) the current UI authorized distribution ROE (currently 9.10%) plus 25 basis points and (B) the current authorized distribution ROE for Connecticut Light and Power Company, or CL&P (currently 9.25%), less target equivalent market revenues (reflected as 25 basis points). In addition, UI will retain a percentage of the market revenues from the program, which percentage is expected to equate to approximately 25 basis points on a levelized basis over the life of the program. The cost of this program, a 2.8 MW fuel cell facility in New Haven, solar photovoltaic and fuel cell facilities totaling 5 MW in Bridgeport, and a 2.2 MW fuel cell facility in Woodbridge, all of which are now operational, was approximately $41.5 million.

On May 25, 2017, UI entered into six 20-year power purchase agreements (PPAs) totaling approximately 32 MW with developers of wind and solar generation. These PPAs originated from a three-state Clean Energy RFP, and were entered into pursuant PA 13-303 which provides that the net costs of the PPAs are recoverable through electric rates. The PPAs were approved by PURA on September 13, 2017.

On June 20, 2017, UI entered into twenty-two 20-year PPAs totaling approximately 72 MW with developers of wind and solar generation. These PPAs originated from and RFP issued by the Connecticut Department of Energy and Environmental Protection's (DEEP) PA 15-107 1(b), which provides that the net costs of the PPAs are recoverable through electric rates. The PPAs were approved by PURA on September 7, 2017. One contract was terminated on October 24, 2017, resulting in UI having twenty-one remaining contracts from this solicitation totaling approximately 70 MW.

In October of 2018, UI entered into five PPAs totaling approximately 50 MW from developers of offshore wind and fuel cell generation. These PPAs originated from RFP issued by DEEP, under PA 17-144 which provides that the net costs of the PPAs are recoverable through electric rates. The PPAs were filed for PURA approval on October 25, 2018. On December 19, 2018, PURA issued its final decision approving the five PPAs, and approved UI's use of the non by-passable federally mandated congestion charges for all customers to recover the net costs of the PPAs.

On December 28, 2018, DEEP issued a directive to UI to negotiate and enter into PPAs with twelve projects, totaling approximately 12 million MWh, which were selected as a result of the Zero Carbon RFP issued by DEEP pursuant to PA 17-3, which provides that the net costs of the PPAs are recoverable through electric rates. One of the selected projects is the Millstone nuclear facility located in Waterford, Connecticut and owned by Dominion Energy, Inc. DEEP's directive provides that UI should file these PPAs for PURA by March 31, 2019. UI has not yet entered into any of these PPAs

Equity Investment in Peaking Generation

UI is party to a 50-50 joint venture with Clearway Energy, Inc. in GenConn, which operates two peaking generation plants in Connecticut. The two peaking generation plants, GenConn Devon and GenConn Middletown, are both participating in the ISO-NE markets. PURA has approved revenue requirements for the period from January 1, 2019 through December 31, 2019 of $23 million and $28.8 million for GenConn Devon and GenConn Middletown, respectively.

Note 6. Regulatory Assets and Liabilities

Pursuant to the requirements concerning accounting for regulated operations, our utilities capitalize, as regulatory assets, incurred and accrued costs that are probable of recovery in future electric and natural gas rates. We base our assessment of whether recovery is probable on the existence of regulatory orders that allow for recovery of certain costs over a specific period, or allow for reconciliation or deferral of certain costs. When costs are not treated in a specific order, we use regulatory precedent to determine if recovery is probable. Our operating utilities also record, as regulatory liabilities, obligations to refund previously collected revenue or to spend revenue collected from customers on future costs. The primary items that are not included in the rate base or accruing carrying costs are the regulatory assets for qualified pension and other postretirement benefits, which reflect unrecognized actuarial gains and losses; debt premium; environmental remediation costs, which are primarily the offset of accrued liabilities for future spending; unfunded future income taxes, which are the offset to the unfunded future deferred income tax liability recorded; asset retirement obligations; hedge losses; and contracts for differences. The total net amount of these items is approximately $1,813 million.

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The regulatory assets and regulatory liabilities shown in the tables below result from various regulatory orders that allow for the deferral and/or reconciliation of specific costs. Regulatory assets and regulatory liabilities are classified as current when recovery or refund in the coming year is allowed or required through a specific order or when the rates related to a specific regulatory asset or regulatory liability are subject to automatic annual adjustment.

On June 15, 2016, the NYPSC approved the Joint Proposal in connection with a three-year rate plan for electric and gas service at NYSEG and RG&E effective May 1, 2016. Following the approval of the Joint Proposal most of these items related to NYSEG are amortized over a five-year period, except the portion of storm costs to be recovered over ten years, and plant related tax items which are amortized over the life of associated plant. Annual amortization expense for NYSEG is approximately $17 million per rate year. RG&E items that are being amortized are plant related tax items, which are amortized over the life of associated plant, and unfunded deferred taxes being amortized over a period of fifty years. A majority of the other items related to RG&E, which net to a regulatory liability, remain deferred and will not be amortized until future proceedings. Following the approval of the Joint Proposal by the NYPSC, unfunded future income taxes were adjusted for the amount of $126 million to reflect the change from a flow through to normalization method, which has been recorded as an increase to income tax expense and an offsetting increase to revenue, during the year ended December 31, 2016. These amounts will be collected over a period of fifty years.

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Current and non-current regulatory assets as of December 31, 2018 and 2017 consisted of:

As of December 31,	2018	2017
(Millions)		
Current		
Pension and other post-retirement benefits cost deferrals	$ 24	$ 24
Pension and other post-retirement benefits	12	7
Storm costs	75	46
Rate adjustment mechanism	18	—
Reliability support services	13	27
Revenue decoupling mechanism	7	21
Transmission revenue reconciliation mechanism	11	8
Electric supply reconciliation	2	—
Hedges losses	—	3
Contracts for differences	9	9
Hardship programs	17	14
Deferred property tax	—	10
Plant decommissioning	6	6
Deferred purchased gas	37	31
Deferred transmission expense	11	37
Environmental remediation costs	12	13
Other	45	51
Total Current Regulatory Assets	**299**	**307**
Non-current		
Pension and other post-retirement benefits cost deferrals	117	110
Pension and other post-retirement benefits	1,126	1,162
Storm costs	271	254
Deferred meter replacement costs	27	29
Unamortized losses on reacquired debt	20	17
Environmental remediation costs	266	283
Unfunded future income taxes	368	376
Asset retirement obligations	18	18
Deferred property tax	2	14
Federal tax depreciation normalization adjustment	152	155
Merger capital expense target customer credit	1	2
Debt premium	117	131
Reliability support services	—	10
Plant decommissioning	5	9
Contracts for differences	88	84
Hardship programs	9	13
Deferred income taxes regulatory	6	—
Other	53	71
Total Non-current Regulatory Assets	**$ 2,646**	**$ 2,738**

"Pension and other post-retirement benefits" represent the actuarial losses on the pension and other post-retirement plans that will be reflected in customer rates when they are amortized and recognized in future pension expenses. "Pension and other post-retirement benefits cost deferrals" include the difference between actual expense for pension and other post-retirement benefits and the amount provided for in rates for certain of our regulated utilities. The recovery of these amounts will be determined in future proceedings.

"Storm costs" for CMP, NYSEG and RG&E are allowed in rates based on an estimate of the routine costs of service restoration. The companies are also allowed to defer unusually high levels of service restoration costs resulting from major storms when they meet certain criteria for severity and duration. Storm costs in the amount of $123 million at NYSEG are being recovered over a

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ten-year period and the remaining portion is being amortized over five years following the approval of the Joint Proposal by the NYPSC. UI is allowed to defer costs associated with any storm totaling $1 million or greater for future recovery. UI's storm regulatory asset balance was $0 as of December 31, 2018.

"Deferred meter replacement costs" represent the deferral of the book value of retired meters which were replaced by AMI meters. This amount is being amortized over the initial depreciation period of related retired meters.

"Unamortized losses on reacquired debt" represent deferred losses on debt reacquisitions that will be recovered over the remaining original amortization period of the reacquired debt.

"Environmental remediation costs" includes spending that has occurred and is eligible for future recovery in customer rates. Environmental costs are currently recovered through a reserve mechanism whereby projected spending is included in rates with any variance recorded as a regulatory asset or a regulatory liability. The amortization period will be established in future proceedings and will depend upon the timing of spending for the remediation costs. It also includes the anticipated future rate recovery of costs that are recorded as environmental liabilities since these will be recovered when incurred. Because no funds have yet been expended for the regulatory asset related to future spending, it does not accrue carrying costs and is not included within rate base.

"Unfunded future income taxes" represent unrecovered federal and state income taxes primarily resulting from regulatory flow through accounting treatment and are the offset to the unfunded future deferred income tax liability recorded. The income tax benefits or charges for certain plant related timing differences, such as removal costs, are immediately flowed through to, or collected from, customers. This amount is being amortized as the amounts related to temporary differences that give rise to the deferrals are recovered in rates. Following the approval of the Joint Proposal by the NYPSC, these amounts will be collected over a period of fifty years and the NYPSC Staff has initiated an audit, as required, of the unfunded future income taxes and other tax assets to verify the balances.

"Asset retirement obligations" represents the differences in timing of the recognition of costs associated with our AROs and the collection of such amounts through rates. This amount is being amortized at the related depreciation and accretion amounts of the underlying liability.

"Deferred property taxes" represents the customer portion of the difference between actual expense for property taxes and the amount provided for in rates. The amount for NYSEG and RG&E is being amortized over a five year period following the approval of the Joint Proposal by the NYPSC.

"Federal tax depreciation normalization adjustment" represents the revenue requirement impact of the difference in the deferred income tax expense required to be recorded under the IRS normalization rules and the amount of deferred income tax expense that was included in cost of service for rates years covering 2011 forward. The recovery period in NY is from 27 to 39 years and for CMP this will be determined in future MPUC rate proceedings.

"Debt premium" represents the regulatory asset recorded to offset the fair value adjustment to the regulatory component of the non-current debt of UIL at the acquisition date. This amount is being amortized to interest expense over the remaining term of the related outstanding debt instruments.

"Hardship Programs" represent hardship customer accounts deferred for future recovery to the extent they exceed the amount in rates.

"Deferred Purchased Gas" represents the difference between actual gas costs and gas costs collected in rates.

"Contracts for Differences" represent the deferral of unrealized gains and losses on contracts for differences derivative contracts. The balance fluctuates based upon quarterly market analysis performed on the related derivatives. The amounts, which do not earn a return, are fully offset by a corresponding derivative asset/liability.

"Deferred Transmission Expense" represents deferred transmission income or expense and fluctuates based upon actual revenues and revenue requirements.

"Rate adjustment mechanism" represents an interim rate change to return or collect certain defined reconciled revenues and costs for NYSEG and RG&E following the approval of the Joint Proposal by the NYPSC. The RAM, when triggered, is implemented in rates on July 1 of each year for return or collection over a twelve month period.

"Reliability support services" represents the difference between actual expenses for reliability support services and the amount provided for in rates.

"Other" includes post term amortization deferrals and various items subject to reconciliation including rate change levelization

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and loss on re-acquired debt.

Current and non-current regulatory liabilities as of December 31, 2018 and 2017 consisted of:

As of December 31,	2018	2017
(Millions)		
Current		
Non by-passable charges	$ 3	$ 5
Energy efficiency portfolio standard	56	37
Gas supply charge and deferred natural gas cost	4	4
Transmission revenue reconciliation mechanism	7	14
Pension and other post-retirement benefits	—	1
Pension and other post-retirement benefits cost deferrals	14	14
Carrying costs on deferred income tax bonus depreciation	23	21
Carrying costs on deferred income tax - Mixed Services 263(a)	5	5
Yankee DOE refund	—	4
2017 Tax Act	15	—
Revenue decoupling mechanism	8	4
Stranded costs	—	17
Rate adjustment mechanism	6	—
Hedges gains	5	—
Other	59	52
Total Current Regulatory Liabilities	**205**	**178**
Non-current		
Accrued removal obligations	1,151	1,132
2017 Tax Act	1,494	1,515
Asset sale gain account	10	10
Carrying costs on deferred income tax bonus depreciation	49	72
Economic development	25	32
Merger capital expense target customer credit account	6	6
Pension and other post-retirement benefits	83	74
Positive benefit adjustment	36	39
New York state tax rate change	4	6
Theoretical reserve flow thru impact	14	19
Deferred property tax	25	19
Net plant reconciliation	19	10
Variable rate debt	46	33
Carrying costs on deferred income tax - Mixed Services 263(a)	15	20
Rate refund – FERC ROE proceeding	29	27
Transmission congestion contracts	21	19
Merger-related rate credits	18	20
Accumulated deferred investment tax credits	13	13
Asset retirement obligation	13	13
Earning sharing provisions	17	22
Middletown/Norwalk local transmission network service collections	18	19
Excess generation service charge	7	2
Low income programs	33	42
Non-firm margin sharing credits	8	8
Deferred income taxes regulatory	—	13
Other	69	67
Total Non-current Regulatory Liabilities	**$ 3,223**	**$ 3,252**

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“Non by-passable charges” represent the non by-passable charge paid by all customers. An asset or liability is recognized resulting from differences between actual revenues and the underlying cost being recovered. This liability will be refunded to customers within the next year.

“Energy efficiency portfolio standard” represents the difference between revenue billed to customers through an energy efficiency charge and the costs of our energy efficiency programs as approved by the state authorities. This may be refunded to customers within the next year.

“Accrued removal obligations” represent the differences between asset removal costs recorded and amounts collected in rates for those costs. The amortization period is dependent upon the asset removal costs of underlying assets and the life of the utility plant.

“Asset sale gain account” represents the gain on NYSEG’s 2001 sale of its interest in Nine Mile Point 2 nuclear generating station located in Oswego, New York. The net proceeds from the Nine Mile Point 2 nuclear generating station were placed in this account and will be used to benefit customers. The amortization period is five years following the approval of the Joint Proposal by the NYPSC.

“Carrying costs on deferred income tax bonus depreciation” represent the carrying costs benefit of increased accumulated deferred income taxes created by the change in tax law allowing bonus depreciation. The amortization period is five years following the approval of the Joint Proposal by the NYPSC.

“Economic development” represents the economic development program which enables NYSEG and RG&E to foster economic development through attraction, expansion and retention of businesses within its service territory. If the level of actual expenditures for economic development allocated to NYSEG and RG&E varies in any rate year from the level provided for in rates, the difference is refunded to ratepayers. The amortization period is five years following the approval of the Joint Proposal by the NYPSC.

“Merger capital expense target customer credit” account was created as a result of NYSEG and RG&E not meeting certain capital expenditure requirements established in the order approving the purchase of AVANGRID (formerly Energy East Corporation) by Iberdrola. The amortization period is five years following the approval of the Joint Proposal by the NYPSC.

“Pension and other postretirement benefits” represent the actuarial gains on other postretirement plans that will be reflected in customer rates when they are amortized and recognized in future expenses. Because no funds have yet been received for this, a regulatory liability is not reflected within rate base. They also represent the difference between actual expense for pension and other postretirement benefits and the amount provided for in rates. Recovery of these amounts will be determined in future proceedings.

“Positive benefit adjustment” resulted from Iberdrola’s 2008 acquisition of AVANGRID (formerly Energy East Corporation). This is being used to moderate increases in rates. The amortization period is five years following the approval of the Joint Proposal by the NYPSC and included in the Ginna RSSA settlement.

“New York state tax rate change” represents excess funded accumulated deferred income tax balance caused by the 2014 New York state tax rate change from 7.1% to 6.5%. The amortization period is five years following the approval of the Joint Proposal by the NYPSC.

“Post term amortization” represents the revenue requirement associated with certain expired joint proposal amortization items. The amortization period is five years following the approval of the Joint Proposal by the NYPSC.

“Theoretical reserve flow thru impact” represents the differences from the rate allowance for applicable federal and state flow through impacts related to the excess depreciation reserve amortization. It also represents the carrying cost on the differences. The amortization period is five years following the approval of the Joint Proposal by the NYPSC.

“2017 Tax Act” represents the impact from remeasurement of deferred income tax balances as a result of the Tax Act enacted by the U.S. federal government on December 22, 2017. Reductions in accumulated deferred income tax balances due to the reduction in the corporate income tax rates from 35% to 21% under the provisions of the Tax Act will result in amounts previously and currently collected from utility customers for these deferred taxes to be refundable to such customers, generally through reductions in future rates. The NYPSC, MPUC, PURA and DPU have instituted separate proceedings in New York, Maine, Connecticut and Massachusetts, respectively, to review and address the implications associated with the Tax Act on the utilities providing service in such states.

“Merger-related rate credits” resulted from the acquisition of UIL. This is being used to moderate increases in rates. In the years ended December 31, 2018 and 2017, respectively, $3 million and $2 million of rate credits were applied against customer bills.

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"Excess generation service charge" represents deferred generation-related and non by-passable federally mandated congestion costs or revenues for future recovery from or return to customers. The amount fluctuates based upon timing differences between revenues collected from rates and actual costs incurred.

"Low Income Programs" represent various hardship and payment plan programs approved for recovery.

"Other" includes cost of removal being amortized through rates and various items subject to reconciliation including variable rate debt, Medicare subsidy benefits and stray voltage collections.

Note 7. Goodwill and Intangible assets

Goodwill by reportable segment as of December 31, 2018 and 2017 consisted of:

As of December 31,	2018	2017
(Millions)		
Networks	$ 2,747	$ 2,747
Renewables	380	380
Total	**$ 3,127**	**$ 3,127**

As of December 31, 2018 and 2017, there were no changes in gross amounts and accumulated losses of goodwill for the Networks and Renewables reportable segments, except for various immaterial adjustments in 2017 related to the gross amount of goodwill for the Networks reportable segment.

Goodwill Impairment Assessment

For impairment testing purposes our reporting units are the same as operating segments, except for Networks, which contained three reporting units, Maine, New York and UIL. The goodwill for the Maine reporting unit resulted from the purchase of CMP by Energy East Corporation in 2000 and amounted to $325 million. Separately, the goodwill for the New York reporting unit resulted primarily from the purchase of RG&E by Energy East in 2002 and amounted to $654 million. The goodwill for the UIL reporting unit was generated from the acquisition of UIL on December 16, 2015, and amounts to $1,768 million.

Our annual impairment testing takes place as of October 1. Our step zero qualitative assessment involves evaluating key events and circumstances that could affect the fair value of our reporting units, as well as other factors. Events and circumstances evaluated include macroeconomic conditions, industry, regulatory and market considerations, cost factors and their effect on earnings and cash flows, overall financial performance as compared with projected results and actual results of relevant prior periods, other relevant entity specific events and events affecting a reporting unit.

Our step one impairment testing includes various assumptions, primarily the discount rate, which is based on an estimate of our marginal, weighted average cost of capital and forecasted cash flows. We test the reasonableness of the conclusions of our step one impairment testing using a range of discount rates and a range of assumptions for long term cash flows.

We had no impairment of goodwill in 2018 and 2017 as a result of our impairment testing.

Intangible assets

Intangible assets include those assets acquired in business acquisitions and intangible assets acquired and developed from external third parties and from affiliated companies. Following is a summary of intangible assets:

As of December 31, 2018	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
(Millions)			
Wind development	$ 588	$ (275)	$ 313
Other	25	(15)	10
Total Intangible Assets	**$ 613**	**$ (290)**	**$ 323**

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As of December 31, 2017	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
(Millions)			
Wind development	$ 583	$ (264)	$ 319
Other	21	(12)	9
Total Intangible Assets	**$ 604**	**$ (276)**	**$ 328**

Wind development costs, with the exception of future 'pipeline' development costs, are amortized on a straight-line basis in accordance with the life of the related assets. Amortization expense for the years ended December 31, 2018, 2017 and 2016 amounted to $15 million, $22 million and $25 million, respectively. We believe our future cash flows will support the recoverability of our intangible assets.

We expect amortization expense for the five years subsequent to December 31, 2018, to be as follows:

Year ending December 31,	
(Millions)	
2019	$ 14
2020	$ 14
2021	$ 13
2022	$ 13
2023	$ 12

As of December 31, 2017, we reclassified $193 million from intangible assets related to gas storage rights to assets held for sale in the consolidated balance sheet (see Note 26 - Assets Held for Sale).

Note 8. Property, Plant and Equipment

Property, plant and equipment as of December 31, 2018, consisted of:

As of December 31, 2018	Regulated	Nonregulated	Total
(Millions)			
Electric generation, distribution, transmission and other	$ 14,242	$ 11,669	$ 25,911
Natural gas transportation, distribution and other	4,058	13	4,071
Other common operating property	—	226	226
Total Property, Plant and Equipment in Service (a)	**18,300**	**11,908**	**30,208**
Total accumulated depreciation (b)	(4,615)	(3,744)	(8,359)
Total Net Property, Plant and Equipment in Service	**13,685**	**8,164**	**21,849**
Construction work in progress	1,010	600	1,610
Total Property, Plant and Equipment	**$ 14,695**	**$ 8,764**	**$ 23,459**

(a) Includes capitalized leases of $226 million primarily related to electric generation, distribution, transmission and other.
(b) Includes accumulated amortization of capitalized leases of $76 million.

Property, plant and equipment as of December 31, 2017, consisted of:

As of December 31, 2017	Regulated	Nonregulated	Total
(Millions)			
Electric generation, distribution, transmission and other	$ 13,229	$ 11,517	$ 24,746
Natural gas transportation, distribution and other	3,813	13	3,826
Other common operating property	—	169	169
Total Property, Plant and Equipment in Service (a)	**17,042**	**11,699**	**28,741**
Total accumulated depreciation (b)	(4,238)	(3,259)	(7,497)
Total Net Property, Plant and Equipment in Service	**12,804**	**8,440**	**21,244**
Construction work in progress	1,011	414	1,425
Total Property, Plant and Equipment	**$ 13,815**	**$ 8,854**	**$ 22,669**

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(a) Includes capitalized leases of $204 million primarily related to electric generation, distribution, transmission and other.
(b) Includes accumulated amortization of capitalized leases of $68 million.

As of December 31, 2017, we reclassified $489 million from non-regulated property, plant and equipment to assets held for sale in the consolidated balance sheet (see Note 26 - Assets Held for Sale). In addition, certain amounts in the regulated and non-regulated property, plant and equipment of the table above have been reclassified to conform to the 2018 presentation.

Capitalized interest costs were $26 million, $28 million and $20 million for the years ended December 31, 2018, 2017 and 2016, respectively. Accrued liabilities for property, plant and equipment additions were $154 million, $209 million and $338 million as of December 31, 2018, 2017 and 2016, respectively.

We impaired or wrote off amounts of $0, $5 million and $0 for the years ended December 31, 2018, 2017 and 2016, respectively, resulting from reassessment of the economic feasibility of our various Renewables development projects in construction.

Depreciation expense for the years ended December 31, 2018, 2017 and 2016, amounted to $840 million, $802 million and $779 million, respectively.

Note 9. Asset retirement obligations

AROs are intended to meet the costs for dismantling and restoration work that we have committed to carry out at our operational facilities.

The reconciliation of ARO carrying amounts for the years ended December 31, 2018 and 2017 consisted of:

(Millions)		
As of December 31, 2016	**$**	**161**
Liabilities settled during the year		(1)
Liabilities incurred during the year		13
Accretion expense		10
Revisions in estimated cash flows		13
As of December 31, 2017	**$**	**196**
Liabilities settled during the year		(1)
Liabilities incurred during the year		5
Accretion expense		12
Revisions in estimated cash flows		5
As of December 31, 2018	**$**	**217**

Several of the wind generation facilities have restricted cash for purposes of settling AROs. Restricted cash related to AROs was $2 million as of both December 31, 2018 and 2017. These amounts have been included in “Other Assets” on the consolidated balance sheets. Accretion expenses are included in “Operations and maintenance” in the consolidated statements of income.

We have AROs for which a liability has not been recognized because the fair value cannot be reasonably estimated due to indeterminate settlement dates, including for the removal of hydroelectric dams due to structural inadequacy or for decommissioning; the removal of property upon termination of an easement, right-of-way or franchise; and costs for abandonment of certain types of gas mains.

In 2018, the addition of new wind and solar facilities, revision of the estimated useful lives of wind and solar facilities, and the subsequent measure of the amount of the original ARO estimate of undiscounted cash flows resulted in higher discounted AROs. We estimate that the revisions will result in approximately $1 million annual increase in expense going forward.

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Note 10. Debt

Long-term debt as of December 31, 2018 and 2017 consisted of:

As of December 31,		2018		2017	
(Millions)	Maturity Dates	Balances	Interest Rates	Balances	Interest Rates
First mortgage bonds - fixed (a)	2019-2045	$ 2,055	3.07%-10.06%	$ 2,054	3.07%-10.60%
Unsecured pollution control notes - fixed	2020-2029	526	2.00%-3.50%	200	2.00%-2.375%
Unsecured pollution control notes – variable	2032	—		62	1.94%
Other various non-current debt - fixed	2019-2045	3,127	2.80%-10.48%	3,027	2.89%-10.48%
Obligations under capital leases	2019-2036	89	4%-4.44%	74	4%-4.44%
Unamortized debt issuance costs and discount		(35)		(38)	
Total Debt		**5,762**		**5,379**	
Less: debt due within one year, included in current liabilities		394		183	
Total Non-current Debt		**$ 5,368**		**$ 5,196**	

(a) The first mortgage bonds have pledged collateral of substantially all the respective utility's in service properties of approximately $6,751 million.

On June 29, 2018, NYSEG and RG&E remarketed $326 million in aggregate principal amount of Pollution Control Revenue Bonds, issued through the NYSERDA, with mandatory tender and maturity dates ranging from 2023 to 2029 and interest rates ranging from 2.625% to 3.50%.

On October 2, 2018, UI remarketed $64.5 million in aggregate principal amount of Pollution Control Refunding Revenue Bonds, issued through the Business Finance Authority of the State of New Hampshire, with mandatory tender date in 2023 and an interest rate of 2.80%.

In the third and fourth quarters of 2018, UI, CNG, SCG, BGC and CMP offered a total $645 million of debt securities in the private placement market. On October 4, 2018, each of UI, CNG and BGC executed separate note purchase agreements to issue senior unsecured notes, and SCG executed a bond purchase agreement to issue first mortgage bonds. On October 4, 2018, UI issued $100 million of senior unsecured notes maturing in 2028 at an interest rate of 4.07%, and on January 15, 2019, UI, CNG, SCG and BGC issued $195 million in aggregate amount of notes/bonds with maturity dates ranging from 2029 to 2049 and interest rates ranging from 4.07% to 4.52%.

On December 12, 2018, UI issued an additional $50 million of senior unsecured notes maturing in 2025 at a fixed interest rate of 3.96% under a separate note purchase agreement. In addition, on December 27, 2018, CMP executed a bond purchase agreement to issue $300 million of first mortgage bonds and issued $60 million of such bonds maturing in 2028 at a fixed interest rate of 3.95%. The remaining $240 million in aggregate amount of CMP first mortgage bonds are expected to be issued in June 2019. Maturities range from seven to 15 years and interest rates range from 3.87% to 4.20%.

Long-term debt, including sinking fund obligations and capital lease payments, due over the next five years consists of:

(Millions)					
2019	2020	2021	2022	2023	Total
$ 394	$ 720	$ 308	$ 365	$ 489	$ 2,276

We make certain standard covenants to lenders in our third-party debt agreements, including, in certain agreements, covenants regarding the ratio of indebtedness to total capitalization. A breach of any covenant in the existing credit facilities or the agreements governing our other indebtedness would result in an event of default. Certain events of default may trigger automatic acceleration. Other events of default may be remedied by the borrower within a specified period or waived by the lenders and, if not remedied or waived, give the lenders the right to accelerate. Neither we nor any of our subsidiaries were in breach of covenants or of any obligation that could trigger the early redemption of our debt as of December 31, 2018 and 2017.

Fair Value of Debt

The estimated fair value of debt amounted to $5,952 million and $5,799 million as of December 31, 2018 and 2017, respectively. The estimated fair value was determined, in most cases, by discounting the future cash flows at market interest rates. The interest

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rate curve used to make these calculations takes into account the risks associated with the electricity industry and the credit ratings of the borrowers in each case. The fair value hierarchy pertaining to the fair value of debt is considered as Level 2, except for unsecured pollution control notes-variable with a fair value of $61 million as of December 31, 2017, which were repaid in 2018 and were considered Level 3. The fair value of these unsecured pollution control notes-variable was determined using unobservable interest rates as the market for these notes is inactive.

Short-term Debt

Outstanding Notes Payable

AVANGRID had $587 million and $786 million of notes payable as of December 31, 2018 and 2017, respectively. As of December 31, 2018, the balance consisted of $589 million of commercial paper, presented net of discounts on the balance sheet. As of December 31, 2017, the balance consisted of $507 million of commercial paper, $250 million outstanding on the credit facility and $29 million in notes payable to an affiliate. AVANGRID's commercial paper program was established on May 13, 2016, with a limit of $1 billion and is backstopped by the AVANGRID credit facility described below. On July 30, 2018, AVANGRID increased this limit from $1 billion to $2 billion.

AVANGRID Credit Facility

On June 29, 2018, AVANGRID and its subsidiaries, NYSEG, RG&E, CMP, UI, CNG, SCG and BGC entered into a revolving credit facility with a syndicate of banks, or the AVANGRID Credit Facility, that provides for maximum borrowings of up to $2.5 billion in the aggregate. The AVANGRID Credit Facility replaces and supersedes the prior revolving credit facility entered into by AVANGRID and its subsidiaries, NYSEG, RG&E, CMP, UI, CNG, SCG and BGC, with a syndicate of banks on April 5, 2016 with a maturity date of April 5, 2021, which provided for maximum borrowings of up to $1.5 billion in the aggregate on substantially similar terms as the AVANGRID Credit Facility.

Under the terms of the AVANGRID Credit Facility, each joint borrower has a maximum borrowing entitlement, or sublimit, which can be periodically adjusted to address specific short-term capital funding needs, subject to the maximum limit contained in the agreement. AVANGRID's maximum sublimit is $2 billion, NYSEG, RG&E, CMP and UI have maximum sublimits of $400 million, CNG and SCG have maximum sublimits of $150 million and BGC has a maximum sublimit of $40 million. Under the AVANGRID Credit Facility, each of the borrowers will pay an annual facility fee that is dependent on their credit rating. The initial facility fees will range from 12.5 to 17.5 basis points. The maturity date for the AVANGRID Credit Facility is June 29, 2023.

As of December 31, 2018 and 2017, there was $0 and $250 million drawn under the AVANGRID Credit Facility, and the capacity to borrow under the facility is reduced by the amount of outstanding commercial paper, leaving available credit of, respectively, $1,911 million and $743 million.

Iberdrola Group Credit Facility

On June 18, 2018, AVANGRID entered into a credit facility with Iberdrola Financiacion, S.A.U., a company of the Iberdrola Group. The facility has a limit of $500 million and matures on June 18, 2023. AVANGRID pays a facility fee of 10.5 basis points annually on the facility. As of December 31, 2018, there was no outstanding amount under this credit facility.

Note 11. Fair Value of Financial Instruments and Fair Value Measurements

We determine the fair value of our derivative assets and liabilities and available for sale non-current investments associated with Networks' activities utilizing market approach valuation techniques:

- We measure the fair value of our noncurrent investments using quoted market prices in active markets for identical assets and include the measurements in Level 1. The available for sale investments, which are Rabbi Trusts for deferred compensation plans, primarily consist of money market funds and are included in Level 1 fair value measurement.

- NYSEG and RG&E enter into electric energy derivative contracts to hedge the forecasted purchases required to serve their electric load obligations. They hedge their electric load obligations using derivative contracts that are settled based upon Locational Based Marginal Pricing published by the NYISO. NYSEG and RG&E hedge approximately 70% of their electric load obligations using contracts for a NYISO location where an active market exists. The forward market prices used to value the companies' open electric energy derivative contracts are based on quoted prices in active markets for identical assets or liabilities with no adjustment required and therefore we include the fair value in Level 1.

- NYSEG and RG&E enter into natural gas derivative contracts to hedge their forecasted purchases required to serve their natural gas load obligations. The forward market prices used to value open natural gas derivative contracts are exchange-based prices for the identical derivative contracts traded actively on the New York Mercantile Exchange (NYMEX). Because we use prices quoted in an active market we include the fair value measurements in Level 1.

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- NYSEG, RG&E and CMP enter into fuel derivative contracts to hedge their unleaded and diesel fuel requirements for their fleet vehicles. Exchange-based forward market prices are used but because an unobservable basis adjustment is added to the forward prices we include the fair value measurement for these contracts in Level 3.

- UI enters into CfDs, which are marked-to-market based on a probability-based expected cash flow analysis that is discounted at risk-free interest rates and an adjustment for non-performance risk using credit default swap rates. We include the fair value measurement for these contracts in Level 3 (See Note 12 for further discussion on CfDs).

We determine the fair value of our derivative assets and liabilities associated with Renewables and Gas activities utilizing market approach valuation techniques. Exchange-traded transactions, such as NYMEX futures contracts, that are based on quoted market prices in active markets for identical product with no adjustment are included in the Level 1 fair value. Contracts with delivery periods of two years or less which are traded in active markets and are valued with or derived from observable market data for identical or similar products such as over-the-counter NYMEX, foreign exchange swaps and fixed price physical and basis and index trades are included in Level 2 fair value. Contracts with delivery periods exceeding two years or that have unobservable inputs or inputs that cannot be corroborated with market data for identical or similar products are included in Level 3 fair value. The unobservable inputs include historical volatilities and correlations for tolling arrangements and extrapolated values for certain power swaps. The valuation for this category is based on our judgments about the assumptions market participants would use in pricing the asset or liability since limited market data exists.

We determine the fair value of our interest rate swap derivative instruments based on a model whose inputs are observable, such as the London Interbank Offered Rate (LIBOR) forward interest rate curves. We include the fair value measurement for these contracts in Level 2 (See Note 12 for further discussion of interest rate swaps).

The carrying amounts for cash and cash equivalents, restricted cash, accounts receivable, accounts payable, notes payable and interest accrued approximate their estimated fair values and are considered as Level 1.

Restricted cash was $7 million and $5 million as of December 31, 2018 and 2017, respectively, which is included in “Other Assets” on the consolidated balance sheets.

The financial instruments measured at fair value as of December 31, 2018 and 2017 consisted of:

As of December 31, 2018	Level 1	Level 2	Level 3	Netting	Total
(Millions)					
Securities portfolio (available for sale)	**$ 37**	**$ —**	**$ —**	**$ —**	**$ 37**
Derivative assets					
Derivative financial instruments - power	17	23	91	(59)	72
Derivative financial instruments - gas	1	20	36	(55)	2
Contracts for differences	—	—	5	—	5
Total	**18**	**43**	**132**	**(114)**	**79**
Derivative liabilities					
Derivative financial instruments - power	(12)	(41)	(36)	77	(12)
Derivative financial instruments - gas	(1)	(23)	(7)	22	(9)
Contracts for differences	—	—	(102)	—	(102)
Derivative financial instruments – Other	—	(16)	(2)	—	(18)
Total	**$ (13)**	**$ (80)**	**$ (147)**	**$ 99**	**$ (141)**

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As of December 31, 2017	Level 1	Level 2	Level 3	Netting	Total
(Millions)					
Securities portfolio (available for sale)	**$ 41**	**$ —**	**$ —**	**$ —**	**$ 41**
Derivative assets					
Derivative financial instruments - power	14	30	74	(49)	69
Derivative financial instruments - gas	89	18	64	(146)	25
Contracts for differences	—	—	12	—	12
Total	**103**	**48**	**150**	**(195)**	**106**
Derivative liabilities					
Derivative financial instruments - power	(14)	(17)	(15)	37	(9)
Derivative financial instruments - gas	(80)	(20)	(25)	110	(15)
Contracts for differences	—	—	(104)	—	(104)
Total	**$ (94)**	**$ (37)**	**$ (144)**	**$ 147**	**$ (128)**

Included in the derivative financial instruments – gas are derivative assets and liabilities of Gas segment classified as held for sale as of December 31, 2017. See Note 26 – Assets Held For Sale for further discussion.

The reconciliations of changes in the fair value of financial instruments based on Level 3 inputs for the years ended December 31, 2018, 2017 and 2016 consisted of:

(Millions)	2018	2017	2016
Fair value as of January 1,	**$ 6**	**$ 31**	**$ (19)**
Gains for the year recognized in operating revenues	18	18	67
Losses for the year recognized in operating revenues	(9)	(1)	—
Total gains or losses for the period recognized in operating revenues	9	17	67
Gains recognized in OCI	—	2	1
Losses recognized in OCI	(5)	(1)	—
Total gains or losses recognized in OCI	(5)	1	1
Net change recognized in regulatory assets and liabilities	(5)	(17)	(8)
Purchases	(6)	(5)	3
Settlements	(10)	(17)	(9)
Transfers out of Level 3 (a)	(4)	(4)	(4)
Fair value as of December 31,	**$ (15)**	**$ 6**	**$ 31**
Gains for the year included in operating revenues attributable to the change in unrealized gains relating to financial instruments still held at the reporting date	$ 9	$ 17	$ 67

(a) Transfers out of Level 3 were the result of increased observability of market data.

For assets and liabilities that are recognized in the consolidated financial statements at fair value on a recurring basis, we determine whether transfers have occurred between levels in the hierarchy by re-assessing categorization based on the lowest level of input that is significant to the fair value measurement as a whole at the end of each reporting period. There have been no transfers between Level 1 and Level 2 during the years reported.

Level 3 Fair Value Measurement

The tables below illustrate the significant sources of unobservable inputs used in the fair value measurement of our Level 3 derivatives, and the variability in prices for those transactions classified as Level 3 derivatives.

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As of December 31, 2018

Instruments	Instrument Description	Valuation Technique	Valuation Inputs	Index	Avg.	Max.	Min.
Fixed price power and gas swaps with delivery period > two years	Transactions with delivery periods exceeding two years	Transactions are valued against forward market prices on a discounted basis	Observable and extrapolated forward gas and power prices not all of which can be corroborated by market data for identical or similar products	NYMEX ($/MMBtu)	$ 2.95	$ 4.90	$ 2.40
				Indiana hub ($/MWh)	$ 30.73	$ 61.12	$ 19.10
				Mid C ($/MWh)	$ 23.73	$ 105.00	$ (0.50)
				Minn hub ($/MWh)	$ 25.30	$ 52.17	$ 12.51

Our Level 3 valuations primarily consist of NYMEX gas and fixed price power swaps with delivery periods extending through 2024 and 2032, respectively. The gas swaps are used to hedge both gas inventory in firm storage and merchant wind positions. The power swaps are used to hedge merchant wind production in the West and Midwest.

We performed a sensitivity analysis around the Level 3 gas and power positions to changes in the valuation inputs. Given the nature of the transactions in Level 3, the only material input to the valuation is the market price of gas or power for transactions with delivery periods exceeding two years. The fixed price power swaps are economic hedges of future power generation, with decreases in power prices resulting in unrealized gains and increases in power prices resulting in unrealized losses. The gas swaps are economic hedges of merchant generation, with decreases in gas prices resulting in unrealized gains and increases in gas prices resulting in unrealized losses. As all transactions are economic hedges of the underlying position, any changes in the fair value of these transactions will be offset by changes in the anticipated purchase/sales price of the underlying commodity.

Two elements of the analytical infrastructure employed in valuing transactions are the price curves used in the calculation of market value and the models themselves. We maintain and document authorized trading points and associated forward price curves, and we develop and document models used in valuation of the various products.

Transactions are valued in part on the basis of forward price, correlation and volatility curves. We maintain and document descriptions of these curves and their derivations. Forward price curves used in valuing the transactions are applied to the full duration of the transaction.

The determination of fair value of the CfDs (see Note 12 for further details on CfDs) was based on a probability-based expected cash flow analysis that was discounted at risk-free interest rates, as applicable, and an adjustment for non-performance risk using credit default swap rates. Certain management assumptions were required, including development of pricing that extended over the term of the contracts. We believe this methodology provides the most reasonable estimates of the amount of future discounted cash flows associated with the CfDs. Additionally, on a quarterly basis, we perform analytics to ensure that the fair value of the derivatives is consistent with changes, if any, in the various fair value model inputs. Significant isolated changes in the risk of non-performance, the discount rate or the contract term pricing would result in an inverse change in the fair value of the CfDs. Additional quantitative information about Level 3 fair value measurements of the CfDs is as follows:

Unobservable Input	Range at December 31, 2018
Risk of non-performance	0.87% - 0.88%
Discount rate	2.51% - 2.63%
Forward pricing ($ per KW-month)	$4.30 - $9.55

Note 12. Derivative Instruments and Hedging

Our Networks, Renewables and Gas activities are exposed to certain risks, which are managed by using derivative instruments. All derivative instruments are recognized as either assets or liabilities at fair value on the consolidated balance sheets in accordance with the accounting requirements concerning derivative instruments and hedging activities.

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(a) Networks activities

NYSEG and RG&E have an electric commodity charge that passes through rates costs for the market price of electricity. They use electricity contracts, both physical and financial, to manage fluctuations in electricity commodity prices in order to provide price stability to customers. We include the cost or benefit of those contracts in the amount expensed for electricity purchased when the related electricity is sold. We record changes in the fair value of electric hedge contracts to derivative assets and / or liabilities with an offset to regulatory assets and / or regulatory liabilities, in accordance with the accounting requirements concerning regulated operations.

The amount recognized in regulatory liabilities and assets for electricity derivatives was a gain of $4.9 million and a loss of $0.1 million as of December 31, 2018, respectively, and a loss of $0.2 million as of December 31, 2017. The amount reclassified from regulatory assets and liabilities into income, which is included in electricity purchased, was a gain of $9.7 million, a loss of $36.9 million and a loss of $66.7 million for the years ended December 31, 2018, 2017 and 2016, respectively.

NYSEG and RG&E have purchased gas adjustment clauses that allow them to recover through rates any changes in the market price of purchased natural gas, substantially eliminating their exposure to natural gas price risk. NYSEG and RG&E use natural gas futures and forwards to manage fluctuations in natural gas commodity prices to provide price stability to customers. We include the cost or benefit of natural gas futures and forwards in the commodity cost that is passed on to customers when the related sales commitments are fulfilled. We record changes in the fair value of natural gas hedge contracts to derivative assets and or liabilities with an offset to regulatory assets and or regulatory liabilities in accordance with the accounting requirements for regulated operations.

The amount recognized in regulatory liabilities for natural gas hedges was a gain of $0.3 million and $2.5 million as of December 31, 2018 and 2017, respectively. The amount reclassified from regulatory liabilities and assets into income, which is included in natural gas purchased, was a gain of $0.8 million, a loss of $0.2 million and a loss of $1.9 million for the years ended December 31, 2018, 2017 and 2016, respectively.

Pursuant to PURA order, UI and Connecticut's other electric utility, CL&P, each executed two long-term CfDs with certain incremental capacity resources, each of which specifies a capacity quantity and a monthly settlement that reflects the difference between a forward market price and the contract price. The costs or benefits of each contract will be paid by or allocated to customers and will be subject to a cost-sharing agreement between UI and CL&P pursuant to which approximately 20% of the cost or benefit is borne by or allocated to UI customers and approximately 80% is borne by or allocated to CL&P customers.

PURA has determined that costs associated with these CfDs will be fully recoverable by UI and CL&P through electric rates, and UI has deferred recognition of costs (a regulatory asset) or obligations (a regulatory liability), including carrying costs. For those CfDs signed by CL&P, UI records its approximate 20% portion pursuant to the cost-sharing agreement noted above. As of December 31, 2018, UI has recorded a gross derivative asset of $5 million ($0 of which is related to UI's portion of the CfD signed by CL&P), a regulatory asset of $97 million, a gross derivative liability of $102 million ($96 million of which is related to UI's portion of the CfD signed by CL&P) and a regulatory liability of $0. As of December 31, 2017, UI has recorded a gross derivative asset of $12 million ($0 of which is related to UI's portion of the CfD signed by CL&P), a regulatory asset of $93 million, a gross derivative liability of $104 million ($90 million of which is related to UI's portion of the CfD signed by CL&P) and a regulatory liability of $0.

The unrealized gains and losses from fair value adjustments to these derivatives, which are recorded in regulatory assets or regulatory liabilities, for the years ended December 31, 2018, 2017 and 2016, respectively, were as follows:

	Years Ended December 31,		
	2018	2017	2016
(Millions)			
Derivative Assets	$ (6)	$ (8)	$ (7)
Derivative Liabilities	$ 1	$ (9)	$ (1)

The net notional volumes of the outstanding derivative instruments associated with Networks activities as of December 31, 2018 and 2017, respectively, consisted of:

As of December 31,	2018	2017
(Millions)		
Wholesale electricity purchase contracts (MWh)	4.9	3.9
Natural gas purchase contracts (Dth)	7.8	6.1
Fleet fuel purchase contracts (Gallons)	2.1	2.1

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The offsetting of derivatives, location in the consolidated balance sheet and amounts of derivatives associated with Networks activities as of December 31, 2018 and 2017, respectively, consisted of:

As of December 31, 2018	Current Assets	Noncurrent Assets	Current Liabilities	Noncurrent Liabilities
(Millions)				
Not designated as hedging instruments				
Derivative assets	$ 18	$ 6	$ 10	$ 3
Derivative liabilities	(10)	(3)	(21)	(93)
	8	3	(11)	(90)
Designated as hedging instruments				
Derivative assets	—	—	—	—
Derivative liabilities	—	—	(2)	—
	—	—	(2)	—
Total derivatives before offset of cash collateral	8	3	(13)	(90)
Cash collateral receivable	—	—	—	—
Total derivatives as presented in the balance sheet	$ 8	$ 3	$ (13)	$ (90)

As of December 31, 2017	Current Assets	Noncurrent Assets	Current Liabilities	Noncurrent Liabilities
(Millions)				
Not designated as hedging instruments				
Derivative assets	$ 20	$ 5	$ 13	$ —
Derivative liabilities	(13)	—	(32)	(88)
	7	5	(19)	(88)
Designated as hedging instruments				
Derivative assets	—	—	—	—
Derivative liabilities	—	—	—	—
	—	—	—	—
Total derivatives before offset of cash collateral	7	5	(19)	(88)
Cash collateral receivable	—	—	3	—
Total derivatives as presented in the balance sheet	$ 7	$ 5	$ (16)	$ (88)

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The effect of derivatives in cash flow hedging relationships on OCI and income for the years ended December 31, 2018, 2017 and 2016, respectively, consisted of:

Year Ended December 31,	Loss Recognized in OCI on Derivatives	Location of Loss Reclassified from Accumulated OCI into Income	Loss Reclassified from Accumulated OCI into Income
(Millions)	Effective Portion (a)	Effective Portion (a)	
2018			
Interest rate contracts	$ —	Interest expense	$ 8
Commodity contracts	(1)	Operating expenses	—
Total	**$ (1)**		**$ 8**
2017			
Interest rate contracts	$ —	Interest expense	$ 8
Commodity contracts	(1)	Operating expenses	1
Total	**$ (1)**		**$ 9**
2016			
Interest rate contracts	$ —	Interest expense	$ 8
Commodity contracts	—	Operating expenses	2
Total	**$ —**		**$ 10**

(a) Changes in OCI are reported in pre-tax dollars, the reclassified amounts of commodity contracts are included within "Purchase power, natural gas and fuel used" line item within operating expenses in the consolidated statements of income.

The net loss in AOCI related to previously settled forward starting swaps and accumulated amortization is $60.8 million and $68.8 million, as of December 31, 2018 and 2017, respectively. We recorded $8.0 million in net derivative losses related to discontinued cash flow hedges in each of the years ended December 31, 2018, 2017 and 2016. We will amortize approximately $5.8 million of discontinued cash flow hedges in 2019. During the years ended December 31, 2018, 2017 and 2016, there was no ineffective portion for cash flow hedges.

The unrealized loss of $1.7 million on hedge derivatives is reported in OCI because the forecasted transaction is considered to be probable as of December 31, 2018. We expect that $1.7 million of those losses will be reclassified into earnings within the next twelve months. The maximum length of time over which we are hedging our exposure to the variability in future cash flows for forecasted fleet fuel transactions is twelve months.

(b) Renewables and Gas activities

The below presented quantitative information includes derivative financial instruments associated with Gas activities, which were classified as held for sale in the consolidated balance sheet as of December 31, 2017 (see Note 26 - Assets Held for Sale).

We sell fixed-price gas and power forwards to hedge our merchant wind assets from declining commodity prices for our Renewables business. We also purchase fixed-price gas and basis swaps and sell fixed-price power in the forward market to hedge the spark spread or heat rate of our merchant thermal assets. We also enter into tolling arrangements to sell the output of our thermal generation facilities.

Renewables has proprietary trading operations that enter into fixed-price power and gas forwards in addition to basis swaps. The intent is to speculate on fixed-price commodity and basis volatility in the U.S. commodity markets.

Renewables will periodically designate derivative contracts as cash flow hedges for both its thermal and wind portfolios. To the extent that the derivative contracts are effective in offsetting the variability of cash flows associated with future power sales and gas purchases, the fair value changes are recorded in OCI. Any hedge ineffectiveness is recorded in current period earnings. For thermal operations, Renewables will periodically designate both fixed price NYMEX gas contracts and natural gas basis swaps that hedge the fuel requirements of its Klamath Plant in Klamath, Oregon. Renewables will also designate fixed price power swaps at various locations in the U.S. market to hedge future power sales from its Klamath facility and various wind farms.

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The net notional volumes of outstanding derivative instruments associated with Renewables and Gas activities as of December 31, 2018 and 2017, respectively, consisted of:

As of December 31,	2018	2017
(MWh/Dth in Millions)		
Wholesale electricity purchase contracts	5	4
Wholesale electricity sales contracts	6	6
Natural gas and other fuel purchase contracts	29	285
Financial power contracts	11	12
Basis swaps - purchases	42	68
Basis swaps - sales	4	62

The fair values of derivative contracts associated with Renewables and Gas activities as of December 31, 2018 and 2017, respectively, consisted of:

As of December 31,	2018	2017
(Millions)		
Wholesale electricity purchase contracts	$ 11	$ (3)
Wholesale electricity sales contracts	(12)	8
Natural gas and other fuel purchase contracts	(2)	19
Financial power contracts	55	55
Basis swaps- purchases	(6)	(13)
Basis swaps- sales	—	4
Total	**$ 46**	**$ 70**

The offsetting of derivatives, location in the consolidated balance sheet and amounts of derivatives associated with Renewables and Gas activities as of December 31, 2018 and 2017, respectively, consisted of:

As of December 31, 2018	Current Assets	Noncurrent Assets	Current Liabilities	Noncurrent Liabilities
(Millions)				
Not designated as hedging instruments				
Derivative assets	$ 19	$ 96	$ 29	$ 17
Derivative liabilities	(5)	(3)	(48)	(35)
	14	93	(19)	(18)
Designated as hedging instruments				
Derivative assets	2	1	2	4
Derivative liabilities	—	—	(7)	(10)
	2	1	(5)	(6)
Total derivatives before offset of cash collateral	16	94	(24)	(24)
Cash collateral receivable (payable)	(8)	(34)	9	17
Total derivatives as presented in the balance sheet	$ 8	$ 60	$ (15)	$ (7)

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As of December 31, 2017	Current Assets	Noncurrent Assets	Current Liabilities	Noncurrent Liabilities
(Millions)				
Not designated as hedging instruments				
Derivative assets	$ 111	$ 99	$ 31	$ 4
Derivative liabilities	(82)	(5)	(51)	(10)
	29	94	(20)	(6)
Designated as hedging instruments				
Derivative assets	24	4	—	2
Derivative liabilities	—	(1)	(3)	(3)
	24	3	(3)	(1)
Total derivatives before offset of cash collateral	53	97	(23)	(7)
Cash collateral receivable (payable)	(17)	(39)	3	3
Total derivatives as presented in the balance sheet, including assets and liabilities held for sale	$ 36	$ 58	$ (20)	$ (4)

The effect of trading derivatives associated with Renewables and Gas activities for the years ended December 31, 2018, 2017 and 2016 consisted of:

Years Ended December 31,	2018	2017	2016
(Millions)			
Wholesale electricity purchase contracts	$ 4	$ (3)	$ 3
Wholesale electricity sales contracts	(2)	4	(7)
Financial power contracts	—	(1)	4
Financial and natural gas contracts	4	(8)	(22)
Total Gain (Loss)	**$ 6**	**$ (8)**	**$ (22)**

The effect of non-trading derivatives associated with Renewables and Gas activities for the years ended December 31, 2018, 2017 and 2016 consisted of:

Years Ended December 31,	2018	2017	2016
(Millions)			
Wholesale electricity purchase contracts	$ 11	$ 1	$ 9
Wholesale electricity sales contracts	(15)	(3)	(20)
Financial power contracts	(19)	(5)	(10)
Natural gas and other fuel purchase contracts	—	(8)	34
Total (Loss) Gain	**$ (23)**	**$ (15)**	**$ 13**

Such gains and losses are included in “Operating revenues” and in “Purchased power, natural gas and fuel used” operating expenses in the consolidated statements of income, depending upon the nature of the transaction.

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The effect of derivatives in cash flow hedging relationships on OCI and income for the years ended December 31, 2018, 2017 and 2016 consisted of:

Year Ended December 31,	(Loss) Gain Recognized in OCI on Derivatives	Location of (Gain) Loss Reclassified from Accumulated OCI into Income	(Gain) Loss Reclassified from Accumulated OCI into Income
(Millions)	Effective Portion (a)	Effective Portion (a)	
2018			
Commodity contracts	$ (11)	Revenues	$ (22)
	$ (11)		**$ (22)**
2017			
Commodity contracts	$ 41	Revenues	$ 14
	$ 41		**$ 14**
2016			
Commodity contracts	$ (42)	Revenues	$ (43)
Total	**$ (42)**		**$ (43)**

(a) Changes in OCI are reported on a pre-tax basis.

Amounts are reclassified from AOCI into income in the period during which the transaction being hedged affects earnings or when it becomes probable that a forecasted transaction being hedged would not occur. Notwithstanding future changes in prices, approximately $3.4 million of loss included in AOCI at December 31, 2018 is expected to be reclassified into earnings within the next 12 months. During the years ended December 31, 2018, 2017 and 2016, we recorded a net loss of $0.1 million, net gain of $2.6 million, and a net loss $6.8 million, respectively, in earnings as a result of ineffectiveness from cash flow hedges. We recorded $0.2 million and $0.5 million in net derivative loss and $0.4 million in net derivative gain related to discontinued cash flow hedge for the years ended December 31, 2018, 2017 and 2016, respectively. The net loss in AOCI related to a discontinued cash flow hedge is $0.4 million as of December 31, 2018 out of which no amount will be amortized through 2019.

(c) Interest rate swaps

AVANGRID uses financial derivative instruments from time to time to alter its fixed and floating rate debt balances or to hedge fixed rates in anticipation of future fixed rate issuances. In 2018, AVANGRID entered into two forward interest rate swaps, with a total notional amount of $500 million, to hedge the issuance of forecasted fixed rate debt in 2019. The forward interest rate swaps are designated and qualify as cash flow hedges, have mandatory termination dates of June 28, 2019, and are expected to be settled upon the forecasted debt issuance. The effective portion of the gain or loss on the interest rate swap derivative is reported as a component of AOCI and reclassified into earnings in the period or periods during which related interest payments of the forecasted debt will occur.

Pre-tax loss of $15.8 million was recognized in AOCI for the year ended December 31, 2018 from the effective portion of changes in the fair value of the interest rate swap derivative instruments. The amount in AOCI is expected to be reclassified into earnings upon interest rate swap settlement over the underlying debt maturity period. During the year ended December 31, 2018, no ineffectiveness was recorded from cash flow hedges.

The forward interest rate swap derivative liability of $15.8 million is included in current liabilities on the balance sheet and does not have related offsetting cash collateral or other derivative assets/liabilities to be offset with.

In January 2019, AVANGRID entered into an additional forward interest rate swap, with a total notional amount of $250 million, for the same hedging purpose as the previous two forward interest rate swaps discussed above.

(d) Counterparty credit risk management

NYSEG and RG&E face risks related to counterparty performance on hedging contracts due to counterparty credit default. We have developed a matrix of unsecured credit thresholds that are applicable based on the respective counterparty's or the counterparty guarantor's credit rating, as provided by Moody's or Standard & Poor's. When our exposure to risk for a counterparty exceeds the unsecured credit threshold, the counterparty is required to post additional collateral or we will no longer transact with the counterparty until the exposure drops below the unsecured credit threshold.

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The wholesale power supply agreements of UI contain default provisions that include required performance assurance, including certain collateral obligations, in the event that UI's credit rating on senior debt were to fall below investment grade. If such an event had occurred as of December 31, 2018, UI would have had to post an aggregate of approximately $17 million in collateral.

We have various master netting arrangements in the form of multiple contracts with various single counterparties that are subject to contractual agreements that provide for the net settlement of all contracts through a single payment. Those arrangements reduce our exposure to a counterparty in the event of default on or termination of any single contract. For financial statement presentation purposes, we offset fair value amounts recognized for derivative instruments and fair value amounts recognized for the right to reclaim or the obligation to return cash collateral arising from derivative instruments executed with the same counterparty under a master netting arrangement. The amounts of cash collateral under master netting arrangements that have not been offset against net derivative positions were $26 million and $30 million as of December 31, 2018 and 2017, respectively. Derivative instruments settlements and collateral payments are included in "Other assets" and "Other liabilities" of operating activities in the consolidated statements of cash flows.

Certain of our derivative instruments contain provisions that require us to maintain an investment grade credit rating on our debt from each of the major credit rating agencies. If our debt were to fall below investment grade, we would be in violation of those provisions and the counterparties to the derivative instruments could request immediate payment or demand immediate and ongoing full overnight collateralization on derivative instruments in net liability positions. The aggregate fair value of all derivative instruments with credit risk related contingent features that are in a liability position as of December 31, 2018 is $0.1 million, for which we have posted collateral.

Note 13. Commitments and Contingent Liabilities

We are party to various legal disputes arising as part of our normal business activities. We assess our exposure to these matters and record estimated loss contingencies when a loss is likely and can be reasonably estimated. We do not provide for accrual of legal costs expected to be incurred in connection with a loss contingency.

Transmission - ROE Complaint – CMP and UI

On September 30, 2011, the Massachusetts Attorney General, DPU, PURA, New Hampshire Public Utilities Commission, Rhode Island Division of Public Utilities and Carriers, Vermont Department of Public Service, numerous New England consumer advocate agencies and transmission tariff customers collectively filed a joint complaint with the FERC, pursuant to sections 206 and 306 of the Federal Power Act, against several New England Transmission Owners (NETOs) claiming that the current approved base ROE of 11.14% used by NETOs in calculating formula rates for transmission service under the ISO-New England Open Access Transmission Tariff (OATT) was not just and reasonable and seeking a reduction of the base ROE with refunds to customers for the seeking a reduction of the base ROE with refunds to customers for the 15-month refund periods beginning October 1, 2011 (Complaint I), December 27, 2012 (Complaint II), July 31, 2014 (Complaint III) and April 29, 2016 (Complaint IV).

Following various intermediate hearings, orders and appellate decisions, on October 16, 2018, the FERC issued an order directing briefs and proposing a new methodology to calculate the NETOs ROE that is contained in NETOs' transmission formula rate on file at the FERC (the October 2018 Order). The FERC proposes to use this new methodology to resolve Complaints I, II, III and IV filed by the New England state consumer advocates.

The new proposed ROE methodology set forth in the October 2018 Order considers more than just the two-step DCF analysis adopted in the FERC order on Complaint I vacated by the Court. The new proposed ROE methodology uses three financial analyses (i.e., DCF, the capital-asset pricing model and the expected earnings analysis) to produce a range of returns to narrow the zone of reasonableness when assessing whether a complainant has met its initial burden of demonstrating that the utility's existing ROE is unjust and unreasonable. The new proposed ROE methodology establishes a range of just and reasonable ROEs of 9.60% to 10.99% and proposes a just and reasonable base ROE of 10.41% with a new ROE cap of 13.08%. Pursuant to the October 2018 Order, the NETOs filed briefs on the proposed methodology in all four Complaints on January 11, 2019. We cannot predict the outcome of this proceeding.

CMP and UI reserved for refunds for Complaints I, II and III consistent with the FERC's March 3, 2015 final decision in Complaint I. Refunds were provided to customers for Complaint I. The CMP and UI total reserve associated with Complaints II and III is $23.4 million and $6.4 million, respectively, as of December 31, 2018, which has not changed since December 31, 2017, except for the accrual of carrying costs. If adopted as final, the impact of the initial decision by the FERC administrative law judge would be an additional aggregate reserve for Complaints II and III of $17.1 million, which is based upon currently available information for these proceedings.

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California Energy Crisis Litigation

Two California agencies brought a complaint in 2001 against a long-term PPA entered into by Renewables, as seller, to the California Department of Water Resources, as purchaser, alleging that the terms and conditions of the PPA were unjust and unreasonable. The FERC dismissed Renewables from the proceedings; however, the Ninth Circuit Court of Appeals reversed the FERC's dismissal of Renewables from the proceeding.

Joining with two other parties, Renewables filed a petition for certiorari in the United States Supreme Court on May 3, 2007. In an order entered on June 27, 2008, the Supreme Court granted Renewables' petition for certiorari, vacated the appellate court's judgment, and remanded the case to the appellate court for further consideration in light of the Supreme Court's decision in a similar case. In light of the Supreme Court's order, on December 4, 2008, the Ninth Circuit Court of Appeals vacated its prior opinion and remanded the complaint proceedings to the FERC for further proceedings consistent with the Supreme Court's rulings. In 2014, the FERC assigned an administrative law judge to conduct evidentiary hearings. Following discovery, the FERC Trial Staff recommended that the complaint against Renewables be dismissed.

A hearing was held before a FERC administrative law judge in November and early December 2015. A preliminary proposed ruling by the administrative law judge was issued on April 12, 2016. The proposed ruling found no evidence that Renewables had engaged in any unlawful market conduct that would justify finding the Renewables PPAs unjust and unreasonable. However, the proposed ruling did conclude that price of the PPAs imposed an excessive burden on customers in the amount of $259 million. Renewables position, as presented at hearings and agreed by the FERC Trial Staff, is that Renewables entered into bilateral power purchase contracts appropriately and complied with all applicable legal standards and requirements. The parties have submitted briefs on exceptions to the administrative law judge's proposed ruling to the FERC. There is no specific timetable for the FERC's ruling. In April 2018, Renewables requested, based on the nearly two years of delay from the preliminary proposed ruling and the Supreme Court precedent, that the FERC issue a final decision expeditiously. We cannot predict the outcome of this proceeding.

New York State Department of Public Service Investigation of the Preparation for and Response to the March 2017 Windstorm

On March 11, 2017, the New York State Department of Public Service (the Department) commenced an investigation of NYSEG's and RG&E's preparation for and response to the March 2017 windstorm, which affected more than 219,000 NYSEG and RG&E customers. The Department Staff issued a report (the Staff Report) of the findings from their investigation on November 16, 2017. The Staff Report made several recommendations for future storm response and also alleged that NYSEG and RG&E had violated their own emergency response plan in a number of respects.

Also on November 16, 2017, the NYPSC issued an Order Instituting Proceeding and to Show Cause (the Order) requiring the companies to address whether the NYPSC should mandate, reject or modify, in whole or in part the recommendations made in the Staff Report. The Order also required the companies to show cause why the NYPSC should not commence an administrative penalty proceeding. On May 18, 2018, NYSEG and RG&E filed a settlement joint proposal and investment joint proposal before the NYPSC to settle potential penalties and avoid litigation related to the March 2017 windstorm, pursuant to which, among other things, NYSEG and RG&E have agreed to make $3.9 million in investments in 2018 designed to increase resiliency and improve emergency response in the areas impacted by the storm. The investments will not be reflected in rate base or operating expenses in establishing future delivery rates. The joint proposals were subject to public comment and await NYPSC approval. We cannot predict the final outcome of this matter.

New York State Department of Public Service Investigation of the Preparation for and Response to the March 2018 Winter Storms

In March 2018, following two severe winter storms that impacted over more than a million electric utility customers in New York, including 520,000 NYSEG and RG&E customers, the NYPSC initiated a comprehensive investigation of all the New York electric utilities' preparation and response to those events. The investigation has been expanded to include other 2018 New York spring storm events. We cannot predict the final outcome of this matter.

Class Actions Regarding LDC Gas Transportation Service on Algonquin Gas Transmission

Breiding et al. v. Eversource and Avangrid - Class Action . On November 16, 2017, a class action lawsuit was filed in the U.S. District Court for the District of Massachusetts on behalf of customers in New England against the Company and Eversource alleging that certain of their respective subsidiaries that take gas transportation service over the Algonquin Gas Transmission (AGT), which for AVANGRID would be its indirect subsidiaries SCG and CNG, engaged in pipeline capacity scheduling practices on AGT that resulted in artificially increased electricity prices in New England. These allegations were based on the conclusions of a whitepaper issued by the Environmental Defense Fund (EDF), an environmental advocacy organization, on October 10, 2017,

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purporting to analyze the relationship between the New England electricity market and the New England local gas distribution companies. The plaintiffs assert claims under federal antitrust law, state antitrust, unfair competition and consumer protection laws, and under the common law of unjust enrichment. They seek damages, disgorgement, restitution, injunctive relief and attorney fees and costs. On February 27, 2018, the FERC released the results of a FERC staff inquiry into the pipeline capacity scheduling practices on the AGT. The inquiry arose out of the allegations made by the EDF in its whitepaper. The FERC announced that, based on an extensive review of public and non-public data, it had determined that the EDF study was flawed and led to incorrect conclusions. FERC also stated that the staff inquiry revealed no evidence of anticompetitive withholding of natural gas pipeline capacity on the AGT and that it would take no further action on the matter. On April 27, 2018, the Company filed a Motion to Dismiss all of the claims based on federal preemption and lack of any evidence of antitrust behavior, citing, among other reasons, the results of the FERC staff inquiry conclusion. The plaintiffs filed opposition to the motion to dismiss on May 25, 2018. On September 11, 2018, the District Court granted the Company's Motion and dismissed all claims. On October 10, 2018, the plaintiffs filed a notice of appeal. We cannot predict the outcome of this appeal.

PNE Energy Supply LLC v. Eversource Energy and Avangrid, Inc. - Class Action . On August 10, 2018, PNE Energy Supply LLC, a competitive energy supplier located in New England that purchases electricity in the day-ahead and real time wholesale electric market, filed a civil antitrust action, on behalf of itself and those similarly situated, against the Company and Eversource alleging that their respective gas subsidiaries illegally manipulated the supply of pipeline capacity in the "secondary capacity market" in order to artificially inflate New England natural gas and electricity prices. These allegations were also based on the conclusions of the White Paper issued by EDF. The plaintiff claims to represent entities who purchased electricity directly in the wholesale electricity market that it claims was targeted by the alleged anticompetitive conduct of Eversource and the Company. On September 28, 2018, the Company filed a Motion to Dismiss all of the claims based on federal preemption and lack of any evidence of antitrust behavior, citing, among other reasons, the results of the FERC staff inquiry and the dismissal of the related case, *"Breiding et al. v. Eversource and Avangrid,"* by the same Court in September. The plaintiffs filed opposition to the motion to dismiss on October 26, 2018. We cannot predict the outcome of this class action lawsuit.

Leases

Operating lease expense relating to operational facilities, office building leases and vehicle and equipment leases was $59.0 million, $71.5 million and $70.6 million for the years ended December 31, 2018, 2017 and 2016, respectively. Amounts related to contingent payments predominantly linked to electricity generation at the respective facilities were $10.6 million, $18.6 million and $22.2 million for the years ended December 31, 2018, 2017 and 2016, respectively. Leases for most of the land on which wind farm facilities are located have various renewal and termination clauses.

On January 16, 2014, as required by the NYPSC, NYSEG renewed a Reliability Support Services Agreement (RSS Agreement) with Cayuga Operating Company, LLC (Cayuga) for Cayuga to provide reliability support services to maintain necessary system reliability through June 2017. Cayuga owns and operates the Cayuga Generating Facility (Facility), a coal-fired generating station that includes two generating units. Cayuga operates and maintains the RSS units and manages and complies with scheduling deadlines and requirements for maintaining the Facility and the RSS units as eligible energy and capacity providers and complies with dispatch instructions. NYSEG paid Cayuga a monthly fixed price and also paid for capital expenditures for specified capital projects. NYSEG was entitled to a share of any capacity and energy revenues earned by Cayuga. We accounted for this arrangement as an operating lease. The net expense incurred under this operating lease was $17.6 million and $37.8 million for the years ended December 31, 2017 and 2016, respectively.

On October 21, 2015, RG&E, GNPP and multiple intervenors filed a joint proposal with the regulator for approval of the modified RSS Agreement for the continued operation of the Ginna Facility. On February 23, 2016, the NYPSC unanimously adopted the joint proposal, which provided for a term of the RSSA from April 1, 2015, through March 31, 2017 and RG&E monthly payments to GNPP in the amount of $15.4 million. RG&E was entitled to 70% of revenues from GNPP's sales into the energy and capacity markets, while GNPP was entitled to 30% of such revenues. We accounted for this arrangement as an operating lease. The net expense incurred under this operating lease was $5.6 million and $114.9 million for the years ended December 31, 2017 and 2016, respectively.

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Total future minimum lease payments as of December 31, 2018 consisted of:

Year	Operating Leases	Capital Leases	Total
		(Millions)	
2019	$ 31	$ 30	$ 61
2020	39	10	49
2021	38	7	45
2022	35	2	37
2023	33	50	83
Thereafter	735	2	737
Total	**$ 911**	**$ 101**	**$ 1,012**

Power, Gas and Other Arrangements

Power and Gas Supply Arrangements – Networks

NYSEG and RG&E are the providers of last resort for customers. As a result, the companies buy physical energy and capacity from the NYISO. In accordance with the NYPSC's February 26, 2008 Order, NYSEG and RG&E are required to hedge on behalf of non-demand billed customers. The physical electric capacity purchases we make from parties other than the NYISO are to comply with the hedge requirement for electric capacity. The companies enter into financial swaps to comply with the hedge requirement for physical electric energy purchases. Other purchases, from some Independent Power Producers (IPPs) and NYPA are from contracts entered into many years ago when the companies made purchases under contract as part of their supply portfolio to meet their load requirement. More recent IPP purchases are required to comply with the companies' Public Utility Regulatory Policies Act (PURPA) purchase obligation.

NYSEG, RG&E, SCG, CNG and BGC (collectively, the Regulated Gas Companies) satisfy their natural gas supply requirements through purchases from various producers and suppliers, withdrawals from natural gas storage, capacity contracts and winter peaking supplies and resources. The Regulated Gas Companies operate diverse portfolios of gas supply, firm transportation capacity, gas storage and peaking resources. Actual gas costs incurred by each of the Regulated Gas Companies are passed through to customers through state regulated purchased gas adjustment mechanisms, subject to regulatory review.

The Regulated Gas Companies purchase the majority of their natural gas supply at market prices under seasonal, monthly or mid-term supply contracts and the remainder is acquired on the spot market. The Regulated Gas Companies diversify their sources of supply by amount purchased and location and primarily acquire gas at various locations in the U.S. Gulf of Mexico region, in the Appalachia region and in Canada.

The Regulated Gas Companies acquire firm transportation capacity on interstate pipelines under long-term contracts and utilize that capacity to transport both natural gas supply purchased and natural gas withdrawn from storage to the local distribution system.

The Regulated Gas Companies acquire firm underground natural gas storage capacity using long-term contracts and fill the storage facilities with gas in the summer months for subsequent withdrawal in the winter months.

Winter peaking resources are primarily attached to the local distribution systems and are either owned or are contracted for by the Regulated Gas Companies, each of which is a Local Distribution Company. Each Regulated Gas Company owns or has rights to the natural gas stored in an LNG facility directly attached to its distribution system.

Other arrangements include contractual obligations for property, plant and equipment, material and services on order but not yet delivered at December 31, 2018.

Power, Gas and Other Arrangements – Renewables

Gas purchase commitments consist of firm transport capacity to fuel the Cogen and Peaking gas generators. Power purchase commitments include the following: (i) a 55 MW Biomass PPA for 12 years (three years remaining) with a guaranteed output of 34.4 MW flat and a schedule of fixed price rates depending on season and time of day, (ii) long-term firm transmission agreements with fixed monthly capacity payments that allow the delivery of electricity from wind and thermal generation sources to various customers and (iii) a 95.6 MW (average) three-year purchase of hydro capacity and energy to provide balancing services to the NW wind assets that has monthly fixed payments (beginning in 2019 and expiring in 2021) and (iv) a five-year purchase of 52 MW (average) hydro capacity and energy to provide balancing services to the NW wind assets that has monthly fixed payments (beginning in 2019 and expiring in 2023). Power sales commitments include: (i) a 55 MW Biomass off-take agreement for 12 years (three years remaining) with guaranteed annual production of 34.4 MW flat with a schedule of fixed price rates depending on season and time of day, (ii) a retail renewable power sales agreement for 12 MW (average) expiring in 2026, (iii) fixed price,

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fixed volume power sales off the Klamath Cogen facility, (iv) a seasonal tolling arrangement off the Klamath peaking facility with fixed capacity charges through 2024; (v) fixed price, fixed volume renewable energy credit sales off merchant wind facilities and (vi) sales of merchant wind farm capacity to various ISOs.

Forward purchases and sales commitments under power, gas and other arrangements as of December 31, 2018 consisted of:

	Purchases				Sales		
Year	Gas	Power	Other	Total	Power	Other	Total
				(Millions)			
2019	$ 13	$ 167	$ 1,127	$ 1,307	$ 175	$ 3	$ 178
2020	11	134	66	211	113	3	116
2021	11	106	1	118	86	3	89
2022	11	43	—	54	32	3	35
2023	11	26	—	37	36	3	39
Thereafter	41	59	—	100	22	1	23
Totals	**$ 98**	**$ 535**	**$ 1,194**	**$ 1,827**	**$ 464**	**$ 16**	**$ 480**

Guarantee Commitments to Third Parties

As of December 31, 2018, we had approximately $362 million of standby letters of credit, surety bonds, guarantees and indemnifications outstanding. These instruments provide financial assurance to the business and trading partners of AVANGRID and its subsidiaries in their normal course of business. The instruments only represent liabilities if AVANGRID or its subsidiaries fail to deliver on contractual obligations. We therefore believe it is unlikely that any material liabilities associated with these instruments will be incurred and, accordingly, as of December 31, 2018, neither we nor our subsidiaries have any liabilities recorded for these instruments.

Note 14. Environmental Liabilities

Environmental laws, regulations and compliance programs may occasionally require changes in our operations and facilities and may increase the cost of electric and natural gas service. We do not provide for accruals of legal costs expected to be incurred in connection with loss contingencies.

Waste sites

The Environmental Protection Agency and various state environmental agencies, as appropriate, have notified us that we are among the potentially responsible parties that may be liable for costs incurred to remediate certain hazardous substances at twenty-five waste sites, which do not include sites where gas was manufactured in the past. Fifteen of the twenty-five sites are included in the New York State Registry of Inactive Hazardous Waste Disposal Sites; six sites are included in Maine's Uncontrolled Sites Program and one site is included on the Massachusetts Non-Priority Confirmed Disposal Site list. The remaining sites are not included in any registry list. Finally, nine of the twenty-five sites are also included on the National Priorities list. Any liability may be joint and several for certain sites.

We have recorded an estimated liability of $5 million related to ten of the twenty-five sites. We have paid remediation costs related to the remaining fifteen sites and do not expect to incur additional liabilities. Additionally, we have recorded an estimated liability of $8 million related to another eleven sites where we believe it is probable that we will incur remediation costs and or monitoring costs, although we have not been notified that we are among the potentially responsible parties or that we are regulated under State Resource Conservation and Recovery Act programs. It is possible the ultimate cost to remediate these sites may be significantly more than the accrued amount. Our estimate for costs to remediate these sites ranges from $12 million to $21 million as of December 31, 2018. Factors affecting the estimated remediation amount include the remedial action plan selected, the extent of site contamination and the allocation of the clean-up costs.

Manufactured Gas Plants

We have a program to investigate and perform necessary remediation at our fifty-three sites where gas was manufactured in the past (Manufactured Gas Plants, or MGPs). Eight sites are included in the New York State Registry; three sites are included in the New York State Department of Environmental Conservation Multi-Site Order on Consent; three sites are part of Maine's Voluntary Response Action Program and with two of such sites being part of Maine's Uncontrolled Sites Program. The remaining sites are not included in any registry list. We have entered into consent orders with various environmental agencies to investigate and, where necessary, remediate forty-one of the fifty-three sites.

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Our estimate for all costs related to investigation and remediation of the fifty-three sites ranges from $193 million to $428 million as of December 31, 2018. Our estimate could change materially based on facts and circumstances derived from site investigations, changes in required remedial actions, changes in technology relating to remedial alternatives and changes to current laws and regulations.

Certain of our Connecticut and Massachusetts regulated gas companies own or have previously owned properties where MGPs had historically operated. MGP operations have led to contamination of soil and groundwater with petroleum hydrocarbons, benzene and metals, among other things, at these properties, the regulation and cleanup of which is regulated by the federal Resource Conservation and Recovery Act as well as other federal and state statutes and regulations. Each of the companies has or had an ownership interest in one or more such properties contaminated as a result of MGP-related activities. Under the existing regulations, the cleanup of such sites requires state and at times, federal, regulators' involvement and approval before cleanup can commence. In certain cases, such contamination has been evaluated, characterized and remediated. In other cases, the sites have been evaluated and characterized, but not yet remediated. Finally, at some of these sites, the scope of the contamination has not yet been fully characterized; no liability was recorded in respect of these sites as of December 31, 2018 and no amount of loss, if any, can be reasonably estimated at this time. In the past, the companies have received approval for the recovery of MGP-related remediation expenses from customers through rates and will seek recovery in rates for ongoing MGP-related remediation expenses for all of their MGP sites.

As of December 31, 2018 and 2017, the liability associated with our MGP sites in Connecticut, the remediation costs of which could be significant and will be subject to a review by PURA as to whether these costs are recoverable in rates, was $99 million and $100 million, respectively.

Our total recorded liability to investigate and perform remediation at all known inactive MGP sites discussed above and other sites was $366 million and $389 million as of December 31, 2018 and 2017, respectively. We recorded a corresponding regulatory asset, net of insurance recoveries and the amount collected from FirstEnergy, as described below, because we expect to recover the net costs in rates. Our environmental liability accruals are recorded on an undiscounted basis and are expected to be paid through the year 2055.

FirstEnergy

NYSEG sued FirstEnergy under the Comprehensive Environmental Response, Compensation, and Liability Act to recover environmental cleanup costs at sixteen former MGP sites, which are included in the discussion above. In July 2011, the District Court issued a decision and order in NYSEG's favor, requiring FirstEnergy to pay NYSEG approximately $60 million for past and future clean-up costs at the sixteen sites in dispute. On September 9, 2011, FirstEnergy paid NYSEG $30 million, representing their share of past costs of $27 million and pre-judgment interest of $3 million.

FirstEnergy appealed the decision to the Second Circuit Court of Appeals. On September 11, 2014, the Second Circuit Court of Appeals affirmed the District Court's decision in NYSEG's favor, but modified the decision for nine sites, reducing NYSEG's damages for incurred costs from $27 million to $22 million, excluding interest, and reducing FirstEnergy's allocable share of future costs at these sites. NYSEG refunded FirstEnergy the excess $5 million in November 2014.

FirstEnergy remains liable for a substantial share of clean up expenses at nine MGP sites. Based on current projections, FirstEnergy's share is estimated at approximately $20 million. This amount is being treated as a contingent asset and has not been recorded as either a receivable or a decrease to the environmental provision. Any recovery will be flowed through to NYSEG ratepayers.

Century Indemnity and OneBeacon

On August 14, 2013, NYSEG filed suit in federal court against two excess insurers, Century Indemnity and OneBeacon, who provided excess liability coverage to NYSEG. NYSEG seeks payment for clean-up costs associated with contamination at twenty-two former manufactured gas plants. Based on estimated clean-up costs of $282 million, the carriers' allocable share could equal or exceed approximately $89 million, excluding pre-judgment interest, although this amount may change substantially depending upon the determination of various factual matters and legal issues during the case.

Century Indemnity and OneBeacon have answered admitting issuance of the excess policies, but contesting coverage and providing documentation proving they received notice of the claims in the 1990s. On March 31, 2017, the District Court granted motions filed by Century Indemnity and One Beacon dismissing all of NYSEG's claims against both defendants on the grounds of late notice. NYSEG filed a motion with the District Court on April 14, 2017 seeking reconsideration of the Court's decision, which was denied by an order dated March 27, 2018. NYSEG filed a notice appealing the District Court's dismissal on April 9, 2018. We cannot predict the outcome of this matter; however, any recovery will be flowed through to NYSEG ratepayers.

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English Station

In January 2012, Evergreen Power, LLC (Evergreen Power) and Asnat Realty LLC (Asnat), then and current owners of a former generation site on the Mill River in New Haven (the English Station site) that UI sold to Quinnipiac Energy in 2000, filed a lawsuit in federal district court in Connecticut against UI seeking, among other things: (i) an order directing UI to reimburse the plaintiffs for costs they have incurred and will incur for the testing, investigation and remediation of hazardous substances at the English Station site and (ii) an order directing UI to investigate and remediate the site. This proceeding had been stayed in 2014 pending resolutions of other proceedings before the DEEP concerning the English Station site. In December 2016, the court administratively closed the file without prejudice to reopen upon the filing of a motion to reopen by any party. In December 2013, Evergreen Power and Asnat filed a subsequent lawsuit in Connecticut state court seeking among other things: (i) remediation of the English Station site; (ii) reimbursement of remediation costs; (iii) termination of UI's easement rights; (iv) reimbursement for costs associated with securing the property; and (v) punitive damages. This lawsuit had been stayed in May 2014 pending mediation. Due to lack of activity in the case, the court terminated the stay and scheduled a status conference for July 6, 2017. On July 5, 2017, Asnat filed a pretrial memorandum claiming damages of $10 million for "environmental remediation activities" and lost use of the property. On April 16, 2018, the plaintiffs filed a revised compliant alleging fraud and unjust enrichment against UIL and UI and adding former UIL officers as named defendants alleging fraud. The complaint was further revised on July 3, 2018. We filed a Motion to Strike the counts in the complaint in August 2018 and oral arguments were held. On February 21, 2019, the court granted our Motion to Strike with respect to all counts except for the count against UI for unjust enrichment. The counts stricken include all counts against the individual defendants as well as against UIL. As to the remaining count, the court declined to strike the claim against UI for unjust enrichment. The court's ruling is subject to appeal by the plaintiffs. We cannot predict the outcome of this matter.

On April 8, 2013, DEEP issued an administrative order addressed to UI, Evergreen Power, Asnat and others, ordering the parties to take certain actions related to investigating and remediating the English Station site. Mediation of the matter began in the fourth quarter of 2013 and concluded unsuccessfully in April 2015. This proceeding was stayed while DEEP and UI continue to work through the remediation process pursuant to the consent order described below. Status reports are periodically filed with the DEEP.

On August 4, 2016, DEEP issued a partial consent order (the consent order), that, subject to its terms and conditions, requires UI to investigate and remediate certain environmental conditions within the perimeter of the English Station site. Under the consent order, to the extent that the cost of this investigation and remediation is less than $30 million, UI will remit to the State of Connecticut the difference between such cost and $30 million to be used for a public purpose as determined in the discretion of the Governor of the State of Connecticut, the Attorney General of the State of Connecticut and the Commissioner of DEEP. UI is obligated to comply with the terms of the consent order even if the cost of such compliance exceeds $30 million. Under the terms of the consent order, the state will discuss options with UI on recovering or funding any cost above $30 million such as through public funding or recovery from third parties; however, it is not bound to agree to or support any means of recovery or funding. UI has initiated its process to investigate and remediate the environmental conditions within the perimeter of the English Station site pursuant to the consent order.

As of December 31, 2018 and 2017, the amount reserved for this matter was $20 million and $25 million, respectively. We cannot predict the outcome of this matter.

Note 15. Income Taxes

Upon enactment of the Tax Act, the Company remeasured its existing deferred income tax balances as of December 31, 2017 to reflect the decrease in the corporate income tax rate from 35% to 21%, which resulted in a material decrease to its net deferred income tax liability balances based on reasonable estimates that could be determined at that time. The Company's non-regulatory businesses recorded a corresponding net increase or decrease to income tax expense, while the utility operations recorded corresponding regulatory liabilities or assets to the extent that such amounts are probable of settlement or recovery through customer rates. The amount and timing of potential settlements of the established net regulatory liabilities are determined by the regulated utilities' respective rate regulators and IRS Normalization rules. As of December 31, 2018, the Company has completed the measurement and accounting of certain effects of the Tax Act which have been reflected in the December 31, 2018 financial statements.

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Current and deferred taxes charged to (benefit) expense for the years ended December 31, 2018, 2017 and 2016 consisted of:

Years Ended December 31,	2018	2017	2016
(Millions)			
Current			
Federal	$ 17	$ (20)	$ (6)
State	2	12	8
Current taxes charged to expense (benefit)	**19**	**(8)**	**2**
Deferred			
Federal	233	(124)	412
State	(12)	(73)	2
Deferred taxes charged to expense (benefit)	**221**	**(197)**	**414**
Production tax credits	(68)	(53)	(38)
Investment tax credits	(2)	(1)	(1)
Total Income Tax Expense (Benefit)	**$ 170**	**$ (259)**	**$ 377**

The differences between tax expense per the statements of income and tax expense at the 21% statutory federal tax rate for the year ended December 31, 2018 and 35% statutory federal tax rate for the years ended December 31, 2017 and 2016 consisted of:

Years Ended December 31,	2018	2017	2016
(Millions)			
Tax expense at federal statutory rate	$ 161	$ 43	$ 353
Depreciation and amortization not normalized	(5)	9	61
Investment tax credit amortization	(2)	(1)	(1)
Tax return related adjustments	(6)	7	(2)
Production tax credits	(68)	(53)	(38)
Tax equity financing arrangements	—	(10)	(27)
Federal tax rate impact on held for sale classification	21	82	—
State tax (benefit) expense, net of federal benefit	(8)	(40)	7
Tax Act - remeasurement	46	(328)	—
Other, net	31	32	24
Total Income Tax Expense (Benefit)	**$ 170**	**$ (259)**	**$ 377**

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Deferred tax assets and liabilities as of December 31, 2018 and 2017 consisted of:

As of December 31,	2018	2017
(Millions)		
Non-current Deferred Income Tax Liabilities (Assets)		
Property related	$ 3,787	$ 3,543
Unfunded future income taxes	107	75
Federal and state tax credits	(691)	(574)
Accumulated deferred investment tax credits	—	14
Federal and state NOL's	(993)	(975)
Joint ventures/partnerships	132	302
Nontaxable grant revenue	(354)	(449)
Pension and other post-retirement benefits	8	(33)
Tax Act - tax on regulatory remeasurement	(393)	(401)
Other	(102)	(58)
Non-current Deferred Income Tax Liabilities	1,501	1,444
Add: Valuation allowance	23	21
Total Non-current Deferred Income Tax Liabilities	1,524	1,465
Less amounts classified as regulatory liabilities		
Non-current deferred income taxes	(6)	13
Non-current Deferred Income Tax Liabilities	$ 1,530	$ 1,452
Deferred tax assets	$ 2,533	$ 2,490
Deferred tax liabilities	4,057	3,955
Net Accumulated Deferred Income Tax Liabilities	$ 1,524	$ 1,465

Valuation allowances are recorded to reduce deferred tax assets when it is more likely than not that all or a portion of a tax benefit will not be realized. The valuation allowance for deferred tax assets as of December 31, 2018 and 2017 was $23 million and $21 million, respectively. Valuation allowances have been established on various state net operating losses and tax credit carryforwards. The Company has not recorded a valuation allowance on its federal net operating losses or tax credit carryforwards. The $2 million increase (net of federal benefit) in valuation allowance was primarily driven by an increase of $4 million for additional valuation on state net operating losses, an increase of $4 million on state tax credits and a reduction of $6 million on state net operating losses written off related to Gas business.

The reconciliation of unrecognized income tax benefits for the years ended December 31, 2018, 2017 and 2016 consisted of:

Years Ended December 31,	2018	2017	2016
(Millions)			
Beginning Balance	$ 45	$ 40	$ 36
Increases for tax positions related to prior years	111	23	8
Decreases for tax positions related to prior years	(3)	(16)	(4)
Reduction for tax position related to settlements with taxing authorities	—	(2)	—
Ending Balance	**$ 153**	**$ 45**	**$ 40**

Unrecognized income tax benefits represent income tax positions taken on income tax returns but not yet recognized in the consolidated financial statements. The accounting guidance for uncertainty in income taxes provides that the financial effects of a tax position shall initially be recognized when it is more likely than not based on the technical merits the position will be sustained upon examination, assuming the position will be audited and the taxing authority has full knowledge of all relevant information.

Accruals for interest and penalties on tax reserves were $(0.4) million, $(0.4) million, and $2 million for the years ended December 31, 2018, 2017 and 2016, respectively. If recognized, $119 million of the total gross unrecognized tax benefits would affect the effective tax rate.

It is estimated that no unrecognized tax benefits are anticipated to result in a net increase or decrease within twelve months of December 31, 2018.

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AVANGRID and its subsidiaries, without ARHI, have been audited for the federal tax years 1998 through 2009. The results of these audits, net of reserves already provided, were immaterial. Tax years 2010 and forward are open for potential federal adjustments. All New York state returns, which were filed without ARHI, are closed through 2011 and Maine state returns are closed through 2015.

All federal tax returns filed by ARHI from the periods ended March 31, 2004, to December 31, 2009, are closed for adjustment. Generally, the adjustment period for the individual states we filed in is at least as long as the federal period.

As of December 31, 2018, UIL is subject to audit of its federal tax return for years 2013 and 2014. UIL income tax years 2010 through 2014 are open and subject to Connecticut and Massachusetts audit.

As of December 31, 2018, we had federal tax net operating losses of $3.7 billion, federal renewable energy and investment tax credits, federal R&D tax credits and other federal credits of $555 million, state tax net operating losses of $282 million in several jurisdictions and miscellaneous state tax credits of $133 million available to carry forward and reduce future income tax liabilities. For state purposes, we recognized a valuation allowance of $23 million. The federal net operating losses begin to expire in 2028, while the federal tax credits begin to expire in 2023. The more significant state net operating losses begin to expire in 2021.

Note 16. Post-retirement and Similar Obligations

Networks has funded noncontributory defined benefit pension plans that cover the majority of Networks employees. The plans provide defined benefits based on years of service and final average salary for employees hired before 2002. Most employees hired in 2002, or later based upon the plan, are covered under a cash balance plan or formula where their benefit accumulates based on a percentage of annual salary and credited interest. During 2013, Networks announced that they would discontinue, effective December 31, 2013, the cash balance accruals for all non-union employees covered under the cash balance plans or formula. At the same time, the plans were closed to newly-hired non-union employees. The plans had been closed to newly-hired union employees in prior years. CMP's unionized employees covered under a cash balance plan ceased to receive accruals as of December 31, 2014. NYSEG's unionized employees covered under the cash balance plans ceased to receive accruals as of December 31, 2015. Their earned balances will continue to accrue interest but will no longer be increased by a flat dollar amount or percentage of pay, as defined by the plan. Instead, they will receive a contribution to their account under their respective company's defined contribution plan. There was no change to the defined benefit plans for employees covered under the plans that provide defined benefits based on years of service and final average salary. Employees not participating in a defined benefit plan are eligible to receive an enhanced 401(k) match.

Networks has other postretirement health care benefit plans covering the majority of Networks employees. The plans were closed to newly-hired non-union employees at the end of 2010. The plans had been closed to union employees in prior years. The pre-Medicare-eligible healthcare plans are contributory and participants' contributions are adjusted annually. Networks average contribution to these plans is limited at a level determined in prior periods. Except for a small group of "grandfathered" retirees, all Medicare eligible retirees that choose to participate are provided with a subsidy through a Health Reimbursement Account (HRA) to purchase coverage on the individual market.

With the acquisition of UIL, Networks also includes pension and other postretirement plans of UIL operating utility companies. The UI pension plans cover about one half of employees of UIL. The plan was closed to newly-hired employees in 2005. UI also has a non-qualified supplemental pension plan for certain employees.

The Regulated Gas Companies in Connecticut and Massachusetts have multiple qualified pension plans covering a majority of their union and management employees. The union plans are all closed to new hires, and the non-union plans were closed as of December 31, 2017. These entities also have non-qualified supplemental pension plans for certain employees and retirees. The qualified pension plans are traditional defined benefit plans or cash balance plans for those hired on or after specified dates. In some cases, neither of these plans is offered to new employees and have been replaced with enhanced 401(k) plans for those hired on or after specified dates.

In addition to providing pension benefits, UI also provides other postretirement benefits, consisting principally of health care and life insurance benefits, for retired employees and their dependents. The plans were closed to newly-hired non-union employees at the end of April 2005 and to newly-hired union employees at the end of March 2005. The healthcare plans are contributory and participants' contributions are adjusted annually. For Medicare eligible non-union retirees, UI provides a subsidy through an HRA for retirees to purchase coverage on the individual market. Medicare eligible union retirees have the option of receiving a subsidy through an HRA or paying contributions and participating in company-sponsored retiree health plans.

SCG and CNG also have plans providing other postretirement benefits for a majority of their employees. The SCG plans were closed to newly-hired non-union employees at the end of 1995, the SCG plans were closed to newly-hired union employees by the end of March 2010 and to newly-hired CNG union employees by end of March 2011. These benefits consist primarily of health

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care, prescription drug and life insurance benefits for retired employees and their dependents. For Medicare eligible non-union retirees, SCG and CNG provide a subsidy through an HRA for retirees to purchase coverage on the individual market. Medicare eligible union retirees have the option of receiving a subsidy through an HRA or paying contributions and participating in company-sponsored retiree health plans.

ARHI has funded defined benefit pension plans for eligible employees hired prior to January 1, 2008. The benefit is based on the participant's age, service and five years average pay at the time of the freeze date of April 30, 2011. ARHI has other postretirement health care benefit plans covering eligible retirees and employees hired prior to January 1, 2008. Health and life insurance rates are based on age and service points at the time of retirement.

Obligations and funded status of Networks and ARHI as of December 31, 2018 and 2017 consisted of:

	Pension Benefits		Postretirement Benefits	
As of December 31,	**2018**	**2017**	**2018**	**2017**
(Millions)				
Change in benefit obligation				
Benefit obligation as of January 1,	**$ 3,593**	**$ 3,448**	**$ 491**	**$ 495**
Service cost	44	42	4	4
Interest cost	128	139	19	22
Plan participants' contributions	—	—	9	7
Plan amendments	—	—	(3)	—
Actuarial (gain) loss	(159)	188	(55)	3
Benefits paid	(237)	(219)	(41)	(39)
Reclassified from (to) held for sale	5	(5)	1	(1)
Benefit Obligation as of December 31,	**3,374**	**3,593**	**425**	**491**
Change in plan assets				
Fair value of plan assets as of January 1,	**2,865**	**2,672**	**165**	**160**
Actual return on plan assets	(135)	382	(5)	17
Employer contributions	48	33	20	20
Plan participants' contributions	—	—	9	7
Benefits paid	(237)	(219)	(41)	(39)
Reclassified from (to) held for sale	3	(3)	—	—
Fair Value of Plan Assets as of December 31,	**2,544**	**2,865**	**148**	**165**
Funded Status as of December 31,	**$ (830)**	**$ (728)**	**$ (277)**	**$ (326)**

Amounts recognized as of December 31, 2018 and 2017 consisted of:

	Pension Benefits		Postretirement Benefits	
As of December 31,	**2018**	**2017**	**2018**	**2017**
(Millions)				
Current liabilities	$ —	$ —	$ (5)	$ (5)
Non-current liabilities	(830)	(728)	(272)	(321)
Total	**$ (830)**	**$ (728)**	**$ (277)**	**$ (326)**

Amounts recognized in OCI for ARHI for the years ended December 31, 2018, 2017 and 2016, consisted of:

	Pension Benefits			Postretirement Benefits		
Years Ended December 31,	**2018**	**2017**	**2016**	**2018**	**2017**	**2016**
(Millions)						
Net loss (gain)	$ 24	$ 25	$ 23	$ (7)	$ (4)	$ (3)

We have determined that all Networks' regulated operating companies are allowed to defer as regulatory assets or regulatory liabilities items that would have otherwise been recorded in AOCI pursuant to the accounting requirements concerning defined benefit pension and other postretirement plans.

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Amounts recognized as regulatory assets or regulatory liabilities for Networks for the years ended December 31, 2018, 2017 and 2016 consisted of:

	Pension Benefits			Postretirement Benefits		
Years Ended December 31,	**2018**	**2017**	**2016**	**2018**	**2017**	**2016**
(Millions)						
Net loss	$ 762	$ 737	$ 860	$ (8)	$ 35	$ 44
Prior service cost (credit)	$ 4	$ 6	$ 7	$ (25)	$ (31)	$ (40)

Our accumulated benefit obligation (ABO) for all defined benefit pension plans of Networks and ARHI was $3,174 million and $3,363 million as of December 31, 2018 and 2017, respectively. CMP's and NYSEG's postretirement benefits were partially funded as of December 31, 2018 and 2017.

The projected benefit obligation (PBO) and the ABO exceeded the fair value of pension plan assets for all plans of Networks and ARHI as of December 31, 2018 and 2017.

The aggregate PBO and ABO and the fair value of plan assets for underfunded plans of Networks and ARHI as of December 31, 2018 and 2017 consisted of:

	PBO in excess of plan assets	
As of December 31,	**2018**	**2017**
(Millions)		
Projected benefit obligation	$ 3,374	$ 3,593
Fair value of plan assets	$ 2,544	$ 2,865

	ABO in excess of plan assets	
As of December 31,	**2018**	**2017**
(Millions)		
Accumulated benefit obligation	$ 3,174	$ 3,363
Fair value of plan assets	$ 2,544	$ 2,865

Components of Networks' net periodic benefit cost and other changes in plan assets and benefit obligations recognized in income and regulatory assets and liabilities for the years ended December 31, 2018, 2017 and 2016 consisted of:

(Millions)	Pension Benefits			Postretirement Benefits		
For the years ended December 31,	**2018**	**2017**	**2016**	**2018**	**2017**	**2016**
Net Periodic Benefit Cost:						
Service cost	$ 44	$ 42	$ 44	$ 4	$ 5	$ 5
Interest cost	126	137	140	18	21	20
Expected return on plan assets	(199)	(195)	(199)	(8)	(8)	(8)
Amortization of prior service cost (benefit)	1	2	2	(9)	(9)	(9)
Amortization of net loss	149	126	123	6	5	8
Net Periodic Benefit Cost	**121**	**112**	**110**	**11**	**14**	**16**
Other changes in plan assets and benefit obligations recognized in regulatory assets and regulatory liabilities:						
Net loss (gain)	175	3	(11)	(37)	(5)	(24)
Amortization of net loss	(149)	(126)	(123)	(6)	(5)	(8)
Current year prior service cost	—	—	—	(3)	—	—
Amortization of prior service (cost) benefit	(1)	(2)	(2)	9	9	9
Total Other Changes	**25**	**(125)**	**(136)**	**(37)**	**(1)**	**(23)**
Total Recognized	**$ 146**	**$ (13)**	**$ (26)**	**$ (26)**	**$ 13**	**$ (7)**

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Components of ARHI's net periodic benefit cost and other changes in plan assets and benefit obligations recognized in income and OCI for the years ended December 31, 2018, 2017 and 2016 consisted of:

(Millions)	Pension Benefits			Postretirement Benefits		
For the years ended December 31,	2018	2017	2016	2018	2017	2016
Net Periodic Benefit Cost:						
Interest cost	$ 2	$ 2	$ 2	$ 1	$ 1	$ 1
Expected return on plan assets	(2)	(2)	(2)	—	—	—
Amortization of net loss	1	1	1	—	—	—
Settlement charge	1	—	1	—	—	—
Net Periodic Benefit Cost	**2**	**1**	**2**	**1**	**1**	**1**
Other Changes in plan assets and benefit obligations recognized in OCI:						
Net loss (gain)	1	2	—	(3)	(1)	(2)
Amortization of net loss	(1)	(1)	(1)	—	—	—
Total Other Changes	**—**	**1**	**(1)**	**(3)**	**(1)**	**(2)**
Total Recognized	**$ 2**	**$ 2**	**$ 1**	**$ (2)**	**$ —**	**$ (1)**

The net periodic benefit cost for postretirement benefits represents the amount expensed for providing health care benefits to retirees and their eligible dependents. We include the net periodic benefit cost in other operating expenses net of capitalized portion.

Amounts expected to be amortized from regulatory assets or liabilities into net periodic benefit cost for the year ending December 31, 2019 consist of:

	Pension Benefits	Postretirement Benefits
(Millions)		
Estimated net loss	$ 121	$ —
Estimated prior service benefit	$ (1)	$ (9)

Amounts expected to be amortized from OCI into net periodic benefit cost for the year ending December 31, 2019 consist of:

	Pension Benefits	Postretirement Benefits
(Millions)		
Estimated net gain	$ —	$ (1)

We expect that no pension benefit or postretirement benefit plan assets will be returned to us during the year ending December 31, 2019.

The weighted-average assumptions used to determine benefit obligations for Networks and ARHI as of December 31, 2018 and 2017 consisted of:

	Pension Benefits		Postretirement Benefits	
As of December 31,	2018	2017	2018	2017
Discount rate - Networks	3.93% / 4.09%	3.63% / 3.80%	3.93% / 4.09%	3.63% / 3.80%
Discount rate - ARHI	4.09%	3.80%	4.09%	3.80%
Rate of compensation increase - Networks	3.50% - 4.20%	3.50% - 4.20%	—	—

The discount rate is the rate at which the benefit obligations could presently be effectively settled. We determined the discount rates by developing yield curves derived from a portfolio of high grade noncallable bonds with yields that closely match the duration of the expected cash flows of our benefit obligations.

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The weighted-average assumptions used to determine net periodic benefit cost for Networks and ARHI for the years ended December 31, 2018, 2017 and 2016 consisted of:

	Pension Benefits			Postretirement Benefits		
Years Ended December 31,	**2018**	**2017**	**2016**	**2018**	**2017**	**2016**
Discount rate - Networks	3.63% / 3.80%	4.12% / 4.24%	4.12% / 4.24%	3.63% / 3.80%	4.12% / 4.24%	4.12% / 4.24%
Discount rate - ARHI	3.80%	3.81%	3.90%	3.80%	3.81%	3.90%
Expected long-term return on plan assets - Networks	7.00% / 7.40%	7.00% / 7.50%	7.40% / 7.75%	6.13%	6.13%	7.16%
Expected long-term return on plan assets - ARHI	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%
Expected long-term return on plan assets - nontaxable trust - Networks	—	—	—	6.40%	6.50%	7.00%
Expected long-term return on plan assets - taxable trust - Networks	—	—	—	4.20%	4.25%	4.50%
Rate of compensation increase - Networks	3.50% - 4.20%	3.50% - 4.20%	3.50% - 4.20%	—	—	—

We developed our expected long-term rate of return on plan assets assumption based on a review of long-term historical returns for the major asset classes, the target asset allocations, and the effect of rebalancing of plan assets discussed below. Our analysis considered current capital market conditions and projected conditions. NYSEG, RG&E and UIL amortize unrecognized actuarial gains and losses over ten years from the time they are incurred as required by the NYPSC, PURA and DPU. Our other companies use the standard amortization methodology under which amounts in excess of ten-percent of the greater of the projected benefit obligation or market related value are amortized over the plan participants' average remaining service to retirement.

Assumed health care cost trend rates used to determine benefit obligations as of December 31, 2018 and 2017 consisted of:

As of December 31,	**2018**	**2017**
Health care cost trend rate assumed for next year - Networks	7.50%/8.50%	6.75%/8.50%
Health care cost trend rate assumed for next year - ARHI	7.00%/7.75%	7.50%/8.50%
Rate to which cost trend rate is assumed to decline (ultimate trend rate) - Networks	4.50%	4.50%
Rate to which cost trend rate is assumed to decline (ultimate trend rate) - ARHI	4.50%	4.50%
Year that the rate reaches the ultimate trend rate - Networks	2030 / 2028	2026 / 2028
Year that the rate reaches the ultimate trend rate - ARHI	2029 / 2027	2028 / 2030

The effects of a one-percent change in the assumed health care cost trend rates would have the following effects:

	1% Increase	1% Decrease
(Millions)		
Effect on total of service and interest cost	$ 1	$ —
Effect on postretirement benefit obligation	$ 11	$ (9)

Contributions

We make annual contributions in accordance with our funding policy of not less than the minimum amounts as required by applicable regulations. Networks expect to contribute $62 million to the pension benefit plans during 2019.

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Estimated Future Benefit Payments

Expected benefit payments and Medicare Prescription Drug, Improvement and Modernization Act of 2003 subsidy receipts reflecting expected future service for Networks and ARHI as of December 31, 2018 consisted of:

(Millions)	Pension Benefits	Postretirement Benefits	Medicare Act Subsidy Receipts
2019	$ 202	$ 32	$ 1
2020	$ 205	$ 32	$ 1
2021	$ 209	$ 31	$ 1
2022	$ 213	$ 31	$ 1
2023	$ 214	$ 30	$ 1
2024 - 2028	$ 1,088	$ 143	$ 3

Non-Qualified Pension Plans

Networks and ARHI also sponsor various unfunded pension plans for certain current employees, former employees and former directors. The total liability for these plans, which is included in Other current and Other Non-current Liabilities, was $54 million and $55 million at December 31, 2018 and 2017, respectively.

Plan Assets

Our pension benefits plan assets for Networks and ARHI are held in three master trusts. This provides for a uniform investment manager lineup and an efficient, cost effective means of allocating expenses and investment performance to each plan. Our primary investment objective is to ensure that current and future benefit obligations are adequately funded and with volatility commensurate with our risk tolerance. Preservation of capital and achievement of sufficient total return to fund accrued and future benefits obligations are of highest concern. Our primary means for achieving capital preservation is through diversification of the trusts' investments while avoiding significant concentrations of risk in any one area of the securities markets. Further diversification is achieved within each asset group through utilizing multiple asset managers and systematic allocation to various asset classes and providing broad exposure to different segments of the equity, fixed income and alternative investment markets.

The asset allocation policy is the most important consideration in achieving our objective of superior investment returns while minimizing risk. Networks has established a target asset allocation policy within allowable ranges for our pension benefits plan assets within broad categories of asset classes made up of Return-Seeking, Liability-Hedging and alternative investments. There is currently a target allocation of 35%-53% in equity securities, 40%-45% for Liability-Hedging assets and 7%-20% for alternative investments. Return-Seeking investments generally consist of domestic, international, global and emerging market equities invested in companies across all market capitalization ranges. Return-Seeking assets also include investments in real estate, absolute return and strategic markets. Liability-Hedging investments generally consist of long-term corporate bonds, annuity contracts, long-term treasury STRIPS and opportunistic fixed income investments. Systematic rebalancing within the target ranges increases the probability that the annualized return on the investments will be enhanced, while realizing lower overall risk, should any asset categories drift outside their specified ranges.

ARHI's investment portfolio contains a diversified blend of equity, fixed income and other investments. In ARHI's asset allocation policy there is a target allocation of 30% for equity investments, 50% for fixed income investments and 20% for alternative investments. Equity investments are diversified across U.S. and non-U.S. stocks, investment styles and market capitalization ranges. Fixed income investments are primarily invested in U.S. bonds and may also include some non-U.S. bonds. Other asset classes, including alternative investments, are used to enhance long-term returns while improving portfolio diversification. We primarily minimize the risk of large losses through diversification but also through monitoring and managing other aspects of risk through quarterly investment portfolio reviews, annual liability measurements and periodic asset and liability studies.

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The fair values of pension benefits plan assets, by asset category, as of December 31, 2018, consisted of:

As of December 31, 2018		Fair Value Measurements		
(Millions)	Total	Level 1	Level 2	Level 3
Asset Category				
Cash and cash equivalents	$ 52	$ —	$ 52	$ —
U.S. government securities	15	15	—	—
Registered investment companies	244	241	3	—
Corporate bonds	413	—	413	—
Preferred stocks	3	—	3	—
Common collective trusts	814	180	634	—
Other, principally annuity, fixed income	71	—	71	—
	$ 1,612	**$ 436**	**$ 1,176**	**$ —**
Other investments measured at net asset value	932			
Total	**$ 2,544**			

The fair values of pension benefits plan assets, by asset category, as of December 31, 2017, consisted of:

As of December 31, 2017		Fair Value Measurements		
(Millions)	Total	Level 1	Level 2	Level 3
Asset Category				
Cash and cash equivalents	$ 18	$ —	$ 18	$ —
U.S. government securities	13	13	—	—
Registered investment companies	266	263	3	—
Corporate bonds	447	—	447	—
Preferred stocks	4	—	4	—
Common collective trusts	930	186	744	—
Other, principally annuity, fixed income	56	—	56	—
	$ 1,734	**$ 462**	**$ 1,272**	**$ —**
Other investments measured at net asset value	1,131			
Total	**$ 2,865**			

Valuation Techniques

We value our pension benefits plan assets as follows:

- Cash and cash equivalents - Level 1: at cost, plus accrued interest, which approximates fair value. Level 2: proprietary cash associated with other investments, based on yields currently available on comparable securities of issuers with similar credit ratings.
- U.S. government securities, common stocks and registered investment companies - at the closing price reported in the active market in which the security is traded.
- Corporate bonds - based on yields currently available on comparable securities of issuers with similar credit ratings.
- Preferred stocks - at the closing price reported in the active market in which the individual investment is traded.
- Common collective trusts/Registered investment companies – Level 1: at the closing price reported in the active market in which the individual investment is traded. Level 2 - the fair value is primarily derived from the quoted prices in active markets of the underlying securities. Because the fund shares are offered to a limited group of investors, they are not considered to be traded in an active market.
- Other investments, principally annuity and fixed income - based on yields currently available on comparable securities of issuers with similar credit ratings.
- Other investments measured at net asset value (NAV) – alternative investments, such as private equity and real estate oriented investments, partnership/joint ventures and hedge funds are valued using the NAV as a practical expedient.

Our postretirement benefits plan assets are held with trustees in multiple voluntary employees' beneficiary association (VEBA) and 401(h) arrangements and are invested among and within various asset classes to achieve sufficient diversification in accordance

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with our risk tolerance. This is achieved for our postretirement benefits plan assets through the utilization of multiple institutional mutual and money market funds, providing exposure to different segments of the fixed income, equity and short-term cash markets. Approximately 37% of the postretirement benefits plan assets are invested in VEBA and 401(h) arrangements that are not subject to income taxes with the remainder being invested in arrangements subject to income taxes.

Networks has established a target asset allocation policy within allowable ranges for postretirement benefits plan assets of 45%-65% for equity securities, 25%-45% for fixed income and 5%-25% for all other investment types. In ARHI's asset allocation policy we have a target allocation of 45% in equity securities, 50% in fixed income and 5% for cash and cash equivalents investments. Equity investments are diversified across U.S. and non-U.S. stocks, investment styles, and market capitalization ranges. Fixed income investments are primarily invested in U.S. bonds and may also include some non-U.S. bonds. Other asset classes, including alternative investments, are used to enhance long-term returns while improving portfolio diversification. We primarily minimize the risk of large losses through diversification but also through monitoring and managing other aspects of risk through quarterly investment portfolio reviews. Systematic rebalancing within target ranges increases the probability that the annualized return on investments will be enhanced, while realizing lower overall risk, should any asset categories drift outside their specified ranges.

The fair values of other postretirement benefits plan assets, by asset category, as of December 31, 2018 consisted of:

As of December 31, 2018		Fair Value Measurements		
(Millions)	Total	Level 1	Level 2	Level 3
Asset Category				
Money market funds	$ 9	$ 5	$ 4	$ —
Registered investment companies	111	109	2	—
Common collective trusts	21	21	—	—
Other, principally annuity, fixed income	7	—	7	—
Total	**$ 148**	**$ 135**	**$ 13**	**$ —**

The fair values of other postretirement benefits plan assets, by asset category, as of December 31, 2017 consisted of:

As of December 31, 2017		Fair Value Measurements		
(Millions)	Total	Level 1	Level 2	Level 3
Asset Category				
Money market funds	$ 4	$ 4	$ —	$ —
Registered investment companies	122	120	2	—
Common collective trusts	31	4	27	—
Other, principally annuity, fixed income	8	—	8	—
Total	**$ 165**	**$ 128**	**$ 37**	**$ —**

Valuation Techniques

We value our postretirement benefits plan assets as follows:

- Money market funds - based upon quoted market prices in active markets.
- Common collective trusts/Registered investment companies – Level 1: at the closing price reported in the active market in which the individual investment is traded. Level 2: the fair value is primarily derived from the quoted prices in active markets of the underlying securities. Because the fund shares are offered to a limited group of investors, they are not considered to be traded in an active market.
- Other investments, principally annuity and fixed income - based on yields currently available on comparable securities of issuers with similar credit ratings.

Pension and postretirement benefit plan equity securities did not include any Iberdrola common stock as of both December 31, 2018 and 2017.

Defined contribution plans

We also have defined contribution plans defined as 401(k)s for all eligible Networks and ARHI employees. There are various match formulas depending on years of service, age, and pension plan closure/freeze date. The annual contributions made through these plans for Networks and ARHI amounted to $37 million, $36 million and $34 million for 2018, 2017 and 2016 respectively.

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Note 17. Equity

As of December 31, 2018, our share capital consisted of 500,000,000 shares of common stock authorized, 309,752,140 shares issued and 309,005,272 shares outstanding, 81.5% of which are owned by Iberdrola, each having a par value of $0.01, for a total value of common stock of $3 million and additional paid in capital of $13,657 million. As of December 31, 2017, our share capital consisted of 500,000,000 shares of common stock authorized, 309,670,932 shares issued and 309,005,272 shares outstanding, 81.5% of which were owned by Iberdrola, each having a par value of $ $0.01, for a total value of common stock capital of $3 million and additional paid in capital of $13,653 million. We had 485,810 shares of common stock held in trust and no convertible preferred shares outstanding as of both December 31, 2018 and December 31, 2017. During the year ended December 31, 2018, we issued 81,208 shares of common stock and released no shares of common stock held in trust each having a par value of $0.01. During the year ended December 31, 2017, we issued 70,493 shares of common stock and released 5,649 shares of common stock held in trust, each having a par value of $0.01.

On April 28, 2016, we entered into a repurchase agreement with J.P. Morgan Securities, LLC. (JPM), pursuant to which JPM will, from time to time, acquire, on behalf of AVANGRID, shares of common stock of AVANGRID. The purpose of the stock repurchase program is to allow AVANGRID to maintain the relative ownership percentage of Iberdrola at 81.5%. The stock repurchase program may be suspended or discontinued at any time upon notice. Out of a total of 261,058 treasury shares of common stock of AVANGRID as of December 31, 2018, 115,831 shares were repurchased during 2016, 64,019 shares were repurchased in May 2017 and 81,208 shares were repurchased in May 2018, all in the open market. The total cost of repurchases, including commissions, was $12 million as of December 31, 2018.

Accumulated OCI (Loss)

Accumulated OCI (Loss) for the years ended December 31, 2018, 2017 and 2016 consisted of:

Accumulated OCI (Loss)	As of December 31, 2015	2016 Change	As of December 31, 2016	2017 Change	As of December 31, 2017	Adoption of new accounting standard	2018 Change	As of December 31, 2018
(Millions)								
(Loss) gain on revaluation of defined benefit plans, net of income tax expense of $4.3 for 2016 and $1.1 for 2018	$ (21)	$ 7	$ (14)	$ —	$ (14)	$ —	$ 3	$ (11)
Loss for nonqualified pension plans, net of income tax expense of $0.4 for 2016, $0.2 for 2017 and $0.3 for 2018	(8)	1	(7)	1	(6)	(1)	1	(6)
Unrealized (loss) gain on derivatives qualifying as cash flow hedges:								
Unrealized (losses) gains during period on derivatives qualifying as cash flow hedges, net of income tax expense (benefit) of $(15.8) for 2016, $15.2 for 2017 and $(6.6) for 2018	31	(26)	5	25	30	—	(21)	9
Reclassification to net income of (gains) losses on cash flow hedges, net of income tax expense (benefit) of $(11.0) for 2016, $9.3 for 2017 and $(6.5) for 2018 (a)	(54)	(16)	(70)	14	(56)	—	(8)	(64)
Gain (loss) on derivatives qualifying as cash flow hedges	(23)	(42)	(65)	39	(26)	—	(29)	(55)
Accumulated OCI (Loss)	**$ (52)**	**$ (34)**	**$ (86)**	**$ 40**	**$ (46)**	**$ (1)**	**$ (25)**	**$ (72)**

(a) Reclassification is reflected in the operating expenses line item in the consolidated statements of income.

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Note 18. Earnings Per Share

Basic earnings per share is computed by dividing net income attributable to AVANGRID by the weighted-average number of shares of our common stock outstanding. In 2018, 2017 and 2016, while we did have securities that were dilutive, these securities did not result in a change to our earnings per share calculations for the years ended December 31, 2018, 2017 and 2016.

The calculations of basic and diluted earnings per share attributable to AVANGRID for the years ended December 31, 2018, 2017 and 2016, consisted of:

Years Ended December 31,	2018	2017	2016
(Millions, except for number of shares and per share data)			
Numerator:			
Net income attributable to AVANGRID	$ 595	$ 381	$ 632
Denominator:			
Weighted average number of shares outstanding - basic	309,503,319	309,502,861	309,512,553
Weighted average number of shares outstanding - diluted	309,712,628	309,661,883	309,817,322
Earnings per share attributable to AVANGRID			
Earnings Per Common Share, Basic	$ 1.92	$ 1.23	$ 2.04
Earnings Per Common Share, Diluted	$ 1.92	$ 1.23	$ 2.04

Note 19. Variable Interest Entities

We participate in certain partnership arrangements that qualify as variable interest entities (VIEs). These arrangements consist of tax equity financing arrangements (TEFs) and partnerships in which an investor holds a noncontrolling interest and does not have substantive kick-out or participating rights.

The sale of a membership interest in the TEFs represents the sale of an equity interest in a structure that is considered a sale of non-financial assets. Under the sale of non-financial assets, the membership interests in the TEFs we sell to third-party investors are reflected as noncontrolling interest in the consolidated balance sheets valued based on an HLBV model. Earnings from the TEFs are recognized in net income attributable to noncontrolling interests in the consolidated statements of income. We consolidate the entities that have TEFs based on being the primary beneficiary for these VIEs.

The assets and liabilities of the VIEs totaled approximately $876 million and $50 million, respectively, at December 31, 2018. As of December 31, 2017 the assets and liabilities of VIEs totaled approximately $1,441 million and $185 million, respectively. At December 31, 2018 and 2017, the assets and liabilities of the VIEs consisted primarily of property, plant and equipment, equity method investments and TEF liabilities. At December 31, 2018 and 2017, equity method investments of VIEs were approximately $101 million and $107 million, respectively.

In May 2018, tax equity financing was completed on El Cabo Wind, LLC (El Cabo) through contributions of $213 million from tax equity investors. In November 2018, we repurchased 88% of the third-party investors membership in Aeolus Wind Power IV LLC (Aeolus IV), and in December 2018, we repurchased the remaining 12% of the third-party investors membership in Aeolus IV. The difference between the amount received of $12 million and the noncontrolling interest balance of $25 million was recorded as an adjustment to equity because there was no change in control as a result of the transactions. After the transactions, Aeolus IV is no longer considered a VIE. At December 31, 2018, we consider Aeolus Wind Power II LLC and El Cabo to be VIEs.

Wind power generation is subject to certain favorable tax treatments in the U.S. In order to monetize the tax benefits, we have entered into these structured institutional partnership investment transactions related to certain wind farms. Under these structures, we contribute certain wind assets, relating both to existing wind farms and wind farms that are being placed into operation at the time of the relevant transaction, and other parties invest in the share equity of the limited liability holding company. As consideration for their investment, the third parties make either an upfront cash payment or a combination of upfront cash and issuance of fixed and contingent notes. We retain a class of membership interest and day-to-day operational and management control, subject to investor approval of certain major decisions. The third-party investors do not receive a lien on any assets and have no recourse against us for their upfront cash payments.

The third party investors receive a disproportionate amount of the profit or loss, cash distributions and tax benefits resulting from the wind farm energy generation until the investor recovers its investment and achieves a cumulative annual after-tax return. Once this target return is met, the relative sharing of profit or loss, cash distributions and taxable income or loss between the Company and the third party investor flips, with the Company taking a disproportionate share of such amounts thereafter. We also have a call option to acquire the third party investors' membership interest within a defined time period after this target return is met.

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Our Aeolus and El Cabo interests are not subject to any rights of investors that may restrict our ability to access or use the assets or to settle any existing liabilities associated with the interests.

Note 20. Grants, Government Incentives and Deferred Income

The changes in deferred income as of December 31, 2018 and 2017 consisted of:

(Millions)	Government grants	Other deferred income	Total
As of December 31, 2016	**$ 1,461**	**$ 22**	**$ 1,483**
Additions	33	2	35
Reclassified to held for sale	—	(2)	(2)
Recognized in income	(67)	(3)	(70)
As of December 31, 2017	**$ 1,427**	**$ 19**	**$ 1,446**
Additions	9	—	9
Recognized in income	(69)	(1)	(70)
As of December 31, 2018	**$ 1,367**	**$ 18**	**$ 1,385**

Within deferred income, we classify grants we received under Section 1603 of the American Recovery and Reinvestment Act of 2009, where the United States Department of Treasury (DOT) provides eligible parties the option of claiming grants for specified energy property in lieu of tax credits, which we claimed for the majority of our qualifying properties. Deferred income has been recorded for the grant amounts and is amortized as an offset against depreciation expense using the straight-line method over the estimated useful life of the associated property to which the grants apply. We recognize a net deferred tax asset for the book to tax basis differences related to the property for income tax purposes within the nontaxable grant revenue deferred income tax liabilities (see Note 15 – Income Taxes).

We are required to comply with certain terms and conditions applicable to each grant and, if a disqualifying event should occur as specified in the grant's terms and conditions, we are required to repay the grant funds to the DOT. We believe we are in compliance with each grant's terms and conditions as of December 31, 2018 and 2017.

Other deferred income relates predominantly to gas storage transactions where revenues are recognized as services are provided. As of December 31, 2017, we reclassified $2 million of other deferred income to liabilities held for sale in the consolidated balance sheet (see Note 26 - Assets Held for Sale).

Note 21. Equity method investments

In August 2018, we acquired the remaining 50% ownership of a joint venture, which owns and operates a 162 MW wind farm located in Southeast Colorado (Colorado Wind Ventures LLC), which commenced operations in January 2004. The wind farm, being a single asset, constituted substantially all of the fair value of the gross assets acquired and, therefore, the transaction was considered an asset acquisition. We accounted for this venture under the equity method of accounting through the date of the asset acquisition. The carrying amount of this investment was $18 million as of December 31, 2017. During the year ended December 31, 2017, we recorded an OTTI of $49 million on this investment. The fair value for OTTI calculation purposes was determined using Level 3 inputs and was estimated based on a discounted cash flows valuation technique utilizing the net amount of estimated future cash inflows and outflows related to the respective PPA.

In December 2018, we sold 80% of our wholly owned subsidiary, Coyote Ridge Wind, LLC (Coyote Ridge), including substantially all of the related tax benefits, to WEC Infrastructure in exchange for $145 million of total proceeds. We recorded a gain from this transaction of $10 million in "Other expense" in the statement of income for the year ended December 31, 2018. We account for the remaining 20% membership interest under the equity method of accounting. The carrying amount of our investment was $5 million as of December 31, 2018.

We have two 50-50 joint ventures with Horizon Wind Energy, LLC, which own and operate the Flat Rock Windpower LLC and the Flat Rock Wind Power II LLC wind farms located in upstate New York. Flat Rock Wind Power LLC, which commenced operations in January 2006, has a 231 MW capacity. Flat Rock Wind Power II LLC commenced operations in September 2007 and has a 91 MW capacity. We account for the Flat Rock joint ventures under the equity method of accounting. The carrying amount of these investments was $114 million and $120 million for Flat Rock Wind Power LLC, and $53 million and $57 million for Flat Rock Wind Power II LLC, as of December 31, 2018 and 2017, respectively.

We hold a 50% voting interest in Vineyard Wind, LLC (Vineyard Wind), a joint venture with Copenhagen Infrastructure Partners. Vineyard Wind acquired a lease from the U.S. Bureau of Ocean Energy Management containing rights to develop offshore wind

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generation in a 260 square mile area located southeast of Martha's Vineyard. The leased area has the capacity for siting up to approximately 3,000 MW. We account for this venture under the equity method of accounting. The carrying amount of this investment was $52 million and $10 million as of December 31, 2018 and 2017, respectively (See also Note 24).

Through UI, we are party to a 50-50 joint venture with Clearway Energy, Inc. in GenConn, which operates two peaking generation plants in Connecticut. The investment in GenConn is being accounted for as an equity investment, the carrying value of which was $119 million and $124 million as of December 31, 2018 and 2017, respectively.

Networks holds an approximate 20% ownership interest in New York TransCo. New York TransCo was established by the New York transmission utilities to develop, own and operate electric transmission in New York. The investment in New York TransCo is being accounted for as an equity investment, the carrying value of which was $23 million as of both December 31, 2018 and 2017 (See also Note 24).

None of our joint ventures have any contingent liabilities or capital commitments. Distributions received from equity method investments amounted to $18 million, $20 million and $20 million for the years ended December 31, 2018, 2017 and 2016 respectively, which are reflected as either distributions of earnings or as returns of capital in the operating and investing sections of the consolidated statements of cash flows, respectively. In addition, during the years ended December 31, 2018 and 2017, we received $7.6 million and $3.5 million of distributions in RECs from our equity method investments. As of December 31, 2018, there was an immaterial amount of undistributed earnings from our equity method investments.

During the year ended December 31, 2016, we completed the sale of our interest in Iroquois Gas Transmission System L.P. (Iroquois) to an unaffiliated third party for proceeds of $53.8 million and an impact to net income of $19.0 million. The carrying value of this equity method investment was $22.0 million.

Note 22. Other Financial Statements Items

Other (expense) income

Other (expense) income for the years ended December 31, 2018, 2017 and 2016 consisted of:

Years ended December 31,	2018	2017	2016
(Millions)			
Allowance for funds used during construction	$ 30	$ 36	$ 26
Carrying costs on regulatory assets	21	11	14
Non-service component of net periodic benefit cost	(128)	(120)	—
Other	11	11	36
Total Other (Expense) Income	**$ (66)**	**$ (62)**	**$ 76**

Beginning in 2018, we include the components of net periodic benefit cost other than the service cost component in other (expense) income in the consolidated statements of income (See Note 3).

"Other" in 2018 and 2016 includes $10 million and $33 million gains from sale of our interest in Coyote Ridge and Iroquois, respectively (See Note 21).

Accounts Receivable

Accounts receivable as of December 31, 2018 and 2017 consisted of:

As of December 31,	2018	2017
(Millions)		
Trade receivables	$ 1,204	$ 1,104
Allowance for bad debts	(62)	(64)
Total Accounts Receivable	**$ 1,142**	**$ 1,040**

The allowance for bad debts relates entirely to gas and electricity consumers and comprises an amount that has been reserved following historical averages of loss percentages.

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The change in the allowance for bad debts as of December 31, 2018 and 2017 consisted of:

(Millions)	
As of December 31, 2015	**$ 62**
Current period provision	48
Write-off as uncollectible	(46)
As of December 31, 2016	**$ 64**
Current period provision	69
Write-off as uncollectible	(69)
As of December 31, 2017	**$ 64**
Current period provision	74
Write-off as uncollectible	(76)
As of December 31, 2018	**$ 62**

DPA receivable balances were $62 million and $55 million as of December 31, 2018 and 2017, respectively.

Prepayments and Other Current Assets

Prepayments and other current assets as of December 31, 2018 and 2017 consisted of:

As of December 31,	2018	2017
(Millions)		
Prepaid other taxes	$ 137	$ 194
Broker margin and collateral accounts	37	32
Other pledged deposits	6	9
Prepaid expenses	43	33
Other	6	5
Total	**$ 229**	**$ 273**

Other current liabilities

Other current liabilities as of December 31, 2018 and 2017 consisted of:

As of December 31,	2018	2017
(Millions)		
Advances received	$ 129	$ 113
Accrued salaries	81	87
Short-term environmental provisions	60	69
Collateral deposits received	42	43
Pension and other postretirement	5	5
Other	10	13
Total	**$ 327**	**$ 330**

Note 23. Segment Information

Our segment reporting structure uses our management reporting structure as its foundation to reflect how AVANGRID manages the business internally and is organized by type of business. We report our financial performance based on the following two reportable segments:

- Networks: includes all of the energy transmission and distribution activities, any other regulated activity originating in New York and Maine and regulated electric distribution, electric transmission and gas distribution activities originating in Connecticut and Massachusetts. The Networks reportable segment includes eight rate regulated operating segments. These operating segments generally offer the same services distributed in similar fashions, have the same types of customers, have similar long-term economic characteristics and are subject to similar regulatory requirements, allowing these operations to be aggregated into one reportable segment.

- Renewables: activities relating to renewable energy, mainly wind energy generation and trading related with such activities.

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Based on the quantitative assessment, and due to the disposition of gas trading and storage businesses (see Note 26 – Assets Held For Sale for further discussion), the Gas business no longer meets the reportable segment criteria effective in the first quarter of 2018. As a result, the prior period segment information has been restated to conform to the 2018 presentation.

Additionally, to better align the evaluation of the segment information for both internal and external purposes, effective in 2018, the evaluation of segment performance by the chief operating decision maker was changed from adjusted EBITDA (Earnings Before Interest, Taxes, Depreciation and Amortization) used in the prior periods to adjusted net income.

We define adjusted net income as net income adjusted to exclude restructuring charges, mark-to-market adjustments to reflect the effect of mark-to-market changes in the fair value of derivative instruments used by AVANGRID to economically hedge market price fluctuations in related underlying physical transactions for the purchase and sale of electricity, loss from held for sale measurement, impact of the Tax Act, accelerated depreciation derived from repowering of a wind farm, OTTI and adjustments for the non-core Gas business.

Products and services are sold between reportable segments and affiliate companies at cost. Segment income, expense and assets presented in the accompanying tables include all intercompany transactions that are eliminated in the consolidated financial statements.

Segment information as of and for the year ended December 31, 2018 consisted of:

For the year ended December 31, 2018 (Millions)	Networks	Renewables	Other(a)	AVANGRID Consolidated
Revenue - external	$ 5,304	$ 1,137	$ 37	$ 6,478
Revenue - intersegment	6	2	(8)	—
Loss from assets held for sale	—	—	16	16
Depreciation and amortization	503	352	—	855
Operating income	975	136	16	1,127
Earnings (loss) from equity method investments	13	(3)	—	10
Interest expense, net of capitalization	260	33	10	303
Income tax expense (benefit)	169	(31)	32	170
Capital expenditures	1,377	410	—	1,787
Adjusted net income	486	185	13	684
As of December 31, 2018				
Property, plant and equipment	14,754	8,697	8	23,459
Equity method investments	142	224	—	366
Total assets	$ 22,239	$ 10,703	$ (775)	$ 32,167

(a) Includes Corporate, Gas and intersegment eliminations.

Included in revenue-external for the year ended December 31, 2018 are: $3,802 million from regulated electric operations, $1,499 million from regulated gas operations and $3 million from other operations of Networks; $1,137 million from renewable energy generation of Renewables.

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Segment information as of and for the year ended December 31, 2017 consisted of:

For the year ended December 31, 2017 (Millions)	Networks	Renewables	Other(a)	AVANGRID Consolidated
Revenue - external	$ 4,950	$ 1,038	$ (25)	$ 5,963
Revenue - intersegment	11	9	(20)	—
Loss from assets held for sale	—	—	642	642
Depreciation and amortization	474	325	25	824
Operating income (loss)	1,114	92	(701)	505
Earnings (loss) from equity method investments	15	(55)	—	(40)
Interest expense, net of capitalization	244	28	8	280
Income tax expense (benefit)	316	(320)	(255)	(259)
Capital expenditures	1,305	1,097	14	2,416
Adjusted net income	507	120	55	682
As of December 31, 2017				
Property, plant and equipment	13,876	8,786	7	22,669
Equity method investments	147	205	—	352
Total assets	$ 21,411	$ 11,308	$ (1,048)	$ 31,671

(a) Includes Corporate, Gas and intersegment eliminations.

Included in revenue-external for the year ended December 31, 2017 are: $3,585 million from regulated electric operations, $1,375 million from regulated gas operations and $(10) million from other operations of Networks; $1,038 million from renewable energy generation of Renewables.

AVANGRID made a net non-cash capital contribution of $921 million in Renewables in 2017, which was used by Renewables to settle outstanding intercompany debt payables with the Gas segment accumulated prior to August 2017. The elimination of this activity between Renewables and Gas is included in Other at December 31, 2017.

Segment information as of and for the year ended December 31, 2016 consisted of:

For the year ended December 31, 2016 (Millions)	Networks	Renewables	Other (a)	AVANGRID Consolidated
Revenue - external	$ 5,027	$ 1,000	$ (9)	$ 6,018
Revenue - intersegment	3	15	(18)	—
Depreciation and amortization	466	313	25	804
Operating income (loss)	1,086	149	(41)	1,194
Earnings (loss) from equity method investments	15	(8)	—	7
Interest expense, net of capitalization	252	50	(34)	268
Income tax expense (benefit)	415	7	(45)	377
Capital expenditures	1,140	561	6	1,707
As of December 31, 2016				
Property, plant and equipment	13,032	8,015	501	21,548
Equity method investments	151	236	—	387
Total assets	$ 20,753	$ 9,884	$ 672	$ 31,309

(a) Includes Corporate, Gas and intersegment eliminations.

Included in revenue-external for the year ended December 31, 2016 are: $3,686 million from regulated electric operations, $1,306 million from regulated gas operations and $35 million from other operations of Networks; $1,000 million from renewable energy generation of Renewables.

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Reconciliation of Adjusted Net Income to Net Income attributable to AVANGRID for the years ended December 31, 2018 and 2017 is as follows:

Years Ended December 31,	2018	2017
(Millions)		
Adjusted Net Income Attributable to Avangrid, Inc.	**$ 684**	**$ 682**
Adjustments:		
Impairment of equity method and other investment (1)	—	(49)
Restructuring charges (2)	(4)	(20)
Mark-to-market adjustments - Renewables (3)	(25)	(15)
Loss from held for sale measurement (4)	(16)	(642)
Impact of the Tax Act (5)	(46)	328
Accelerated depreciation from repowering (6)	(3)	—
Income tax impact of adjustments	(6)	162
Gas Storage, net of tax (7)	11	(64)
Net Income Attributable to Avangrid, Inc.	**$ 595**	**$ 381**

(1) Represents OTTI on equity method investment recorded in 2017.
(2) Restructuring and severance related charges relate to costs resulted from restructuring actions involving initial targeted voluntary workforce reductions and related costs in our plan to vacate a lease, predominantly within the Networks segment (See Note 27 - Restructuring and Severance Related Expenses – for further details).
(3) Mark-to-market adjustments relate to changes in the fair value of derivative instruments used by AVANGRID to economically hedge market price fluctuations in related underlying physical transactions for the purchase and sale of electricity and gas.
(4) Represents loss from measurement of assets and liabilities held for sale in connection with the committed plan to sell the gas trading and storage businesses (See Note 26 - Assets Held for Sale – for further details).
(5) Represents the impact from measurement of deferred income tax balances as a result of the Tax Act enacted by the U.S. federal government on December 22, 2017.
(6) Represents the amount of accelerated depreciation derived from repowering of a wind farm in Renewables.
(7) Removal of the impact from Gas activity in the reconciliation to AVANGRID Net Income.

Note 24. Related Party Transactions

We engage in related party transactions that are generally billed at cost and in accordance with applicable state and federal commission regulations.

Related party transactions for the years ended December 31, 2018, 2017 and 2016, respectively, consisted of:

Years Ended December 31,	2018		2017		2016	
(Millions)	Sales To	Purchases From	Sales To	Purchases From	Sales To	Purchases From
Iberdrola Financiación, S.A.	$ —	$ (3)	$ —	$ (2)	$ —	$ (2)
Iberdrola Renovables Energia, S.L.	$ —	$ (14)	$ —	$ (9)	$ —	$ (8)
Iberdrola Canada Energy Services, Ltd	$ —	$ (5)	$ —	$ (33)	$ —	$ (37)
Iberdrola, S.A.	$ 1	$ (38)	$ 1	$ (36)	$ —	$ (31)
Iberdrola Energia Monterrey, S.A. de C.V.	$ 3	$ —	$ 46	$ —	$ 18	$ —
Other	$ 5	$ (5)	$ 1	$ (1)	$ 3	$ (1)

In addition to the statements of income items above, we made purchases of turbines for wind farms from Siemens-Gamesa, in which Iberdrola has an 8.1% ownership. The amounts capitalized for these transactions were $6 million and $266 million for the years ended December 31, 2018 and 2017, respectively.

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Related party balances as of December 31, 2018 and 2017, respectively, consisted of:

As of December 31,	2018		2017	
(Millions)	Owed By	Owed To	Owed By	Owed To
Iberdrola Canada Energy Services, Ltd	$ —	$ —	$ —	$ (31)
Siemens-Gamesa	—	(14)	2	(51)
Iberdrola, S.A.	1	(40)	1	(32)
Iberdrola Renovables Energía, S.L.	4	—	—	—
Iberdrola Energia Monterrey, S.A. de C.V.	—	—	1	—
Other	1	(4)	6	(4)

Transactions with Iberdrola, our majority shareholder, relate predominantly to the provision and allocation of corporate services and management fees. All costs that can be specifically allocated, to the extent possible, are charged directly to the company receiving such services. In situations when Iberdrola corporate services are provided to two or more companies of AVANGRID, any costs remaining after direct charges are allocated using agreed upon cost allocation methods designed to allocate such costs. We believe that the allocation method used is reasonable.

Transactions with Iberdrola Canada Energy Services (ICES) predominantly relate to the purchase of gas for ARHI's gas-fired cogeneration facility in Klamath, Oregon. Included in the amounts owed to ICES are notes payable of $0 and $29 million as of December 31, 2018 and December 31, 2017, respectively.

Transactions with Iberdrola Energia Monterrey predominantly related to the sale of gas by Gas for the power generation plant in Monterrey, Mexico.

There have been no guarantees provided or received for any related party receivables or payables. These balances are unsecured and are typically settled in cash. Interest is not charged on regular business transactions but is charged on outstanding loan balances. There have been no impairments or provisions made against any affiliated balances.

Networks holds an approximate 20% ownership interest in the regulated New York TransCo. Through New York TransCo, Networks has formed a partnership with Central Hudson Gas and Electric Corporation, Consolidated Edison, Inc., National Grid, plc and Orange and Rockland Utilities, Inc. to develop a portfolio of interconnected transmission lines and substations to fulfill the objectives of the New York energy highway initiative, which is a proposal to install up to 3,200 MW of new electric generation and transmission capacity in order to deliver more power generated from upstate New York power plants to downstate New York. In 2016, Networks has increased its equity method investment in the New York TransCo by approximately $21 million (included in "Other investments and equity method investments, net" of investing activities in the consolidated statements of cash flows) for a total equity method investment of $22 million. Additionally, in 2016, Networks received approximately $67 million from the New York TransCo in the form of $43 million for assets constructed and transferred to the New York TransCo (included in "Proceeds from sale of property, plant and equipment" of investing activities in the consolidated statements of cash flows), $22 million in contributions in aid of construction and approximately $2 million in advanced lease payments for a 99 year lease of land and attachment rights. As of December 31, 2018 and 2017, the amount receivable from New York TransCo was $1 million and $6 million, respectively.

We hold a 50% voting interest in Vineyard Wind, a joint venture with Copenhagen Infrastructure Partners. Vineyard Wind acquired a lease from the U.S. Bureau of Ocean Energy Management containing rights to develop offshore wind generation in a 260 square mile area located southeast of Martha's Vineyard. The leased area has the capacity for siting up to approximately 3,000 MW. In May 2018, Vineyard Wind was selected by the Massachusetts Electric Distribution Companies (EDCs) to construct and operate Vineyard Wind's proposed 800 MW wind farm and electricity transmission project pursuant to the Massachusetts Green Communities Act Section 83C RFP for offshore wind energy projects. Under the provisions of the LLC agreement, Renewables has committed $92 million in total contributions, of which $54 million has been funded to date. We expect to provide additional capital contributions as the project develops. There was no amount receivable from Vineyard Wind as of both December 31, 2018 and 2017.

In December 2018, Renewables, through its joint venture in Vineyard Wind, was awarded a second Massachusetts offshore lease. In February 2019, a contribution was made to a new offshore development project of $100 million to enter into the lease contract.

AVANGRID manages its overall liquidity position as part of the Iberdrola Group and is a party to a liquidity agreement with a financial institution, along with certain members of the Iberdrola Group. Cash surpluses remaining after meeting the liquidity requirements of AVANGRID and its subsidiaries may be deposited at the financial institution. Deposits, or credit balances, serve as collateral against the debit balances of other parties to the liquidity agreement. The balance at both December 31, 2018 and 2017, was zero.

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On June 18, 2018, AVANGRID entered into a credit facility with Iberdrola Financiacion, S.A.U., a company of the Iberdrola Group. The facility has a limit of $500 million and matures on June 18, 2023. AVANGRID pays a facility fee of 10.5 basis points annually on the facility. As of December 31, 2018, there was no outstanding amount under this credit facility.

Note 25. Stock-Based Compensation

Under the Avangrid, Inc. Omnibus Incentive Plan, 1,298,683 performance stock units (PSUs) were granted to certain officers and employees of AVANGRID in July 2016. In 2017 and 2018, an additional 85,759 and 75,350 PSUs, respectively, were granted to officers and employees of AVANGRID under this plan. The PSUs will vest upon achievement of certain performance and market-based metrics related to the 2016 through 2019 plan and will be payable in three equal installments in 2020, 2021 and 2022. As of December 31, 2018, the total number of shares authorized for stock-based compensation plans was 2,500,000.

The fair value of the PSUs on the grant date was $31.80 per share, which is expensed on a straight-line basis over the requisite service period of approximately seven years based on expected achievement. The fair value of the PSUs was determined using valuation techniques to forecast possible future stock prices, applying a weighted average historical stock price volatility of AVANGRID and industry companies, a risk-free rate of interest that is equal, as of the grant date, to the yield of the zero-coupon U.S. Treasury bill and a reduction for the respective dividend yield calculated based on the most recent quarterly dividend payment and the stock price as of the grant date.

In June and October 2018, pursuant to the Avangrid, Inc. Omnibus Incentive Plan two restricted stock units (RSUs) awards of 60,000 and 8,000 RSUs, respectively, were granted to certain officers of AVANGRID. The RSUs vest in full in one installment in June and December 2020, respectively for each award, provided that the award holders remain continuously employed with AVANGRID through such dates. The fair value on the grant date was determined based on a price of $50.40 and $47.59 per share, respectively, for June and October 2018 awards.

The total stock-based compensation expense, which is included in operations and maintenance of the consolidated statements of income for the years ended December 31, 2018, 2017 and 2016 was $2.0 million, $1.2 million and $0.6 million, respectively. The total income tax benefit recognized for stock-based compensation arrangements for the years ended December 31, 2018, 2017 and 2016, was $0.5 million, $0.5 million and $0.2 million, respectively.

Before 2016, AVANGRID's historical stock-based compensation expense and liabilities were based on shares of Iberdrola and not on shares of AVANGRID. These Iberdrola shares-based awards were early terminated at the end of 2015, and the remaining liability was settled in March 2018. The total liability relating to those awards, which is included in other current liabilities, was $5.5 million as of December 31, 2017.

A summary of the status of the AVANGRID's nonvested PSUs and RSUs as of December 31, 2018, and changes during the fiscal year ended December 31, 2018, is presented below:

	Number of PSUs and RSUs	Weighted Average Grant Date Fair Value
Nonvested Balance - December 31, 2017	1,384,259	$ 32.57
Granted	144,476	$ 40.54
Forfeited	(128,647)	$ 31.80
Vested	(131,366)	$ 49.09
Nonvested Balance - December 31, 2018	1,268,722	$ 32.80

As of December 31, 2018, total unrecognized costs for non-vested PSUs and RSUs were $6.1 million. The weighted-average period over which the PSU and RSUs costs will be recognized is approximately 3 years.

The weighted-average grant date fair value of PSUs and RSUs granted during the year was $40.54 per share for the year ended December 31, 2018.

Note 26. Assets Held For Sale

In December 2017, our management committed to a plan to sell the gas trading and storage businesses because they represented non-core businesses that were not aligned with our strategic objectives. At that time, we determined that the assets and liabilities associated with our gas trading and storage businesses met the criteria for classification as assets held for sale, but did not meet the criteria for classification as discontinued operations. On March 1, 2018, the Company closed a transaction to sell Enstor Energy Services, LLC, which operated AVANGRID's gas trading business, to CCI U.S. Asset Holdings LLC, a subsidiary of Castleton Commodities International, LLC for $66 million, subject to working capital, cash and other adjustments. The transaction price

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did not differ materially from the estimated fair value of our gas trading business at December 31, 2017, but is subject to adjustment based on closing and other contract provisions, including certain transition services.

On May 1, 2018, the Company closed a transaction to sell Enstor Gas, LLC, which operated AVANGRID's gas storage business, to Amphora Gas Storage USA, LLC for $66 million, subject to working capital, cash and other adjustments. The agreement to sell Enstor Gas, LLC contains, among other things, a transition services agreement which obligates ARHI to provide certain transition services for up to one year after the closing date. In connection with the held for sale classification, we recorded a loss from held for sale measurement of $15.6 million and $642 million for the years ended December 31, 2018 and 2017, respectively, which is included in Loss on assets held for sale in the consolidated statements of income related to final purchase price negotiations and certain related working capital adjustments. Loss before income tax, adjusted for corporate overhead, attributed to the gas businesses was $3.8 million, $715 million and $58 million for the years ended December 31, 2018, 2017 and 2016, respectively.

The current assets and current liabilities held for sale relating to our gas trading and storage businesses consisted of the following as of December 31, 2017:

As of December 31,	2017
(Millions)	
Accounts receivable, net	$ 137
Derivative assets	25
Fuel and gas in storage	77
Prepayments and other current assets	19
Property, plant and equipment	71
Intangible assets	28
Assets held for sale	**$ 357**
Accounts payable and accrued liabilities	107
Derivative liabilities	14
Other liabilities	16
Liabilities held for sale	**$ 137**

The fair values of the assets held for sale were determined using Level 3 inputs and were estimated based on recent market analysis studies, recent offers, and management has performed its own fair valuation modeling using discounted cash flows updated for market participant assumptions as completed by third party valuation firms. Unobservable inputs obtained from third parties were adjusted as necessary for the condition and attributes of the specific assets.

Note 27. Restructuring and Severance Related Expenses

In 2017, we announced initial targeted voluntary workforce reductions predominantly within the Networks segment. Those actions primarily include: reducing our workforce through voluntary programs in various areas to better align our people resources with business demands and priorities; reorganizing our human resources function to substantially consolidate in Connecticut, as well as related costs to vacate a lease and relocate employees; and reducing our information technology (IT) workforce to make increasing use of external services for operations, support, and development of systems. Those decisions and transactions resulted in restructuring charges of $3.2 million and $15.2 million for severance expenses and $0 and $4 million for lease termination expenses, which are included in "Operations and maintenance" in the consolidated statements of income for the years ended December 31, 2018 and 2017, and approximately $1.2 million of accelerated amortization of leasehold improvements, which are included in "Depreciation and amortization" in the consolidated statements of income for the year ended December 31, 2017. The remaining costs for severance agreements are being accrued ratably over the service periods, which span intermittent periods through December 2019. For the year ended December 31, 2018, the severance and lease restructuring charges reserves, which are recorded in "Other current liabilities" and "Other liabilities", consisted of:

For the Year Ended December 31,	2018
	(Millions)
Beginning Balance	$ 5
Restructuring and severance related expenses	3
Payments	(4)
Ending Balance	$ 4

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Note 28. Quarterly financial data (unaudited)

Selected quarterly financial data for 2018 and 2017 are set forth below:

(Millions, except per share data)	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2018				
Operating revenues	$ 1,865	$ 1,402	$ 1,546	$ 1,665
Operating Income	$ 403	$ 222	$ 253	$ 249
Net Income	$ 238	$ 110	$ 134	$ 116
Net Income attributable to Avangrid, Inc.	$ 244	$ 107	$ 125	$ 119
Earnings Per Common Share, Basic and Diluted: (1)	$ 0.79	$ 0.35/$0.34	$ 0.40	$ 0.38
2017				
Operating revenues	$ 1,758	$ 1,331	$ 1,341	$ 1,533
Operating Income	$ 427	$ 252	$ 218	$ (392)
Net Income	$ 239	$ 120	$ 100	$ (77)
Net Income attributable to Avangrid, Inc.	$ 239	$ 120	$ 99	$ (77)
Earnings Per Common Share, Basic and Diluted: (1)	$ 0.77	$ 0.39	$ 0.32	$ (0.25)

(1) Based on weighted average number 309.5 million shares and 309.8 million shares outstanding each quarter in both 2018 and 2017 for basic and diluted earnings per share, respectively.

The first and second quarters of 2018 include a loss of $5 million and $10 million, respectively, associated with measurement of held for sale assets of gas trading and storage business, $14 million and $17 million after income taxes. Additionally, the second and fourth quarters of 2018 include the impacts of $7 million and $39 million, respectively, from the measurement of deferred income tax balances as a result of the Tax Act enacted on December 22, 2017 by the U.S. federal government.

The first quarter of 2017 includes an adjustment of $14 million to unfunded future income tax to reflect the change from a flow through to normalization method, which was recorded as an increase to income tax expense and an offsetting increase to revenue. The third and fourth quarters of 2017 include severance and lease restructuring charges of, respectively, $2.1 million and $17.1 million. Additionally, the fourth quarter includes a loss of $642 million associated with measurement of held for sale assets of gas trading and storage business, $463 million after income taxes, and an impact of $328 million from measurement of deferred income tax balances as a result of the Tax Act enacted on December 22, 2017 by the U.S. federal government.

Note 29. Subsequent events

On February 13, 2019, the board of directors of AVANGRID declared a quarterly dividend of $0.44 per share on its common stock. This dividend is payable on April 1, 2019 to shareholders of record at the close of business on March 8, 2019.

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Schedule I –Financial Statements of Parent

AVANGRID, INC. (PARENT)
CONDENSED FINANCIAL INFORMATION OF PARENT
STATEMENTS OF INCOME
FOR THE YEARS ENDED December 31, 2018, 2017 AND 2016
(Millions)

Years Ended December 31,	2018	2017	2016
Operating Revenues	$ —	$ —	$ —
Operating Expenses			
Operating expense	3	3	5
Taxes other than income taxes	(11)	5	5
Total Operating Expenses	(8)	8	10
Operating Income (Loss)	8	(8)	(10)
Other Income and (expense)			
Other income	48	58	68
Equity earnings of subsidiaries	604	312	567
Interest expense	(56)	(29)	(32)
Income Before Income Tax	604	333	593
Income tax expense (benefit)	9	(48)	(39)
Net Income	**$ 595**	**$ 381**	**$ 632**

See accompanying notes to Schedule I.

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Schedule I –Financial Statements of Parent

AVANGRID, INC. (PARENT)
CONDENSED FINANCIAL INFORMATION OF PARENT
STATEMENTS OF COMPREHENSIVE INCOME
FOR THE YEARS ENDED December 31, 2018, 2017, AND 2016
(Millions)

Years Ended December 31,	2018	2017	2016
Net Income	$ 595	$ 381	$ 632
Other comprehensive (loss) income of subsidiaries	(25)	40	(34)
Comprehensive Income	**$ 570**	**$ 421**	**$ 598**

See accompanying notes to Schedule I.

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Schedule I –Financial Statements of Parent

AVANGRID, INC. (PARENT)
CONDENSED FINANCIAL INFORMATION OF PARENT
BALANCE SHEETS
AS OF December 31, 2018 AND 2017
(Millions)

As of December 31,	2018	2017
Assets		
Current Assets		
Cash and cash equivalents	$ —	$ 8
Accounts receivable from subsidiaries	306	55
Notes receivable from subsidiaries	666	1,129
Prepayments and other current assets	21	—
Total current assets	993	1,192
Investments in subsidiaries	16,067	15,531
Other assets		
Deferred income taxes	312	285
Other	1	9
Total other assets	313	294
Total Assets	**$ 17,373**	**$ 17,017**
Liabilities		
Current Liabilities		
Current portion of debt	$ 8	$ 7
Notes payable	588	507
Notes payable to subsidiaries	456	208
Accounts payable and accrued liabilities	10	6
Accounts payable to subsidiaries	9	1
Interest accrued	7	8
Interest accrued subsidiaries	6	4
Dividends payable	136	134
Taxes accrued	—	8
Total current liabilities	1,220	883
Non-current debt	1,049	1,057
Total non-current liabilities	1,049	1,057
Total Liabilities	2,269	1,940
Equity		
Stockholders' Equity:		
Common stock	3	3
Additional paid-in capital	13,657	13,653
Treasury Stock	(12)	(8)
Retained earnings	1,528	1,475
Accumulated other comprehensive loss	(72)	(46)
Total Equity	15,104	15,077
Total Liabilities and Equity	**$ 17,373**	**$ 17,017**

See accompanying notes to Schedule I.

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Schedule I –Financial Statements of Parent

AVANGRID, INC. (PARENT)
CONDENSED FINANCIAL INFORMATION OF PARENT
STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED December 31, 2018, 2017, AND 2016
(Millions)

Years Ended December 31,	2018	2017	2016
Net Cash (used in) provided by Operating Activities	**$ (323)**	**$ (1)**	**$ 324**
Cash Flow from Investing Activities			
Notes receivable from subsidiaries	462	(532)	(627)
Investments in subsidiaries	(48)	—	(533)
Return of capital from investments in subsidiaries	116	308	420
Net Cash provided by (used in) Investing Activities	530	(224)	(740)
Cash Flow from Financing Activities			
Proceeds (repayments) of short-term notes payable from subsidiaries, net	246	(246)	133
Proceeds from short-term notes payable	82	357	150
Proceeds of non-current debt	—	594	483
Repurchase of common stock	(4)	(3)	(5)
Issuance of common stock	(2)	(1)	(2)
Dividends paid	(537)	(535)	(401)
Net Cash (used in) provided by Financing Activities	(215)	166	358
Net Decrease in Cash and Cash Equivalents	(8)	(59)	(58)
Cash and Cash Equivalents, Beginning of Year	8	67	125
Cash and Cash Equivalents, End of Year	$ —	$ 8	$ 67
Supplemental Cash Flow Information			
Cash paid for interest	$ 55	$ 52	$ 4
Cash payment (refund) for income taxes	$ 55	$ (8)	$ 71

See accompanying notes to Schedule I.

Note 1. Basis of Presentation

Avangrid, Inc. (AVANGRID), formerly Iberdrola USA, Inc., is a holding company and conducts substantially all of its business through its subsidiaries. Substantially all of its consolidated assets are held by such subsidiaries. Accordingly, its cash flow and its ability to meet its obligations are largely dependent upon the earnings of these subsidiaries and the distribution of other payment of such earnings to in the form of dividends, loans or advances or repayment of loans and advances from it. These condensed financial statements and related footnotes have been prepared in accordance with regulatory statute 210.12-04 of Regulation S-X. These statements should be read in conjunction with the consolidated financial statements and notes thereto of AVANGRID and subsidiaries (AVANGRID Group).

AVANGRID indirectly or directly owns all of the ownership interests of its significant subsidiaries. AVANGRID relies on dividends or loans from its subsidiaries to fund dividends to its primary shareholder.

AVANGRID's significant accounting policies are consistent with those of the AVANGRID Group. For the purposes of these condensed financial statements, AVANGRID's wholly owned and majority owned subsidiaries are recorded based upon its proportionate share of the subsidiaries net assets.

AVANGRID will file a consolidated federal income tax return that includes the taxable income or loss of all its subsidiaries for the 2018 tax period. Each subsidiary company is treated as a member of the consolidated group and determines its current and deferred taxes separately and settles its current tax liability or benefit each year directly with AVANGRID pursuant to a tax sharing agreement between AVANGRID and its members.

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Note 2. Common Stock

As of December 31, 2018, AVANGRID share capital consisted of 500,000,000 shares of common stock authorized, 309,752,140 shares issued and 309,005,272 shares outstanding, 81.5% of which are owned by Iberdrola, each having a par value of $0.01, for a total value of common stock of $3 million and additional paid in capital of $13,657 million. As of December 31, 2017, AVANGRID share capital consisted of 500,000,000 shares of common stock authorized, 309,670,932 shares issued and 309,005,272 shares outstanding, 81.5% of which were owned by Iberdrola, each having a par value of $ $0.01, for a total value of common stock capital of $3 million and additional paid in of $13,653 million. AVANGRID had 485,810 shares of common stock held in trust and no convertible preferred shares outstanding as of both December 31, 2018 and 2017. During the year ended December 31, 2018, AVANGRID issued 81,208 shares of common stock and released no shares of common stock held in trust each having a par value of $0.01. During the year ended December 31, 2017, AVANGRID issued 70,493 shares of common stock and released 5,649 shares of common stock held in trust each having a par value of $0.01.

On April 28, 2016, AVANGRID entered into a repurchase agreement with J.P. Morgan Securities, LLC. (JPM), pursuant to which JPM will, from time to time, acquire, on behalf of AVANGRID, shares of common stock of AVANGRID. The purpose of the stock repurchase program is to allow AVANGRID to maintain the relative ownership percentage of Iberdrola at 81.5%. The stock repurchase program may be suspended or discontinued at any time upon notice. Out of 261,058 treasury shares of common stock of AVANGRID as of December 31, 2018, 115,831 shares were repurchased during 2017, 64,019 shares were repurchased in May 2017 and 81,208 shares were repurchased in May 2018, all in the open market. The total cost of repurchase, including commissions, was $12 million as of December 31, 2018.

On February 13, 2019, the board of directors of AVANGRID declared a quarterly dividend of $0.44 per share on its common stock. This dividend is payable on April 1, 2019 to shareholders of record at the close of business on March 8, 2019.

Note 3. Non-current Debt

Supplemental Indenture

On December 19, 2016, AVANGRID, its subsidiary, UIL, and The Bank of New York Mellon, entered into a supplemental indenture, pursuant to which AVANGRID assumed from UIL all the obligations under the indenture dated as of October 7, 2010 between UIL and The Bank of New York Mellon and all obligations relating to $450 million in aggregate principal amount of 4.625% notes due 2020 issued by the predecessor company to UIL in 2010. For the purpose of the supplemental indenture a capital contribution of $483 million was made by AVANGRID to UIL in December 2016.

On November 21, 2017, AVANGRID issued $600 million aggregate principal amount of its 3.150% notes maturing in 2024. Proceeds of the offering were used to reduce short-term debt incurred to fund capital expenditures associated with development of renewable energy generation facilities. Net proceeds of the offering after the price discount and issuance-related expenses were $594 million.

Note 4. Cash Dividends Paid by Subsidiaries

Cash dividends paid by subsidiaries are as follows:

Years ended December 31,	2018	2017	2016
(In millions)			
AVANGRID Networks	$ 116	$ 308	$ 220
AVANGRID Renewables	—	—	200
	$ 116	$ 308	$ 420

In December 2018 and December 2016, AVANGRID made a capital contribution of $50 million to each of its subsidiaries, UI and CMP, respectively. During 2018 and 2017, AVANGRID recorded a net non-cash contribution and dividend of $1,515 million and $1,318 million, respectively, to and from its subsidiaries to zero out their account balances of notes receivables and payables.

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Item 9. ***Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.***

None.

Item 9A. ***Controls and Procedures.***

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer, or CEO, and our Chief Financial Officer, or CFO, has evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended, or the Exchange Act), as of the end of the period covered by this Annual Report on Form 10-K. Based on such evaluation, our CEO and CFO have concluded that as of such date, our disclosure controls and procedures were effective to provide reasonable assurance that information required to be disclosed by the Company in reports that it files or submits under the Exchange Act is (i) recorded, processed, summarized and reported within the time periods specified in the SEC rules and forms and (ii) accumulated and communicated to the Company's management, including its CEO and CFO, as appropriate to allow timely decisions regarding required disclosure.

Report of Management on Internal Control Over Financial Reporting

The management of AVANGRID is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. AVANGRID's internal control system over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles. AVANGRID's internal control over financial reporting includes those policies and procedures that:

(i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company;

(ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with U.S. generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and

(iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the company's assets that could have a material effect on the financial statements.

Because of inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation. Also, projections of any evaluation of effectiveness to future periods are subject to risk that controls may become inadequate because of changes in condition, or that the degree of compliance with the policies or procedures may deteriorate.

AVANGRID's management assessed the effectiveness of AVANGRID's internal control over financial reporting as of December 31, 2018. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) ("COSO") in Internal Control-Integrated Framework. Based on this assessment, management determined that our internal control over financial reporting was effective as of December 31, 2018.

Our independent registered public accounting firm, KPMG LLP, has issued an audit report on the Company's internal control over financial reporting, which appears in Part II, Item 8 of this Form 10-K.

Changes in Internal Control

Other than the remediation efforts identified below to remediate the material weakness disclosed in the 2017 Form 10-K, there were no changes in our internal control over financial reporting identified in connection with the evaluation required by Rules 13a-15(d) and 15d-15(d) of the Exchange Act during the period covered by this Annual Report on Form 10-K that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Material Weakness Remediation

As disclosed in Part II. Item 9A. Controls and Procedures in our Annual Report on Form 10-K for the year ended December 31, 2017, we identified a material weakness in internal control over financial reporting related to the measurement and disclosure of income taxes.

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Our management, with oversight from the Audit and Compliance Committee of the Board of Directors, conducted the following remediation efforts that effectively remediated the material weakness as of December 31, 2018:

- Further accelerated the deadline of key activities to allow sufficient time for the execution of consolidated deferred income tax controls that were further refined during 2018 that management has determined through testing are more precise;
- Further increased the capabilities of income tax accounting resources to devote additional time and internal control resources to consolidated income tax accounting and reporting processes and controls; and
- Enhanced the automation of certain income tax processes and controls to allow for the more timely completion and enhanced review of internal controls surrounding consolidated deferred income tax financial information and disclosures.

During the fourth quarter of fiscal 2018, we completed our testing of the operating effectiveness of the implemented controls and found them to be effective. As a result, we have concluded that the material weakness has been remediated as of December 31, 2018.

Item 9B. ***Other Information.***

None.

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PART III

Item 10. ***Directors, Executive Officers and Corporate Governance.***

For information regarding our executive officers, see Part I of this Annual Report on Form 10-K. Additional information required by this item is incorporated by reference to our Proxy Statement for the 2019 Annual Meeting of Shareholders to be filed with the SEC within 120 days of the fiscal year ended December 31, 2018.

Item 11. ***Executive Compensation.***

The information required by this item is incorporated by reference to our Proxy Statement for the 2019 Annual Meeting of Shareholders to be filed with the SEC within 120 days of the fiscal year ended December 31, 2018.

Item 12. ***Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.***

The information required by this item is incorporated by reference to our Proxy Statement for the 2019 Annual Meeting of Shareholders to be filed with the SEC within 120 days of the fiscal year ended December 31, 2018.

Item 13. ***Certain Relationships and Related Transactions, and Director Independence.***

The information required by this item is incorporated by reference to our Proxy Statement for the 2019 Annual Meeting of Shareholders to be filed with the SEC within 120 days of the fiscal year ended December 31, 2018.

Item 14. ***Principal Accounting Fees and Services.***

The information required by this item is incorporated by reference to our Proxy Statement for the 2019 Annual Meeting of Shareholders to be filed with the SEC within 120 days of the fiscal year ended December 31, 2018.

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Part IV

Item 15. ***Exhibits and Financial Statement Schedules.***

a) The following documents are made a part of this Annual Report on Form 10-K:

1. Financial Statements—Our consolidated financial statements are set forth under Part II, Item 8 "Financial Statements and Supplementary Data."

2. Financial Statement Schedules— Our financial statement schedules are set forth under Part II, Item 8 "Financial Statements and Supplementary Data."

3. Exhibits—The following instruments and documents are included as exhibits to this report.

Exhibit Number	Exhibit Description
2.1	Agreement and Plan of Merger, dated as of February 25, 2015, by and among Avangrid, Inc. (formerly Iberdrola USA, Inc.), Green Merger Sub, Inc. and UIL Holdings Corporation (incorporated herein by reference to Annex A to the proxy statement/prospectus included as Exhibit 2.1 in our Registration Statement on Form S-4 filed with the Securities and Exchange Commission on July 17, 2015).
3.1	Certificate of Incorporation of Avangrid, Inc. (incorporated herein by reference to Exhibit 3.2 to Form 8-K filed with the Securities and Exchange Commission on December 18, 2015).
3.2	Amended and Restated Bylaws of Avangrid, Inc. (incorporated herein by reference to Exhibit 3.1 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended June 30, 2017).
4.1	Specimen Common Stock Certificate (incorporated herein by reference to Exhibit 4.1 to Form S-4/A filed with the Securities and Exchange Commission on October 21, 2015).
4.2	Senior Indenture, dated as of October 7, 2010, between UIL Holdings Corporation and The Bank of New York Mellon, as trustee (incorporated herein by reference to Exhibit 4.1 of UIL Holdings Corporation's Current Report on Form 8-K filed with the Securities and Exchange Commission on October 7, 2010).
4.3	First Supplemental Indenture, dated as of October 7, 2010, between UIL Holdings Corporation and The Bank of New York Mellon, as trustee (incorporated herein by reference to Exhibit 4.2 of UIL Holdings Corporation's Current Report on Form 8-K filed with the Securities and Exchange Commission on October 7, 2010).
4.4	Second Supplemental Indenture, dated as of December 16, 2015, among UIL Holdings Corporation, Green Merger Sub, Inc. and The Bank of New York Mellon, as trustee (incorporated herein by reference to Exhibit 4.2 to Form 8-K filed with the Securities and Exchange Commission on December 18, 2015).
4.5	Third Supplemental Indenture, dated as of December 19, 2016, among Avangrid, Inc., UIL Holdings Corporation and The Bank of New York Mellon, as trustee (incorporated herein by reference to Exhibit 4.5 of AVANGRID's Annual Report on Form 10-K filed with the SEC for the fiscal year ended December 31, 2016).
4.6	Indenture, dated as of November 21, 2017, between the Company and The Bank of New York Mellon, as trustee (incorporated herein by reference to Exhibit 4.1 to Form 8-K filed with the Securities and Exchange Commission on November 21, 2017).
4.7	First Supplemental Indenture, dated November 21, 2017, between the Company and The Bank of New York Mellon, as trustee (incorporated herein by reference to Exhibit 4.2 to Form 8-K filed with the Securities and Exchange Commission on November 21, 2017).
4.8	Form of Global Note Representing the Notes (incorporated herein by reference to Exhibit 4.3 to Form 8-K filed with the Securities and Exchange Commission on November 21, 2017).
10.1	Shareholder Agreement, dated as of December 16, 2015, by and between Avangrid, Inc. and Iberdrola, S.A. (incorporated herein by reference to Exhibit 4.1 to Form 8-K filed with the Securities and Exchange Commission on December 18, 2015).

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Exhibit Number	Exhibit Description
10.2	Service Agreement, dated January 1, 2014, between Iberdrola USA, Inc. Management Corporation and Avangrid, Inc. (formerly Iberdrola USA, Inc.) (incorporated herein by reference to Exhibit 10.2 to Form S-4 filed with the Securities and Exchange Commission on July 17, 2015).
10.3	Accession Agreement, dated September 16, 2011, between Iberdrola Renewables Holdings, Inc. and Bank Mendes Gans N.V. (incorporated herein by reference to Exhibit 10.14 to Form S-4 filed with the Securities and Exchange Commission on July 17, 2015).
10.4	Guarantee and Support Agreement, dated April 3, 2008, between Iberdrola, S.A. and ScottishPower Holdings, Inc. (incorporated herein by reference to Exhibit 10.15 to Form S-4 filed with the Securities and Exchange Commission on July 17, 2015).
10.5	Amendment No. 1 to Guarantee and Support Agreement, dated May 27, 2010, between Iberdrola, S.A. and Iberdrola Renewables Holdings, Inc. (formerly known as ScottishPower Holdings, Inc.) (incorporated herein by reference to Exhibit 10.16 to Form S-4 filed with the Securities and Exchange Commission on July 17, 2015).
10.6	English Translation of Regulations for the "2014-2016 Strategic Bonus" for Senior Officers and Officers of Iberdrola, S.A. and Its Group of Companies (incorporated herein by reference to Exhibit 10.19 to Form S-4/A filed with the Securities and Exchange Commission on September 9, 2015).†
10.7	Provisions to be Applied to U.S. Participants in Relation to the Regulations for the "2014-2016 Strategic Bonus" for Senior Officers and Officers of Iberdrola, S.A. and Its Group of Companies (incorporated herein by reference to Exhibit 10.20 to Form S-4/A filed with the Securities and Exchange Commission on September 9, 2015). †
10.8	Employment Agreement dated October 1, 2010 among Robert Daniel Kump, Iberdrola USA Networks, Inc. (formerly Iberdrola USA, Inc.) and Iberdrola USA Management Corporation (incorporated herein by reference to Exhibit 10.23 to Form S-4/A filed with the Securities and Exchange Commission on September 9, 2015). †
10.9	Service Contract dated January 16, 2014 between Robert Daniel Kump and Avangrid, Inc. (incorporated herein by reference to Exhibit 10.24 to Form S-4/A filed with the Securities and Exchange Commission on September 9, 2015). †
10.10	Employment Agreement dated March 1, 2008 between R. Scott Mahoney and Iberdrola USA Management Corporation (formerly Energy East Management Corporation) (incorporated herein by reference to Exhibit 10.27 to Form S-4/A filed with the Securities and Exchange Commission on September 9, 2015).†
10.11	Framework Agreement for the Provision of Corporate Services for Iberdrola and the Companies of its Group, and the Declaration of Acceptance, dated July 16, 2015 (incorporated herein by reference to Exhibit 10.28 to Form S-4 filed with the Securities and Exchange Commission on July 17, 2015).
10.12	Equipment Supply Agreement dated December 28, 2014 between Iberdrola Renewables, LLC and Gamesa Wind US, LLC (incorporated herein by reference to Exhibit 10.29 to Form S-4/A filed with the Securities and Exchange Commission on November 6, 2015).
10.13	Agreement and Release dated September 25, 2009 between Robert Daniel Kump and Iberdrola USA Management Corporation (formerly Energy East Management Corporation) (incorporated herein by reference to Exhibit 10.31 to Form S-4/A filed with the Securities and Exchange Commission on September 9, 2015). †
10.14	Form of Indemnification Agreement between Avangrid, Inc. (formerly Iberdrola USA, Inc.) and its directors and officers (incorporated herein by reference to Exhibit 10.32 to Form S-4/A filed with the Securities and Exchange Commission on October 21, 2015).†

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Exhibit Number	Exhibit Description
10.15	UIL Holdings Corporation 2008 Stock and Incentive Compensation Plan as Amended and Restated May 14, 2013 (incorporated herein by reference to Exhibit 99.1 to Form S-8 filed with the Securities and Exchange Commission on December 16, 2015).†
10.16	UIL Holdings Corporation Deferred Compensation Plan Grandfathered Benefits Provisions, dated August 4, 2008 (incorporated herein by reference to Exhibit 99.2 to Form S-8 filed with the Securities and Exchange Commission on December 16, 2015).†
10.17	UIL Holdings Corporation Deferred Compensation Plan Non-Grandfathered Benefits Provisions, as amended and restated effective dated January 1, 2013 (incorporated herein by reference to Exhibit 99.3 to Form S-8 filed with the Securities and Exchange Commission on December 16, 2015).†
10.18	Employment Agreement, dated as of July 8, 2005, between The United Illuminating Company and Richard J. Nicholas (incorporated herein by reference to Exhibit 10.4 of UIL Holdings Corporation's Current Report on Form 8-K filed with the Securities and Exchange Commission on July 11, 2005).†
10.19	First Amendment, dated August 4, 2008, to Employment Agreement, dated as of July 8, 2005, between The United Illuminating Company and Richard J. Nicholas (incorporated herein by reference to Exhibit 10.14a of UIL Holdings Corporation's Quarterly Report on Form 10-Q for the quarter ended June 30, 2008).†
10.20	Amended and Restated UIL Holdings Corporation Change In Control Severance Plan II, dated August 4, 2008 (incorporated herein by reference to Exhibit 10.28a of UIL Holdings Corporation's Quarterly Report on Form 10-Q for the quarter ended June 30, 2008).†
10.21	Employment Agreement, dated as of January 1, 2016, among Avangrid, Inc., Avangrid Service Company and James P. Torgerson (incorporated herein by reference to Exhibit 10.1 to AVANGRID's Current Report on Form 8-K filed with the SEC on April 22, 2016).†
10.22	Commercial Paper/Certificates of Deposit Issuing and Paying Agent Agreement dated May 13, 2016 among Avangrid, Inc., as Issuer, and Bank of America, National Association, as Issuing and paying Agent (incorporated herein by reference to Exhibit 10.1 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended June 30, 2016).
10.23	Form of Commercial Paper Dealer Agreement among Avangrid, Inc., as Issuer, and various Dealers (incorporated herein by reference to Exhibit 10.2 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended June 30, 2016).
10.24	Form of Performance Stock Unit Grant Agreement (incorporated herein by reference to Exhibit 10.1 to AVANGRID's Current Report on Form 8-K filed with the SEC on July 19, 2016).†
10.25	Avangrid, Inc. Omnibus Incentive Plan (incorporated herein by reference to Form S-8 filed with the SEC on July 21, 2016).†
10.26	Uncommitted Line of Credit for Standby Letters of Credit Agreement, dated as of December 2, 2016, between Avangrid, Inc. and Crédit Agricole Corporate (incorporated herein by reference to Exhibit 10.44 of AVANGRID's Annual Report on Form 10-K filed with the SEC for the fiscal year ended December 31, 2016).
10.27	Substitution Agreement, dated as of December 19, 2016, between UIL Holdings Corporation and Avangrid, Inc. (incorporated herein by reference to Exhibit 10.45 of AVANGRID's Annual Report on Form 10-K filed with the SEC for the fiscal year ended December 31, 2016).
10.28	Amended and Restated Avangrid, Inc. Omnibus Incentive Plan (incorporated herein by reference to Exhibit 10.1 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended March 31, 2017).†
10.29	Offer Letter, dated March 5, 2015, between Sheila Duncan and Avangrid Management Company (as assignee of Avangrid Service Company, which was formerly known as Iberdrola USA Management Corporation) (incorporated herein by reference to Exhibit 10.2 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended March 31, 2017).†

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Exhibit Number	Exhibit Description
10.30	Customer Liquidity Agreement, dated December 1, 2017, between Avangrid, Inc., Bank of America, National Association, Iberdrola, S.A., Iberdrola Mexico, S.A. de C.V., and Scottish Power Ltd.
10.31	Underwriting Agreement, dated November 16, 2017, by and among the Avangrid, Inc., BBVA Securities Inc., BNP Paribas Securities Corp., Citigroup Global Markets Inc., and Wells Fargo Securities, LLC (incorporated herein by reference to Exhibit 1.1 to Form 8-K filed with the Securities and Exchange Commission on November 21, 2017).
10.32	Purchase Agreement, dated January 31, 2018, between Avangrid Renewables Holdings, Inc. and CCI U.S. Asset Holdings LLC (incorporated herein by reference to Exhibit 10.1 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended March 31, 2018).
10.33	Purchase Agreement, dated February 16, 2018, between Avangrid Renewables Holdings, Inc. and Amphora Gas Storage USA, LLC (incorporated herein by reference to Exhibit 10.2 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended March 31, 2018).
10.34	Restricted Stock Unit Grant Notice and Agreement dated June 7, 2018, between Avangrid, Inc. and James P. Torgerson (incorporated herein by reference to Exhibit 10.1 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended June 30, 2018).†
10.35	Transmission Service Agreement, dated June 13, 2018, between Central Maine Power Company and NSTAR Electric Company (d/b/a Eversource) (incorporated herein by reference to Exhibit 10.2 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended June 30, 2018).
10.36	Transmission Service Agreement, dated June 13, 2018, among Central Maine Power Company, Massachusetts Electric Company (d/b/a National Grid), and Nantucket Electric Company (d/b/a National Grid) (incorporated herein by reference to Exhibit 10.3 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended June 30, 2018).
10.37	Transmission Service Agreement, dated June 13, 2018, between Central Maine Power Company and Fitchburg Gas & Electric Light Company (d/b/a Unitil) (incorporated herein by reference to Exhibit 10.4 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended June 30, 2018).
10.38	Transmission Service Agreement, dated June 13, 2018, between Central Maine Power Company and H.Q. Energy Services (U.S.) Inc. (incorporated herein by reference to Exhibit 10.5 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended June 30, 2018).
10.39	Transmission Service Agreement, dated June 13, 2018, between Central Maine Power Company and H.Q. Energy Services (U.S.) Inc. (incorporated herein by reference to Exhibit 10.6 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended June 30, 2018).
10.40	Transmission Service Agreement, dated June 13, 2018, between Central Maine Power Company and H.Q. Energy Services (U.S.) Inc. (incorporated herein by reference to Exhibit 10.7 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended June 30, 2018).
10.41	Transmission Service Agreement, dated June 13, 2018, between Central Maine Power Company and H.Q. Energy Services (U.S.) Inc. (incorporated herein by reference to Exhibit 10.8 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended June 30, 2018).
10.42	Revolving Credit Agreement, dated as of June 29, 2018, among Avangrid, Inc., New York State Electric & Gas Corporation, Rochester Gas and Electric Corporation, Central Maine Power Company, The United Illuminating Company, Connecticut Natural Gas Corporation, The Southern Connecticut Gas Company, The Berkshire Gas Company, the several lenders from time to time parties thereto, JPMorgan Chase Bank, N.A., as Administrative Agent, MUFG Bank, LTD. and Santander Bank, N.A., as Co-Documentation Agents, Bank of America, N.A., as Syndication Agent, Banco Bilbao Vizcaya Argentaria, S.A. New York Branch, as Sustainability Agent, and JPMorgan Chase Bank, N.A., Merrill Lynch, Pierce, Fenner & Smith Incorporated, , MUFG Bank, LTD., Santander Bank, N.A., and BBVA Securities, as Joint Lead Arrangers and Joint Bookrunners (incorporated herein by reference to Exhibit 10.1 to AVANGRID's Current Report on Form 8-K filed with the SEC on June 29, 2018).

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Exhibit Number	Exhibit Description
10.43	Employment Agreement, effective as of July 8, 2018, between Douglas K. Stuver and Avangrid Management Company, LLC (incorporated herein by reference to Exhibit 10.1 to AVANGRID's Current Report on Form 8-K filed with the SEC on July 20, 2018).†
10.44	Employment Agreement, effective September 27, 2018, between Peter Church and Avangrid Management Company, LLC.*†
10.45	Restricted Stock Unit Grant Notice and Agreement dated October 29, 2018, between Avangrid, Inc. and Peter Church.*†
10.46	Executive Variable Pay Plan (incorporated by reference to Exhibit 10.1 to AVANGRID's Current Report on Form 8-K filed with the SEC on February 21, 2018).†
10.47	First Amendment to Transmission Service Agreement dated October 9, 2018 by and between Central Maine Power Company and NSTAR Electric Company (d/b/a Eversource) (incorporated herein by reference to Exhibit 10.1 to Form 8-K filed with the SEC on October 15, 2018).
10.48	First Amendment to Transmission Service Agreement dated October 9, 2018 by and among Central Maine Power Company, Massachusetts Electric Company (d/b/a National Grid) and Nantucket Electric Company (d/b/a National Grid) (incorporated herein by reference to Exhibit 10.2 to Form 8-K filed with the SEC on October 15, 2018).
10.49	First Amendment to Transmission Service Agreement dated October 9, 2018 by and between Central Maine Power Company and Fitchburg Gas and Electric Light Company (d/b/a Unitil) (incorporated herein by reference to Exhibit 10.3 to Form 8-K filed with the SEC on October 15, 2018).
10.50	Amended and Restated Executive Variable Pay Plan (incorporated by reference to Exhibit 10.1 to AVANGRID's Current Report on Form 8-K filed with the SEC on February 20, 2019).†
21.1	Significant subsidiaries of the Registrant.*
23.1	Consent of KPMG LLP, independent registered public accounting firm of Avangrid, Inc.*
23.2	Consent of Ernst & Young LLP, independent registered public accounting firm of Avangrid, Inc.*
31.1	Chief Executive Officer Certification Pursuant to Rule 13a-14(a) and 15d-14(a), As Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.*
31.2	Chief Financial Officer Certification Pursuant to Rule 13a-14(a) and 15d-14(a), As Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.*
32	Chief Executive Officer and Chief Financial Officer Certification Pursuant to 18 United States Code Section 1350, As Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.*
101.INS	XBRL Instance Document.*
101.SCH	XBRL Taxonomy Extension Schema Document.*
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document.*
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document.*
101.LAB	XBRL Taxonomy Extension Label Linkbase Document.*
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document.*

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* Filed herewith.

† Compensatory plan or agreement.

— Confidential treatment has been requested for portions of this document. The omitted portions of this document have been submitted separately to the Securities and Exchange Commission.

The foregoing list of exhibits does not include instruments defining the rights of the holders of certain long-term debt of Avangrid, Inc. and its subsidiaries where the total amount of securities authorized to be issued under the instrument does not exceed ten percent (10%) of the total assets of Avangrid, Inc. and its subsidiaries on a consolidated basis; and Avangrid, Inc. hereby agrees to furnish a copy of each such instrument to the SEC on request.

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SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Avangrid, Inc.

Date: March 1, 2019

By: /s/ James P. Torgerson
James P. Torgerson
Director and Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ James P. Torgerson James P. Torgerson	Director and Chief Executive Officer (Principal Executive Officer)	March 1, 2019
/s/ Douglas K. Stuver Douglas K. Stuver	Chief Financial Officer (Principal Financial Officer)	March 1, 2019
/s/ Scott M. Tremble Scott M. Tremble	Controller (Principal Accounting Officer)	March 1, 2019
/s/ Ignacio Sánchez Galán Ignacio Sánchez Galán	Chairman of the Board	March 1, 2019
/s/ John E. Baldacci John E. Baldacci	Director	March 1, 2019
/s/ Pedro Azagra Blázquez Pedro Azagra Blázquez	Director	March 1, 2019
/s/ Arnold L. Chase Arnold L. Chase	Director	March 1, 2019
/s/ Alfredo Elías Ayub Alfredo Elías Ayub	Director	March 1, 2019
/s/ Carol L. Folt Carol L. Folt	Director	March 1, 2019
/s/ John L. Lahey John L. Lahey	Director	March 1, 2019
/s/ Santiago Martinez Garrido Santiago Martinez Garrido	Director	March 1, 2019
/s/ Juan Carlos Rebollo Liceaga Juan Carlos Rebollo Liceaga	Director	March 1, 2019
/s/ José Sáinz Armada José Sáinz Armada	Director	March 1, 2019
/s/ Alan D. Solomont Alan D. Solomont	Director	March 1, 2019
/s/ Elizabeth Timm Elizabeth Timm	Director	March 1, 2019

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Exhibit 10.44

EMPLOYMENT AGREEMENT

This EMPLOYMENT AGREEMENT (the "Agreement") is entered into by and among Avangrid Management Company, LLC, a Delaware limited liability company (the "Company"), a wholly-owned subsidiary of Avangrid, Inc., and Peter Church (the "Executive") as of September 27, 2018.

1. Defined Terms. The definitions of capitalized terms used in this Agreement, unless otherwise defined herein, are provided in the last Section hereof.

2. Employment. The Company hereby agrees to employ the Executive, and the Executive hereby agrees to serve the Company, on the terms and conditions set forth herein, until Executive's employment is terminated in accordance with the terms of this Agreement (the "Term").

3. Term of Agreement. The Term will commence on the date hereof and continue until the Date of Termination (as defined below).

4. Position and Duties. The Executive shall serve as Chief Human Resources Officer of Avangrid and such other positions as may be assigned from time to time by the Company, and shall have such responsibilities, duties and authority that are consistent with such positions as may from time to time be assigned to the Executive by the Company. The Executive shall devote substantially all his working time and efforts to the business and affairs of the Company and its subsidiaries and affiliates; provided, however, that Executive may serve on the boards of directors of profit or not-for-profit organizations with the consent of the Company, such consent not to be unreasonably withheld, and may attend to his personal affairs, provided in each case that such activities do not unreasonably interfere with the performance of his duties hereunder or cause a conflict of interest. Executive shall be based in the Company's offices in Orange, Connecticut. The Executive recognizes that his duties will require, at the Company's expense, travel to domestic and international locations.

5. Compensation and Related Matters.

5.1. Base Salary. The Company shall pay the Executive a base salary (the "Base Salary") during the period of the Executive's employment hereunder, which shall be at an initial rate of Three Hundred and Thirty Thousand Dollars ($330,000.00) per annum. The Base Salary shall be paid in accordance with the Company's standard payroll practices. The Base Salary shall be reviewed for possible increase on an annual basis and shall not be decreased during the Term.

5.2. Annual Bonus. During the Term, Executive shall be eligible to participate in the Company's Executive Variable Pay plan (the "EVP"). Executive's EVP opportunity at target for each year during the Term shall be equal to 45% of his Base Salary at the beginning for such year, and the maximum opportunity shall be equal to 90% of the Base Salary.

5.3. Signing Bonus. Executive shall receive a bonus in two installments totaling $150,000.00. The first installment of $75,000.00 shall be received in the employee's

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first pay check. The second installment of $75,000.00 shall be received the first pay period after the completion of 6 months of service. In the event of voluntary termination within 2 years of the Executive's hire date, the entire signing bonus will be required to be repaid in full within 30 days of separation.

5.4. Long-Term Incentive. Executive shall be nominated to participate in the 2016 – 2019 Avangrid Long-Term Incentive Plan and any successor thereto (the "LTIP"). Upon approval by the Compensation, Nominating and Corporate Governance Committee, this will be in accordance with and subject to its terms, with a proposed maximum grant of 19,000 performance share units.

5.5. Restricted Stock Units. Executive shall be nominated to receive

8,000 Restricted Stock Units ("RSUs"). Upon approval by the Compensation, Nominating and Corporate Governance Committee, the RSUs are subject to the terms and conditions set forth in the Restricted Stock Unit Grant Notice (the "Grant Notice") and the Restricted Stock Unit Agreement and shall be bound by the terms of the Omnibus Incentive Plan.

5.6. Benefits. Executive shall participate in the Company's 401(k) Plan

and welfare plans, including but not limited to the Company's medical insurance program, subject to and on a basis consistent with the terms, conditions and overall administration of such plans and arrangements. In addition, in the event that Executive becomes eligible to receive benefits under the Company's long term disability plan (the "LTD Plan"), the Company shall supplement such benefits such that Executive receives aggregate benefits under the LTD Plan and all other disability income sources of not less than 85% of Executive's Base Salary at the time such disability commenced.

5.7. Expenses. Upon presentation of adequate documentation to the Company, the Executive shall receive prompt reimbursement from the Company for all reasonable and customary business expenses incurred by the Executive in accordance with the Company's policies in performing services hereunder.

6. Compensation Related to Disability. During any period during the Term that the Executive fails to perform the Executive's full-time duties with the Company as a result of incapacity due to physical or mental illness, the Company shall pay the Executive's Base Salary to the Executive, together with all compensation and benefits payable to the Executive under the terms of any compensation or benefit plan, program or arrangement in which the Executive participated at the beginning of such period, until the Executive returns to work or his employment is terminated; provided, however, that such Base Salary payments shall be reduced by the sum of the amounts, if any, payable to the Executive under disability benefit plans of the Company or under the Social Security disability insurance program, to the extent such amounts were not previously applied to reduce any such Base Salary payment.

7. Compensation Related to Termination.

7.1. Termination by the Company Without Cause or by Executive for Good Reason. If the Executive's employment shall be terminated during the Term by the Company without Cause or by Executive for Good Reason, Executive shall be entitled to receive

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(a) a lump sum payment payable six months and one day after the Date of Termination equal to the sum of the Base Salary and Executive's EVP or other similar incentive award paid by the AVANGRID Group with respect to the prior calendar year; and (b) all compensation and benefits payable to the Executive through the Date of Termination under the terms of this Agreement or any compensation or benefit plan, program or arrangement maintained by the Company and in which Executive participated as of the Date of Termination.

Termination by the Company Without Cause or by Executive for Good Reason Following a Change in Control. Notwithstanding the foregoing, if Executive's employment shall be terminated during the Term by the Company without Cause or by Executive for Good Reason within one year following a Change in Control and any payment or benefit received or to be received by Executive (including any payment or benefit received pursuant to this Agreement or otherwise) would be (in whole or part) subject to the excise tax imposed by Section 4999 of the Internal Revenue Code (the "Code"), or any successor provision thereto, or any similar tax imposed by state or local law, or any interest or penalties with respect to such excise tax (such tax or taxes, together with any such interest and penalties, are hereafter collectively referred to as the "Excise Tax"), then, the amounts payable under Section 7.1 shall be reduced to the extent necessary to make such payments and benefits not subject to such Excise Tax, but only if such reduction results in a higher after-tax payment to the Executive after taking into account the Excise Tax and any additional taxes the Executive would pay if such payments and benefits were not reduced. Unless the Executive and the Company otherwise agree in writing, any determination required under this Section shall be made in writing by a certified public accountant selected by the Company (the "Accountants"), whose determination shall be conclusive and binding upon the Executive and the Company for all purposes. For purposes of making the calculations required by this Section, the Accountants may make reasonable assumptions and approximations concerning applicable taxes and may rely on reasonable, good faith interpretations concerning the application of Sections 280G and 4999 of the Code. The Company and the Executive shall furnish to the Accountants such information and documents as the Accountants may reasonably request in order to make a determination under this Section. The Company shall bear all costs the Accountants may reasonably incur in connection with any calculations contemplated by this Section. The reduction of payments, if applicable, shall be effected in the following order (unless the Executive, to the extent permitted by Section 409A of the Code, elects another method of reduction by written notice to the Company prior to the Section 280G event): (i) any cash severance payments, (ii) any other cash amounts payable to the Executive, (iii) any benefits valued as parachute payments, and (iv) acceleration of vesting of equity awards.

7.2. Termination by Reason of Executive's Death or Disability. If the Executive's employment shall be terminated during the Term by reason of the Executive's death or Disability, Executive shall be entitled to receive (a) the Executive's Base Salary through the Date of Termination at the rate in effect at the time the Notice of Termination is given; and (b) all compensation and benefits payable to the Executive through the Date of Termination under the terms of this Agreement or any compensation or benefit plan, program or arrangement maintained by the Company during such period and in which Executive participated as of the Date of Termination.

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7.3. Termination by Executive Without Good Reason, by the Company for Cause, or by Reason of Executive's Retirement. If the Executive's employment shall be terminated during the Term by Executive Without Good Reason, by the Company for Cause, or by reason of the Executive's retirement, Executive shall be entitled to receive (a) the Executive's Base Salary through the Date of Termination at the rate in effect at the time the Notice of Termination is given; and (b) all compensation and benefits payable to the Executive through the Date of Termination under the terms of this Agreement or any compensation or benefit plan, program or arrangement maintained by the Company during such period and in which Executive participated as of the Date of Termination.

7.4. No Further Liability; Release. Other than providing the compensation and benefits provided for in accordance with this Section 7, the Company and its directors, officers, employees, subsidiaries, affiliates, stockholders, successors, assigns, agents and representatives shall have no further obligation or liability to Executive or any other person under this Agreement. The payment of any amounts pursuant to this Section 7 (other than payments required by law) is expressly conditioned upon the delivery by Executive to the Company of a release in a form to be provided by the Company of any and all claims Executive may have against the Company and its directors, officers, employees, subsidiaries, affiliates, stockholders, successors, assigns, agents and representatives arising out of or related to Executive's employment by the Company and the termination of such employment. The Company shall provide such release to Executive not more than fifteen days after the Date of Termination.

8. Termination Procedures.

8.1. Notice of Termination. During the Term of this Agreement, any purported termination of the Executive's employment (other than by reason of death) shall be communicated by written Notice of Termination from one party hereto to the other parties hereto in accordance with Section 11 hereof. For purposes of this Agreement, a "Notice of Termination" shall mean a notice which shall indicate the specific termination provision in this Agreement relied upon and, if the termination is purported to be by the Company for Cause or by Executive for Good Reason, shall set forth in reasonable detail the facts and circumstances claimed to provide a basis for termination of the Executive's employment.

8.2. Date of Termination. "Date of Termination," with respect to any purported termination of the Executive's employment during the Term of this Agreement, shall mean (i) if the Executive's employment is terminated by his death, the date of his death, (ii) if the Executive's employment is terminated for Disability, thirty (30) days after Notice of Termination is given (provided that the Executive shall not have returned to the full time performance of the Executive's duties during such thirty (30) day period), and (iii) if the Executive's employment is terminated for any other reason, the date specified in the Notice of Termination, which shall not (except in the case of a termination for Cause) be less than thirty or more than sixty days from the date such Notice of Termination is given.

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9. Exclusive Employment; Noncompetition; Nonsolicitation; Nondisclosure of Proprietary Information; Surrender of Records; Inventions and Patents.

9.1. No Conflict; No Other Employment. During the period of Executive's employment with the Company, Executive shall not: (i) engage in any activity which conflicts or interferes with or derogates from the performance of Executive's duties hereunder nor shall Executive engage in any other business activity, whether or not such business activity is pursued for gain or profit, except as approved in advance in writing by the Company, such approval not to be unreasonably withheld; provided, however, that Executive shall be entitled to manage his personal investments and otherwise attend to personal affairs, including charitable, social and political activities, in a manner that does not unreasonably interfere with his responsibilities hereunder, or (ii) accept or engage in any other employment, whether as an employee or consultant or in any other capacity, and whether or not compensated therefor.

9.2. Noncompetition; Nonsolicitation.

(a) Executive acknowledges and recognizes the highly competitive nature of the Company's business and that access to the Company's confidential records and proprietary information renders his special and unique within the Company's industry. In consideration of the payment by the Company to Executive of amounts that may hereafter be paid to Executive pursuant to this Agreement (including, without limitation, pursuant to Sections 5 and 7 hereof) and other obligations undertaken by the Company hereunder, Executive agrees that during (i) his employment with the Company, and (ii) the period beginning on the date of termination of employment and ending one year after the date of termination of

employment (the "Covered Time"), Executive shall not, directly or indirectly, engage (as owner, investor, partner, stockholder, employer, employee, consultant, advisor, director or otherwise) in any Competing Business in any Restricted Area (each as defined below), provided that the provisions of this Section 9.2(a) will not be deemed breached merely because Executive owns less than 2% of the outstanding common stock of a publicly-traded company.

(b) In further consideration of the payment by the Company to Executive of amounts that may hereafter be paid to Executive pursuant to this Agreement (including, without limitation, pursuant to Sections 5 and 7 hereof) and other obligations undertaken by the Company hereunder, Executive agrees that during his employment and the Covered Time, he shall not, directly or indirectly, (i) solicit,

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encourage or attempt to solicit or encourage any of the employees, agents, consultants or representatives of the Company or any of its affiliates to terminate his, or its relationship with the Company or such affiliate; (ii) solicit, encourage or attempt to solicit or encourage any of the employees, agents, consultants or representatives of the Company or any of its affiliates to become employees, agents, representatives or consultants of any other person or entity; (iii) solicit or attempt to solicit any vendor or distributor of the Company or any of its affiliates in connection with a Competing Business with respect to any product or service being furnished, made, sold, rented or leased by the Company or such affiliate; or (iv) persuade or seek to persuade any vendor or distributor of the Company or any affiliate to cease to do business or to reduce the amount of business which such customer, vendor or distributor has customarily done or contemplates doing with the Company or such affiliate.

(c) Executive understands that the provisions of this Section 9.2 may limit his ability to earn a livelihood in a business similar to the business of the Company or its affiliates but nevertheless agrees and hereby acknowledges that the consideration provided under this Agreement, including any amounts or benefits provided under Sections 5 and 7 hereof and other obligations undertaken by the Company hereunder, is sufficient to justify the restrictions contained in such provisions. In consideration thereof and in light of Executive's education, skills and abilities, Executive agrees that he will not assert in any forum that such provisions prevent his from earning a living or otherwise are void or unenforceable or should be held void or unenforceable.

9.3. Proprietary Information. Executive acknowledges that during the course of his employment with the Company he will necessarily have access to and make use of proprietary information and confidential records of the Company and its affiliates, including without limitation trade secrets (as that term is defined in ORS 646.461) and/or competitively sensitive business or professional information. Executive covenants that he shall not during his employment or at any time thereafter, directly or indirectly, use for his own purpose or for the benefit of any person or entity other than the Company, nor otherwise disclose to any individual or entity, any Proprietary Information, unless such disclosure is made in the good faith performance of Executive's duties hereunder, has been authorized in writing by the Company, or is otherwise required by law.

9.4. Confidentiality and Surrender of Records. Executive shall not during his employment or at any time thereafter (irrespective of the circumstances under which Executive's employment by the Company terminates), except as required by law, directly or

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indirectly publish, make known or in any fashion disclose any confidential records to, or permit any inspection or copying of confidential records by, any individual or entity other than in the course of such individual's or entity's employment or retention by the Company. Upon termination of employment for any reason or request by the Company, Executive shall deliver promptly to the Company all property and records of the Company or any of its affiliates, including, without limitation, all confidential records. For purposes hereof, "confidential records" means all correspondence, reports, memoranda, files, manuals, books, lists, financial, operating or marketing records, magnetic tape, or electronic or other media or equipment of any kind which may be in Executive's possession or under his control or accessible to his which contain any Proprietary Information. All property and records of the Company and any of its affiliates (including, without limitation, all confidential records) shall be and remain the sole property of the Company or such affiliate during Executive's employment with the Company and thereafter.

9.5. Inventions and Patents. All inventions, innovations or improvements (including policies, procedures, products, improvements, software, ideas and discoveries, whether patent, copyright, trademark, service mark, or otherwise) conceived or made by Executive, either alone or jointly with others, in the course of his employment by the Company, belong to the Company. Executive will promptly disclose in writing such inventions, innovations or improvements to the Company and perform all actions reasonably requested by the Company to establish and confirm such ownership by the Company, including, but not limited to, cooperating with and assisting the Company in obtaining patents, copyrights, trademarks, or service marks for the Company in the United States and in foreign countries.

9.6. Enforcement. Executive acknowledges and agrees that, by virtue of his position, his services and access to and use of confidential records and Proprietary Information, any violation by his of any of the undertakings contained in this Section 9 would cause the Company and/or its affiliates immediate, substantial and irreparable injury for which it or they have no adequate remedy at law. Accordingly, Executive agrees and consents to the entry of an injunction or other equitable relief by a court of competent jurisdiction restraining any violation or threatened violation of any undertaking contained in this Section 9. Executive waives posting by the Company or its affiliates of any bond otherwise necessary to secure such injunction or other equitable relief. Rights and remedies provided for in this Section 9 are cumulative and shall be in addition to rights and remedies otherwise available to the parties hereunder or under any other agreement or applicable law.

10. Indemnification. During the Term and for so long thereafter as liability exists with regard to the Executive's activities during the Term on behalf of the Company or its affiliates, the Company shall indemnify the Executive (other than in connection with the Executive's gross negligence or willful misconduct) in accordance with the Company's customary indemnification policies and procedures which are applicable to the Company's officers and directors.

11. Successors; Binding Agreement.

11.1. This Agreement shall inure to the benefit of and be enforceable by the successors and assigns of the Company. Each of the Company may assign this Agreement,

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without Executive's prior consent, to any person or entity that acquires all or a substantial part of the business and/or assets of the Company or any subsidiary thereof to which Executive regularly provides services, provided in each case that such entity expressly assumes and agrees to perform this Agreement in the same manner and to the same extent that the Company would be required to perform it if no succession had taken place.

11.2. This Agreement shall inure to the benefit of and be enforceable by the Executive's personal or legal representatives, executors, administrators, successors, heirs, distributees, devisees and legatees. If the Executive shall die while any amount would still be payable to the Executive hereunder (other than amounts which, by their terms, terminate upon the death of the Executive) if the Executive had continued to live, all such amounts, unless otherwise provided herein, shall be paid in accordance with the terms of this Agreement to the executors, personal representatives or administrators of the Executive's estate.

12. Notices. For the purpose of this Agreement, notices and all other communications provided for in the Agreement shall be in writing and shall be deemed to have been duly given when delivered or mailed by United States registered mail, return receipt requested, postage prepaid, addressed to the respective addresses set forth below, or to such other address as either party may have furnished to the other in writing in accordance herewith, except that notice of change of address shall be effective only upon actual receipt:

To the Company:
Avangrid Management Corporation
180 Marsh Hill Road
Orange, CT 06477
Attention: Chief Human Resources Officer

To the Executive:
Peter Church

13. Miscellaneous.

13.1. No provision of this Agreement may be modified, waived or discharged unless such waiver, modification or discharge is agreed to in writing and signed by the Executive and such officers as may be specifically designated by the Board. No waiver by any party hereto at any time of any breach by any other party hereto of, or compliance with, any condition or provision of this Agreement to be performed by such other party shall be deemed a waiver of similar or dissimilar provisions or conditions at the same or at any prior or subsequent time. No agreements or representations, oral or otherwise, express or implied, with respect to the subject matter hereof have been made by any party, which are not expressly set forth in this Agreement. The validity, interpretation, construction and performance of this Agreement shall

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be governed by the laws of the State of Connecticut. There shall be withheld from any payments provided for hereunder any amounts required to be withheld under federal, state or local law and any additional withholding amounts to which the Executive has agreed. The obligations under this Agreement of the Company or the Executive which by their nature and terms require satisfaction after the end of the Term shall survive such event and shall remain binding upon such party.

13.2. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which taken together shall constitute one and the same instrument. Facsimile or electronically transmitted signatures shall be treated as original signatures for all purposes.

13.3. This Agreement contains the entire agreement and understanding between the parties hereto in respect of Executive's employment and supersedes, cancels and annuls any prior or contemporaneous written or oral agreements, understandings, commitments and practices between them respecting Executive's employment except as specifically referenced herein.

14. Validity. The invalidity or unenforceability of any provision of this Agreement shall not affect the validity or enforceability of any other provision of this Agreement, which shall remain in full force and effect.

15. Counterparts. This Agreement may be executed in several counterparts, each of which shall be deemed to be an original but all of which together will constitute one and the same instrument.

16. Settlement of Disputes; Arbitration. All claims by the Executive for benefits under this Agreement shall be directed to and determined by the Board and shall be in writing. Any denial by the Board of a claim for benefits under this Agreement shall be delivered to the Executive in writing. Any dispute or controversy arising under or in connection with this Agreement or Executive's employment shall be settled exclusively by arbitration in Connecticut in accordance with the Employment Arbitration Rules of the American Arbitration Association then in effect. Judgment may be entered on the arbitrator's award in any court having jurisdiction. Notwithstanding the foregoing, the Company and any affiliate thereof shall have the right to seek injunctive or other equitable relief from a court of competent jurisdiction to enforce the provisions of Section 9 of this Agreement. For purposes of seeking enforcement of Section 9, the Company and Executive hereby consent to the jurisdiction of any state or federal court sitting in Connecticut. In connection with any arbitration or litigation dispute (including any appeal or enforcement proceedings related to any such dispute) arising out of or related to this Agreement, the party substantially prevailing in the matter shall be entitled to recover from the other party his or its reasonable attorneys' fees and costs incurred in connection with such dispute.

17. Section 409A of the Code. The Company may deduct or withhold from any compensation or benefits any applicable federal, state or local tax or employment withholdings or deductions resulting from any payments or benefits provided under this Agreement. The Company makes no representations regarding the tax implications of the

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compensation and benefits to be paid under this Agreement, including, without limitation, under Section 409A ("Section 409A") of the Internal Revenue Code of 1986, as amended (the "Code") and applicable administrative guidance and regulations. It is intended that this Agreement will comply with Section 409A and all regulations and guidance issued thereunder to the extent the Agreement is subject thereto, and the Agreement shall be interpreted on a basis consistent with such intent. Notwithstanding anything in this Agreement to the contrary, in the event Executive is deemed to be a "specified employee" within the meaning of Section 409A(a)(2)(B)(i), no payments hereunder that are "deferred compensation" subject to Section 409A shall be made prior to the date that is six months after the date of Executive's "separation from service" (as defined in Section 409A and any Treasury Regulations promulgated thereunder) or, if earlier, Executive's death. Following any applicable six month delay, all such delayed payments will be paid in a single lump sum on the earliest permissible payment date. For purposes of this Agreement, with respect to payments of any amounts that are considered to be "deferred compensation" subject to Section 409A, references to "termination of employment" (and substantially similar phrases) shall be interpreted and applied in a manner that is consistent with the definition of "separation from service" for purposes of Section 409A. For purposes of Section 409A, Executive's right to receive any installment payment pursuant to this Agreement will be treated as a right to receive a series of separate and distinct payments.

18. Definitions. For purposes of this Agreement, the following terms shall have the meaning indicated below:

(A) "Affiliates" shall mean all direct and indirect parent companies and affiliates of the Company, including without limitation Iberdrola S.A. and Avangrid, Inc. and their respective affiliates.

(B) "Avangrid" shall mean Avangrid, Inc.

(C) "AVANGRID Group" shall mean AVANGRID, Inc. ("Avangrid") and the Company, as well as any entity that directly, or indirectly through one or more intermediaries, controls, are controlled by, or are under common control with, AVANGRID and/or the Company.

(D) "Base Salary" shall have the meaning stated in Section 5.1 hereof.

(E) "Board" shall mean the Board of Directors of Avangrid.

(F) "Cause" for termination by the Company of the Executive's employment, for purposes of this Agreement, shall mean (i) the willful and continued failure by the Executive to substantially perform the Executive's duties with the Company (other than any such failure resulting from the Executive's incapacity due to physical or mental illness or Executive's resignation for Good Reason) after a written demand for substantial performance is delivered to the Executive by the Company, which demand specifically identifies the manner in which the Company believes that the Executive has not substantially performed the Executive's duties, and Executive's failure to cure such failure within fifteen (15) days of the delivery of such written demand, (ii) the willful engaging by the

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Executive in conduct which is demonstrably and materially injurious to the Company or its subsidiaries, monetarily or otherwise; or (iii) the Executive's conviction, or a plea of guilty or no lo contendere to a felony. For purposes of clauses (i) and (ii) of this definition, no act, or failure to act, on the Executive's part shall be deemed "willful" unless done, or omitted to be done, by the Executive not in good faith and without reasonable belief that the Executive's act, or failure to act, was in the best interest of the Company. An error in judgment or negligence by Executive shall not be considered to be "willful." Failure to meet performance standards or objectives of the Company shall not constitute Cause for purposes hereof.

(G) "Change in Control" shall mean the closing of an event qualifying as a change in ownership of the Company, Avangrid, or Iberdrola S.A. or a change in ownership of assets of the Company, Avangrid, or Iberdrola S.A. that have a total gross fair market value equal to or more than eighty percent of the total gross fair market value of all of the assets of, as applicable, the Company, Avangrid, or Iberdrola S.A. immediately before such event, in each case within the meaning of Treasury Regulation Section 1.409A-3(i)(5); provided, however, that no such transfer of ownership or assets to a direct or indirect subsidiary or affiliate of Iberdrola S.A. shall constitute a Change in Control.

(H) "Company" shall mean Avangrid Management Company, LLC and any successor to its business and/or assets which assumes and agrees to perform this Agreement by operation of law, or otherwise.

(I) "Competing Business" shall mean any business (including, without limitation, utilities, power producers, power marketers or traders), co-operative, or energy provider of any kind that directly or indirectly competes with the Company's businesses or planned future businesses as defined within the approved strategic plan of the Company, or with the businesses or planned future businesses as defined within the approved strategic plan of the Company's affiliates as of the date of Executive's termination of employment with the Company.

(J) "Date of Termination" shall have the meaning stated in Section 8.2 hereof.

(K) "Disability" shall be deemed the reason for the termination by the Company of the Executive's employment if, as a result of the Executive's incapacity due to physical or mental illness, the Executive shall have been absent from the full-time performance of the Executive's duties with the Company for a period of at least six months within any twelve month period, the Company shall have given the Executive a Notice of Termination for Disability, and, within thirty (30) days after such Notice of Termination is given, the Executive shall not have returned to the full-time performance of the Executive's duties.

(L) "Executive" shall mean the individual named in the first paragraph of this Agreement.

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(M) "Good Reason" for termination by the Executive of the Executive's employment shall mean the occurrence (without the Executive's express written consent), of any of the following acts by the Company, unless such act is corrected prior to the Date of Termination specified in the Notice of Termination given in respect thereof: (i) a material and ongoing diminution of Executive's title, duties, responsibilities, or authorities; (ii) a material diminution of Executive's annual base salary, unless such reduction is consistent with a general reduction of compensation rates of all executives or all employees of the Company; (iii) a requirement by the Company that Executive relocate his principal place of employment by more than fifty miles; or (iv) any other action or inaction by the Company that constitutes a material breach of this Agreement, including (x) a failure to include the Executive in the management compensation programs then in effect on substantially the same terms and conditions as that applicable to other officers or similarly situated executives of the AVANGRID Group, or (y) a failure to continue the Executive's participation in the material benefit plans of the AVANGRID Group (other than any pension plan) on substantially the same basis as that applicable to other officers or similarly situated executives of the AVANGRID Group. For the avoidance of doubt, the appointment of a President and assignment to such person of duties appropriate for such position, or the appointment of other executives below the level of Chief Executive Officer, shall not constitute Good Reason.

(N) "Notice of Termination" shall have the meaning stated in Section 8.1 hereof.

(O) "Proprietary Information" includes, but is not limited to: (a) the software products, programs, applications, and processes utilized by the Company or any of its affiliates; (b) information concerning the transactions or relations of any vendor or distributor of the Company or any of its affiliates with the Company or such affiliate or any of its or their partners, principals, directors, officers or agents; (c) any information concerning any product, technology, or procedure employed by the Company or any of its affiliates but not generally known to its or their customers, vendors or competitors, or under development by or being tested by the Company or any of its affiliates but not at the time offered generally to customers or vendors; (d) any information relating to the computer software, computer systems, pricing or marketing methods, sales margins, cost of goods, cost of material, capital structure, operating results, borrowing arrangements or business plans of the Company or any of its affiliates; (e) any information which is generally regarded as confidential or proprietary in any line of business engaged in by the Company or any of its affiliates; (f) any business plans, budgets, advertising or marketing plans; (g) any information contained in any of the written or oral policies and procedures or manuals of the Company or any of its affiliates; (h) any information belonging to customers or vendors of the Company or any of its affiliates or any other person or entity which the Company or any of its affiliates has agreed to hold in confidence; (i) any inventions, innovations or improvements covered by this Agreement; and (j) all written, graphic and other material relating to any of the foregoing. Executive

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acknowledges and understands that information that is not novel or copyrighted or patented may nonetheless be Proprietary Information. The term "Proprietary Information" shall not include information that is or becomes generally available to and known by the public or information that was known to Executive prior to the commencement of his employment with the Company or information that is or becomes available to Executive on a non-confidential basis from a source other than the Company, any of its affiliates, or the directors, officers, employees, partners, principals or agents of the Company or any of its affiliates (other than as a result of a breach of any obligation of confidentiality).

(P) "Restricted Area" shall mean North America.

(Q) "Term" shall have the meaning stated in Section 3 hereof.

[Remainder of the page intentionally left blank.]

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IN WITNESS WHEREOF, the parties have executed and delivered this Agreement.

AVANGRID MANAGEMENT COMPANY, LLC

By: /s/ Sheila Duncan

Name: Sheila Duncan

Title: Chief Human Resources Officer

Date: September 27, 2018

EXECUTIVE

By: /s/ Peter T. Church

Name: Peter T. Church

Date: October 1, 2018

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Exhibit 10.45

AVANGRID, INC.
AMENDED AND RESTATED OMNIBUS INCENTIVE PLAN

RESTRICTED STOCK UNIT GRANT NOTICE

Avangrid, Inc., a Delaware corporation (the "Company"), pursuant to its Amended and Restated Omnibus Incentive Plan, as amended from time to time (the "Plan"), hereby grants to the holder listed below ("Participant") the number of Restricted Stock Units (the "RSUs") set forth below. The RSUs are subject to the terms and conditions set forth in this Restricted Stock Unit Grant Notice (the "Grant Notice") and the Restricted Stock Unit Agreement attached hereto as Exhibit A (the "Agreement") and the Plan, which are incorporated herein by reference. Unless otherwise defined herein, the terms defined in the Plan shall have the same defined meanings in the Grant Notice and the Agreement.

Participant:	Peter Church
Grant Date:	October 29, 2018
Number of RSUs:	8,000
Vesting Schedule:	The RSUs shall vest in full in one installment on December 31st, 2020, provided that the Participant remains continuously employed with the Company through such date. In addition, to the extent not previously forfeited, the RSUs shall also vest in full upon (i) the Participant's death or termination of employment due to Disability, (ii) retirement with the consent of the Company, or (iii) termination of the Participant's employment by the Company for Cause or the Participant's resignation of his employment on account of a Constructive Termination, in either case following the occurrence of a Change in Control. "Cause" and "Constructive Termination" shall have the meanings set forth in the Participant's employment agreement previously entered into with the Company.

By his or her signature, and the Company's signature below, Participant agrees to be bound by the terms and conditions of the Plan, the Agreement and the Grant Notice. Participant has reviewed the Agreement, the Plan and the Grant Notice in their entirety, has had an opportunity to obtain the advice of counsel prior to executing the Grant Notice and fully understands all provisions of the Grant Notice, the Agreement and the Plan. Participant hereby agrees to accept as binding, conclusive and final all decisions or interpretations of the Administrator upon any questions arising under the Plan, the Grant Notice or the Agreement.

AVANGRID, INC.		**PARTICIPANT**	
By:	/s/ Sheila Duncan	By:	/s/ Peter T. Church
Print Name:	Sheila Duncan	Print Name:	Peter T. Church
Title:	Chief Human Resources Officer		

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EXHIBIT A
TO RESTRICTED STOCK UNIT GRANT NOTICE

RESTRICTED STOCK UNIT AGREEMENT

Pursuant to the Grant Notice to which this Agreement is attached, the Company has granted to Participant the number of RSUs set forth in the Grant Notice.

ARTICLE I.
GENERAL

1.1 Defined Terms. Capitalized terms not specifically defined herein shall have the meanings specified in the Plan or the Grant Notice.

1.2 Incorporation of Terms of Plan. The RSUs and the shares of Common Stock ("Stock") to be issued to Participant hereunder ("Shares") are subject to the terms and conditions set forth in this Agreement and the Plan, which is incorporated herein by reference. In the event of any inconsistency between the Plan and this Agreement, the terms of the Plan shall control.

ARTICLE II.
AWARD OF RESTRICTED STOCK UNITS AND DIVIDEND EQUIVALENTS; RESTRICTIVE COVENANTS

2.1 Award of RSUs and Dividend Equivalents.

(a) In consideration of Participant's past and/or continued employment with or service to the Company or a Subsidiary and for other good and valuable consideration, effective as of the grant date set forth in the Grant Notice (the "Grant Date"), the Company has granted to Participant the number of RSUs set forth in the Grant Notice, upon the terms and conditions set forth in the Grant Notice, the Plan and this Agreement, subject to adjustments as provided in Section 8 of the Plan. Each RSU represents the right to receive one Share or, at the option of the Company, an amount of cash as set forth in Section 2.3(b), in either case, at the times and subject to the conditions set forth herein, subject to the provisions of Section 2.3(a). However, unless and until the RSUs have vested, Participant will have no right to the payment of any Shares subject thereto. Prior to the actual delivery of any Shares, the RSUs will represent an unsecured obligation of the Company, payable only from the general assets of the Company.

(b) The Company hereby grants to Participant an Award of Dividend Equivalents with respect to each RSU granted pursuant to the Grant Notice for all ordinary cash dividends which are paid to all or substantially all holders of the outstanding shares of Stock, to be credited as of dividend payment dates with respect to dividends with record dates that occur between the Grant Date and the date when the applicable RSU is distributed or paid to Participant or is forfeited or expires. The Dividend Equivalents for each RSU shall be equal to the amount of cash which is paid as a dividend on one share of Stock. All such Dividend Equivalents shall be credited to Participant and be deemed to be reinvested in additional RSUs as of the date of payment of any such dividend based on the Fair Market Value of a share of Stock on such date. Each additional RSU which results from such deemed reinvestment of Dividend Equivalents granted hereunder shall be subject to the same vesting, distribution or payment, adjustment and other provisions which apply to the underlying RSU to which such additional RSU relates.

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2.2 Vesting of RSUs and Dividend Equivalents.

(a) Subject to Participant's continued employment with or service to the Company or a Subsidiary on each applicable vesting date and subject to the terms of this Agreement, the RSUs shall vest in such amounts and at such times as are set forth in the Grant Notice. Each additional RSU which results from deemed reinvestments of Dividend Equivalents pursuant to Section 2.1(b) hereof shall vest whenever the underlying RSU to which such additional RSU relates vests.

(b) In the event Participant incurs a Termination of Service, except as may be otherwise provided by the Administrator or as set forth in a written agreement between Participant and the Company, Participant shall immediately forfeit any and all RSUs and Dividend Equivalents granted under this Agreement which have not vested or do not vest on or prior to the date on which such Termination of Service occurs, and Participant's rights in any such RSUs and Dividend Equivalents which are not so vested shall lapse and expire.

2.3 Distribution or Payment of RSUs.

(a) Participant's RSUs shall be distributed in Shares (either in book-entry form or otherwise) or, at the option of the Company, paid in an amount of cash as set forth in Section 2.3(b), in either case, as soon as administratively practicable following the vesting of the applicable RSU pursuant to Section 2.2, and, in any event, within sixty (60) days following such vesting. Notwithstanding the foregoing, the Company may delay a distribution or payment in settlement of RSUs if it reasonably determines that such payment or distribution will violate Federal securities laws or any other Applicable Law, *provided* that such distribution or payment shall be made at the earliest date at which the Company reasonably determines that the making of such distribution or payment will not cause such violation, as required by Treasury Regulation Section 1.409A-2(b)(7)(ii), and provided further that no payment or distribution shall be delayed under this Section 2.3(a) if such delay will result in a violation of Section 409A of the Code.

(b) In the event that the Company elects to make payment of Participant's RSUs in cash, the amount of cash payable with respect to each RSU shall be equal to the Fair Market Value of a Share on the day immediately preceding the applicable distribution or payment date set forth in Section 2.3(a). All distributions made in Shares shall be made by the Company in the form of whole Shares, and any fractional share shall be distributed in cash in an amount equal to the value of such fractional share determined based on the Fair Market Value as of the date immediately preceding the date of such distribution.

2.4 Conditions to Issuance of Certificates. The Company shall not be required to issue or deliver any certificate or certificates for any Shares prior to the fulfillment of all of the following conditions: (A) the admission of the Shares to listing on all stock exchanges on which such Shares are then listed, (B) the completion of any registration or other qualification of the Shares under any state or federal law or under rulings or regulations of the Securities and Exchange Commission or other governmental regulatory body, which the Administrator shall, in its absolute discretion, deem necessary or advisable, and (C) the obtaining of any approval or other clearance from any state or federal governmental agency that the Administrator shall, in its absolute discretion, determine to be necessary or advisable.

2.5 Tax Withholding. Notwithstanding any other provision of this Agreement:

(a) The Company and its Subsidiaries have the authority to deduct or withhold, or require Participant to remit to the Company or the applicable Subsidiary, an amount sufficient to satisfy applicable federal, state, local and foreign taxes (including the employee portion of any FICA obligation) required by law to be withheld with respect to any taxable event arising pursuant to this Agreement. The

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Company and its Subsidiaries may withhold or Participant may make such payment in one or more of the forms specified below:

(i) by cash or check made payable to the Company or the Subsidiary with respect to which the withholding obligation arises;

(ii) by the deduction of such amount from other compensation payable to Participant;

(iii) with respect to any withholding taxes arising in connection with the distribution of the RSUs, with the consent of the Administrator, by requesting that the Company and its Subsidiaries withhold a net number of vested shares of Stock otherwise issuable pursuant to the RSUs having a then current Fair Market Value not exceeding the amount necessary to satisfy the withholding obligation of the Company and its Subsidiaries based on the minimum applicable statutory withholding rates for federal, state, local and foreign income tax and payroll tax purposes;

(iv) with respect to any withholding taxes arising in connection with the distribution of the RSUs, with the consent of the Administrator, by tendering to the Company vested shares of Stock having a then current Fair Market Value not exceeding the amount necessary to satisfy the withholding obligation of the Company and its Subsidiaries based on the minimum applicable statutory withholding rates for federal, state, local and foreign income tax and payroll tax purposes;

(v) with respect to any withholding taxes arising in connection with the distribution of the RSUs, through the delivery of a notice that Participant has placed a market sell order with a broker acceptable to the Company with respect to shares of Stock then issuable to Participant pursuant to the RSUs, and that the broker has been directed to pay a sufficient portion of the net proceeds of the sale to the Company or the Subsidiary with respect to which the withholding obligation arises in satisfaction of such withholding taxes; *provided* that payment of such proceeds is then made to the Company or the applicable Subsidiary at such time as may be required by the Administrator, but in any event not later than the settlement of such sale; or

(vi) in any combination of the foregoing.

(b) With respect to any withholding taxes arising in connection with the RSUs, in the event Participant fails to provide timely payment of all sums required pursuant to Section 2.5(a), the Company shall have the right and option, but not the obligation, to treat such failure as an election by Participant to satisfy all or any portion of Participant's required payment obligation pursuant to Section 2.5(a)(ii) or Section 2.5(a)(iii) above, or any combination of the foregoing as the Company may determine to be appropriate. The Company shall not be obligated to deliver any certificate representing shares of Stock issuable with respect to the RSUs to Participant or his or her legal representative unless and until Participant or his or her legal representative shall have paid or otherwise satisfied in full the amount of all federal, state, local and foreign taxes applicable with respect to the taxable income of Participant resulting from the vesting or settlement of the RSUs or any other taxable event related to the RSUs.

(c) In the event any tax withholding obligation arising in connection with the RSUs will be satisfied under Section 2.5(a)(iii) above, the Company may elect to instruct any brokerage firm determined acceptable to the Company for such purpose to sell on Participant's behalf a whole number of shares from those shares of Stock then issuable to Participant pursuant to the RSUs as the Company determines to be appropriate to generate cash proceeds sufficient to satisfy the tax withholding obligation and to remit the proceeds of such sale to the Company or the Subsidiary with respect to which the withholding obligation

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arises. Participant's acceptance of this Award constitutes Participant's instruction and authorization to the Company and such brokerage firm to complete the transactions described in this Section 2.5(c), including the transactions described in the previous sentence, as applicable. The Company may refuse to issue any shares of Stock in settlement of the RSUs to Participant until the foregoing tax withholding obligations are satisfied, provided that no payment shall be delayed under this Section 2.5(c) if such delay will result in a violation of Section 409A of the Code.

(d) Participant is ultimately liable and responsible for all taxes owed in connection with the RSUs, regardless of any action the Company or any Subsidiary takes with respect to any tax withholding obligations that arise in connection with the RSUs. Neither the Company nor any Subsidiary makes any representation or undertaking regarding the treatment of any tax withholding in connection with the awarding, vesting or payment of the RSUs or the subsequent sale of the Shares. The Company and the Subsidiaries do not commit and are under no obligation to structure the RSUs to reduce or eliminate Participant's tax liability.

2.6 Rights as Stockholder. Neither Participant nor any person claiming under or through Participant will have any of the rights or privileges of a stockholder of the Company in respect of any Shares deliverable hereunder unless and until certificates representing such Shares (which may be in book-entry form) will have been issued and recorded on the records of the Company or its transfer agents or registrars and delivered to Participant (including through electronic delivery to a brokerage account). Except as otherwise provided herein, after such issuance, recordation and delivery, Participant will have all the rights of a stockholder of the Company with respect to such Shares, including, without limitation, the right to receipt of dividends and distributions on such Shares.

2.7 "***Fair Market Value***" means, as of any date, the value of Common Stock on such date as determined by such reasonable methods or procedures as may be established from time to time by the Administrator in accordance with the requirements of the Code and all Applicable Laws. Unless otherwise determined by the Administrator, the Fair Market Value of Common Stock shall be determined as follows: (i) if the Common Stock is listed on any established stock exchange, its Fair Market Value will be the closing sales price for such Common Stock as quoted on such exchange for such date, or if no sale occurred on such date, the last day preceding such date during which a sale occurred, as reported in The Wall Street Journal or another source the Administrator deems reliable; (ii) if the Common Stock is not traded on a stock exchange but is quoted on a national market or other quotation system, the closing sales price on such date, or if no sales occurred on such date, then on the last date preceding such date during which a sale occurred, as reported in The Wall Street Journal or another source the Administrator deems reliable; or (iii) without an established market for the Common Stock, the Administrator will determine the Fair Market Value in its discretion.

ARTICLE III.
OTHER PROVISIONS

3.1 Administration. The Administrator shall have the power to interpret the Plan, the Grant Notice and this Agreement and to adopt such rules for the administration, interpretation and application of the Plan, the Grant Notice and this Agreement as are consistent therewith and to interpret, amend or revoke any such rules. All actions taken and all interpretations and determinations made by the Administrator will be final and binding upon Participant, the Company and all other interested persons. To the extent allowable pursuant to Applicable Law, no member of the Committee or the Board will be personally liable for any action, determination or interpretation made with respect to the Plan, the Grant Notice or this Agreement.

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3.2 RSUs Not Transferable. The RSUs may not be sold, pledged, assigned or transferred in any manner other than by will or the laws of descent and distribution, unless and until the Shares underlying the RSUs have been issued, and all restrictions applicable to such Shares have lapsed. No RSUs or any interest or right therein or part thereof shall be liable for the debts, contracts or engagements of Participant or his or her successors in interest or shall be subject to disposition by transfer, alienation, anticipation, pledge, encumbrance, assignment or any other means whether such disposition be voluntary or involuntary or by operation of law by judgment, levy, attachment, garnishment or any other legal or equitable proceedings (including bankruptcy), and any attempted disposition thereof shall be null and void and of no effect, except to the extent that such disposition is permitted by the preceding sentence.

3.3 Adjustments. The Administrator may accelerate the vesting of all or a portion of the RSUs in such circumstances as it, in its sole discretion, may determine. Participant acknowledges that the RSUs and the Shares subject to the RSUs are subject to adjustment, modification and termination in certain events as provided in this Agreement and Section 8 of the Plan.

3.4 Titles. Titles are provided herein for convenience only and are not to serve as a basis for interpretation or construction of this Agreement.

3.5 Governing Law. The laws of the State of Delaware shall govern the interpretation, validity, administration, enforcement and performance of the terms of this Agreement regardless of the law that might be applied under principles of conflicts of laws.

3.6 Conformity to Securities Laws. Participant acknowledges that the Plan, the Grant Notice and this Agreement are intended to conform to the extent necessary with all Applicable Laws, including, without limitation, the provisions of the Securities Act and the Exchange Act, and any and all regulations and rules promulgated thereunder by the Securities and Exchange Commission, and state securities laws and regulations. Notwithstanding anything herein to the contrary, the Plan shall be administered, and the RSUs are granted, only in such a manner as to conform to Applicable Law. To the extent permitted by Applicable Law, the Plan and this Agreement shall be deemed amended to the extent necessary to conform to Applicable Law.

3.7 Amendment, Suspension and Termination. To the extent permitted by the Plan, this Agreement may be wholly or partially amended or otherwise modified, suspended or terminated at any time or from time to time by the Administrator or the Board, *provided* that, except as may otherwise be provided by the Plan, no amendment, modification, suspension or termination of this Agreement shall adversely affect the RSUs in any material way without the prior written consent of Participant.

3.8 Successors and Assigns. The Company may assign any of its rights under this Agreement to single or multiple assignees, and this Agreement shall inure to the benefit of the successors and assigns of the Company. Subject to the restrictions on transfer set forth in Section 3.2 and the Plan, this Agreement shall be binding upon and inure to the benefit of the heirs, legatees, legal representatives, successors and assigns of the parties hereto.

3.9 Limitations Applicable to Section 16 Persons. Notwithstanding any other provision of the Plan or this Agreement, if Participant is subject to Section 16 of the Exchange Act, the Plan, the RSUs (including RSUs which result from the deemed reinvestment of Dividend Equivalents), the Dividend Equivalents, the Grant Notice and this Agreement shall be subject to any additional limitations set forth in any applicable exemptive rule under Section 16 of the Exchange Act (including any amendment to Rule 16b-3 of the Exchange Act) that are requirements for the application of such exemptive rule. To the extent

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permitted by Applicable Law, this Agreement shall be deemed amended to the extent necessary to conform to such applicable exemptive rule.

3.10 Not a Contract of Employment. Nothing in this Agreement or in the Plan shall confer upon Participant any right to continue to serve as an employee or other service provider of the Company or any Subsidiary or shall interfere with or restrict in any way the rights of the Company and its Subsidiaries, which rights are hereby expressly reserved, to discharge or terminate the services of Participant at any time for any reason whatsoever, with or without cause, except to the extent expressly provided otherwise in a written agreement between the Company or a Subsidiary and Participant.

3.11 Entire Agreement. The Plan, the Grant Notice and this Agreement (including any exhibit hereto) constitute the entire agreement of the parties and supersede in their entirety all prior undertakings and agreements of the Company and Participant with respect to the subject matter hereof.

3.12 Section 409A. This Award is not intended to constitute "nonqualified deferred compensation" within the meaning of Section 409A of the Code (together with any Department of Treasury regulations and other interpretive guidance issued thereunder, including without limitation any such regulations or other guidance that may be issued after the date hereof, "Section 409A"). However, notwithstanding any other provision of the Plan, the Grant Notice or this Agreement, if at any time the Administrator determines that this Award (or any portion thereof) may be subject to Section 409A, the Administrator shall have the right in its sole discretion (without any obligation to do so or to indemnify Participant or any other person for failure to do so) to adopt such amendments to the Plan, the Grant Notice or this Agreement, or adopt other policies and procedures (including amendments, policies and procedures with retroactive effect), or take any other actions, as the Administrator determines are necessary or appropriate for this Award either to be exempt from the application of Section 409A or to comply with the requirements of Section 409A.

3.13 Limitation on Participant's Rights. Participation in the Plan confers no rights or interests other than as herein provided. This Agreement creates only a contractual obligation on the part of the Company as to amounts payable and shall not be construed as creating a trust. Neither the Plan nor any underlying program, in and of itself, has any assets. Participant shall have only the rights of a general unsecured creditor of the Company with respect to amounts credited and benefits payable, if any, with respect to the RSUs and Dividend Equivalents.

3.14 Counterparts. The Grant Notice may be executed in one or more counterparts, including by way of any electronic signature, subject to Applicable Law, each of which shall be deemed an original and all of which together shall constitute one instrument.

* * *

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EXHIBIT 21.1

LIST OF SUBSIDIARIES OF Avangrid, Inc.

Name of Subsidiary	State or Jurisdiction of Incorporation Or Organization
Avangrid Networks, Inc.(1)*	Maine
New York State Electric & Gas Corporation(2)	New York
Rochester Gas and Electric Corporation(2)	New York
Central Maine Power Company(2)	Maine
Maine Natural Gas Corporation(2)	Maine
UIL Holdings Corporation(2)	Connecticut
The United Illuminating Company(4)	Connecticut
The Southern Connecticut Gas Company(4)	Connecticut
Connecticut Natural Gas Corporation(4)	Connecticut
The Berkshire Gas Company(4)	Massachusetts
Avangrid Renewables Holdings, Inc.(1)*	Delaware
Avangrid Renewables, LLC(3)	Oregon

(1) Subsidiary of Avangrid, Inc.
(2) Subsidiary of Avangrid Networks, Inc.
(3) Subsidiary of Avangrid Renewables Holdings, Inc.
(4) Subsidiary of UIL Holdings Corporation

* Holding Company

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EXHIBIT 23.1

Consent of Independent Registered Public Accounting Firm

The Board of Directors

Avangrid, Inc.:

We consent to the incorporation by reference in the registration statements (No. 333-212606 and No. 333-208571) on Form S-8 of Avangrid, Inc. of our reports dated March 1, 2019, with respect to the consolidated balance sheets of Avangrid, Inc. as of December 31, 2018 and 2017, the related consolidated statements of income, comprehensive income, changes in equity, and cash flows for each of the years in the two-year period ended December 31, 2018, and the related notes (and financial statement schedule I) (collectively, the "consolidated financial statements"), and the effectiveness of internal control over financial reporting as of December 31, 2018, which reports appear in the December 31, 2018 annual report on Form 10-K of Avangrid, Inc.

/s/ KPMG LLP

New York, New York
March 1, 2019

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EXHIBIT 23.2

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the following Registration Statements:

(1) Registration Statement (Form S-8 No. 333-212616) pertaining to Avangrid, Inc.'s common stock to be available for issuance under the Avangrid, Inc. Omnibus Incentive Plan, and

(2) Registration Statement (Form S-8 No. 333-208571) pertaining to Avangrid, Inc.'s common stock to be available for issuance under the UIL Holdings Corporation 2008 Stock and Incentive Compensation Plan and the UIL Holdings Corporation Deferred Compensation Plan;

of our report dated March 10, 2017, except for the paragraph in Note 2 titled Previously Reported Immaterial Corrections to Prior Periods, as to which the date is March 26, 2018, with respect to the Avangrid, Inc. consolidated financial statements and schedule for the year ended December 31, 2016, included in this Annual Report (Form 10-K) of Avangrid, Inc. for the year ended December 31, 2018.

/s/ Ernst & Young LLP

New York, New York
March 1, 2019

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EXHIBIT 31.1

CERTIFICATION

I, James P. Torgerson, certify that:

1. I have reviewed this annual report on Form 10-K of Avangrid, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 1, 2019

/s/ James P. Torgerson

James P. Torgerson
Director and Chief Executive Officer

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EXHIBIT 31.2

CERTIFICATION

I, Douglas K. Stuver, certify that:

1. I have reviewed this annual report on Form 10-K of Avangrid, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 1, 2019

/s/ Douglas K. Stuver

Douglas K. Stuver
Chief Financial Officer

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EXHIBIT 32

CERTIFICATION OF CHIEF EXECUTIVE OFFICER AND CHIEF FINANCIAL OFFICER
Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

Pursuant to 18 U.S.C. 1350, the undersigned, James P. Torgerson and Douglas K. Stuver, the Chief Executive Officer and Chief Financial Officer, respectively, of Avangrid, Inc. (the "issuer"), do each hereby certify that the report on Form 10-K to which this certification is attached as an exhibit (the "report") fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)) and that information contained in the report fairly presents, in all material respects, the financial condition and results of operations of the issuer.

/s/ James P. Torgerson

James P. Torgerson
Director and Chief Executive Officer
Avangrid, Inc.
March 1, 2019

/s/ Douglas K. Stuver

Douglas K. Stuver
Chief Financial Officer
Avangrid, Inc.
March 1, 2019

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VINEYARD WIND

ATTACHMENT TO SECTION 5

Attachment 5.6-19: Avangrid Annual Report 2019

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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Form 10-K

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2019
Or

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from to
Commission File No. 001-37660

Avangrid, Inc.
(Exact name of registrant as specified in its charter)

Securities registered pursuant to Section 12(b) of the Act:

New York	**14-1798693**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
180 Marsh Hill Road	
Orange, Connecticut	**06477**
(Address of principal executive offices)	**(Zip Code)**

Registrant's telephone number, including area code: (207) 629-1200

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol	Name of exchange on which registered
Common Stock, par value $0.01 per share	AGR	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☒ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Exchange Act. Yes ☐ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or emerging growth company. See definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large Accelerated Filer	☒	Accelerated Filer	☐
Non-accelerated Filer	☐	Smaller Reporting Company	☐
Emerging Growth Company	☐		

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

The aggregate market value of the Avangrid, Inc.'s voting stock held by non-affiliates, computed by reference to the price at which the common equity was last sold as of the last business day of Avangrid, Inc.'s most recently completed second fiscal quarter (June 30, 2019) was $2,836 million based on a closing sales price of $50.50 per share.

Indicate the number of shares outstanding of each of the registrant's classes of common stock, as of the latest practicable date: 309,005,272 shares of common stock, par value $0.01, were outstanding as of February 28, 2020.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the documents listed below have been incorporated by reference into the indicated parts of this report, as specified in the responses to the item numbers involved.

Designated portions of the Proxy Statement relating to the 2020 Annual Meeting of the Shareholders are incorporated by reference into Part III to the extent described therein.

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GLOSSARY OF TERMS AND ABBREVIATIONS

Unless the context indicates otherwise, references in this Annual Report on Form 10-K to "AVANGRID," the "Company," "we," "our," and "us" refer to Avangrid, Inc. and its consolidated subsidiaries.

AGT	Algonquin Gas Transmission
AMI	Automated Metering Infrastructure
AOCI	Accumulated other comprehensive income
ARHI	Avangrid Renewables Holdings, Inc.
ARP	Alternative Revenue Programs
ASC	Accounting Standards Codification
Asnat	Asnat Realty, LLC
Army Corps	U.S. Army Corps of Engineers
ARO	Asset retirement obligation
AVANGRID	Avangrid, Inc.
Bcf	One billion cubic feet
BGC	The Berkshire Gas Company
BGEPA	Bald and Golden Eagle Protection Act
BLM	U.S. Bureau of Land Management
Cayuga	Cayuga Operating Company, LLC
CENG	Constellation Energy Nuclear Group, LLC
CfDs	Contracts for Differences
CFTC	Commodity Futures Trading Commission
CLCPA	Climate Leadership and Community Protection Act
CL&P	The Connecticut Light and Power Company
CMP	Central Maine Power Company
CNG	Connecticut Natural Gas Corporation
CPCN	Certificate of Public Convenience and Necessity
CSC	Connecticut Siting Council
DCF	Discounted cash flow
DEEP	Connecticut Department of Energy and Environmental Protection
DIMP	Distribution Integrity Management Program
DER	Distributed energy resources
Dodd-Frank Act	Dodd-Frank Wall Street Reform and Consumer Protection Act
DOE	Department of Energy
DOER	Massachusetts Department of Energy Resources
DOJ	Department of Justice
DPA	Deferred Payment Arrangements
DPU	Massachusetts Department of Public Utilities
DSIP	Distributed System Implementation Plan
DSP	Distributed System Platform
DTh	Dekatherm
EAM	Earnings adjustment mechanism
EDC	Massachusetts electric distribution companies
EDF	Environmental Defense Fund
English Station	Former generation site on the Mill River in New Haven, Connecticut
EPA	Environmental Protection Agency
EPAct 2005	Energy Policy Act of 2005
ERCOT	Electric Reliability Council of Texas
ESA	Endangered Species Act

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ESC	Energy Smart Community
ESM	Earnings sharing mechanism
Evergreen Power	Evergreen Power III, LLC
Exchange Act	The Securities Exchange Act of 1934, as amended
FASB	Financial Accounting Standards Board
FERC	Federal Energy Regulatory Commission
FirstEnergy	FirstEnergy Corp.
FPA	Federal Power Act
Gas	Enstor Gas, LLC
GenConn	GenConn Energy LLC
GenConn Devon	GenConn's peaking generating plant in Devon, Connecticut
GenConn Middleton	GenConn's peaking generating plant in Middletown, Connecticut
Ginna	Ginna Nuclear Power Plant, LLC and the R.E. Ginna Nuclear Power Plant
Ginna Facility	R.E. Ginna Nuclear Power Plant
GNPP	Ginna Nuclear Power Plant, LLC.
HLBV	Hypothetical Liquidation at Book Value
HQUS	H.Q. Energy Services (U.S) Inc.
Iberdrola	Iberdrola, S.A., which owns 81.5% of the outstanding shares of Avangrid, Inc.
Iberdrola Group	The group of companies controlled by Iberdrola, S.A.
Installed capacity	The production capacity of a power plant or wind farm based either on its rated (nameplate) capacity or actual capacity
IRS	Internal Revenue Service
ISO	Independent system operator
ISO-NE	ISO New England, Inc.
Joint Proposal	The Joint Proposal, approved by the NYPSC on June 15, 2016, by NYSEG, RG&E and certain other signatory parties for a three-year rate plan for electric and gas service at NYSEG and RG&E commencing May 1, 2016.
Klamath Plant	The Klamath gas-fired cogeneration facility located in the city of Klamath, Oregon
kV	Kilovolts
kWh	Kilowatt-hour
LDC	Local distribution company
LIBOR	London Interbank Offer Rate
LNG	Liquefied natural gas
MBTA	Migratory Bird Treaty Act
Merger Agreement	The Agreement and Plan of Merger, dated as of February 25, 2015, by and among Avangrid, Inc., Green Merger Sub, Inc. and UIL Holdings Corporation
Merger Sub	Green Merger Sub, Inc.
MEPCO	Maine Electric Power Corporation
MGP	Manufactured gas plants
MHI	Mitsubishi Heavy Industries
MNG	Maine Natural Gas Corporation
MPRP	Maine Power Reliability Program
MPUC	Maine Public Utilities Commission
MtM	Mark-to-market
MW	Megawatts
MWh	Megawatt-hours
NAV	Net asset value
NECEC	New England Clean Energy Connect
NEPA	National Environmental Policy Act

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NERC	North American Electric Reliability Corporation
NETOs	New England Transmission Owners
Networks	Avangrid Networks, Inc.
New York TransCo	New York TransCo, LLC.
NGA	Natural Gas Act of 1938
NOL	Net operating loss
Non-GAAP	Financial measures that are not prepared in accordance with U.S. GAAP, including adjusted net income and adjusted earnings per share
NYISO	New York Independent System Operator, Inc.
NYPA	New York Power Authority
NYPSC	New York State Public Service Commission
NYSE	New York Stock Exchange
NYSEG	New York State Electric & Gas Corporation
NYSERDA	New York State Energy Research and Development Authority
OATT	Open Access Transmission Tariff
OCC	Connecticut Office of Consumer Counsel
OCI	Other comprehensive income
OSHA	Occupational Safety and Health Act, as amended
OTTI	Other than temporary impairment
PA	Connecticut Public Act
PCB	Polychlorinated Biphenyls
PJM	PJM Interconnection, L.L.C.
PPA	Power purchase agreement
PTF	Pool Transmission Facilities
PUCT	Public Utility Commission of Texas
PUHCA 2005	Public Utility Holding Company Act of 2005
PURA	Connecticut Public Utilities Regulatory Authority
RAM	Rate Adjustment Mechanism
RCRA	Resource Conservation and Recovery Act
RDM	Revenue decoupling mechanism
REC	Renewable Energy Certificate
RFP	Request for Proposals
Renewables	Avangrid Renewables, LLC
REV	Reforming the Energy Vision
RG&E	Rochester Gas and Electric Corporation
ROE	Return on equity
ROU	Right-of-use
RPS	Renewable Portfolio Standards
RSSA	Reliability Support Services Agreement
RTO	Regional transmission organization
SCG	The Southern Connecticut Gas Company
Scottish Power	Scottish Power Ltd.
SEC	United States Securities and Exchange Commission
SOX	Sarbanes-Oxley Act
SPHI	Scottish Power Holdings, Inc.
Tax Act	Tax Cuts and Jobs Act of 2017 enacted by the U.S. federal government on December 22, 2017
TEF	Tax equity financing arrangements
TSA	Transmission Service Agreement
UI	The United Illuminating Company
UIL	UIL Holdings Corporation

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U.S. GAAP	Generally accepted accounting principles for financial reporting in the United States.
VaR	Value-at-risk
VIEs	Variable interest entities
WECC	Western Electricity Coordinating Council

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CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains a number of forward-looking statements. Forward-looking statements may be identified by the use of forward-looking terms such as "may," "will," "should," "would," "could," "can," "expect(s)," "believe(s)," "anticipate(s)," "intend(s)," "plan(s)," "estimate(s)," "project(s)," "assume(s)," "guide(s)," "target(s)," "forecast(s)," "are (is) confident that" and "seek(s)" or the negative of such terms or other variations on such terms or comparable terminology. Such forward-looking statements include, but are not limited to, statements about our plans, objectives and intentions, outlooks or expectations for earnings, revenues, expenses or other future financial or business performance, strategies or expectations, or the impact of legal or regulatory matters on business, results of operations or financial condition of the business and other statements that are not historical facts. Such statements are based upon the current reasonable beliefs, expectations and assumptions of our management and are subject to significant risks and uncertainties that could cause actual outcomes and results to differ materially. Important factors that could cause actual results to differ materially from those indicated by such forward-looking statements include, without limitation:

- the future financial performance, anticipated liquidity and capital expenditures;
- actions or inactions of local, state or federal regulatory agencies;
- success in retaining or recruiting our officers, key employees or directors;
- changes in levels or timing of capital expenditures;
- adverse developments in general market, business, economic, labor, regulatory and political conditions;
- fluctuations in weather patterns;
- technological developments;
- the impact of any cyber breaches or other incidents, grid disturbances, acts of war or terrorism or natural disasters;
- the impact of any change to applicable laws and regulations affecting operations including those relating to the environment and climate change, taxes, price controls, regulatory approval and permitting;
- the implementation of changes in accounting standards; and
- other presently unknown unforeseen factors.

Additional risks and uncertainties are set forth under Part I, Item 1A, "Risk Factors" in this Annual Report on Form 10-K. Should one or more of these risks or uncertainties materialize, or should any of the underlying assumptions prove incorrect, actual results may vary in material respects from those expressed or implied by these forward-looking statements. You should not place undue reliance on these forward-looking statements. We do not undertake any obligation to update or revise any forward-looking statements to reflect events or circumstances after the date of this report, whether as a result of new information, future events or otherwise, except as may be required under applicable securities laws. Other risk factors are detailed from time to time in our reports filed with the Securities and Exchange Commission, or SEC, and we encourage you to consult such disclosures.

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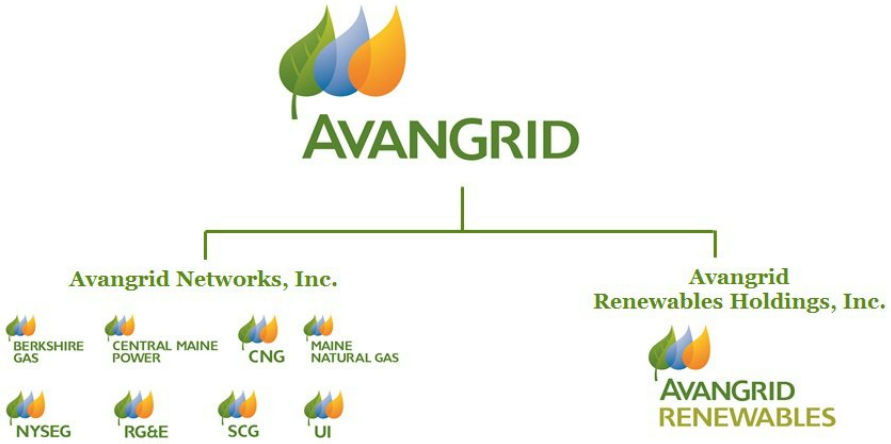
PART I

Item 1. *Business*

Overview

AVANGRID is a leading sustainable energy company with approximately $34 billion in assets and operations in 24 states. AVANGRID has two primary lines of business - Avangrid Networks and Avangrid Renewables. Avangrid Networks owns eight electric and natural gas utilities, serving approximately 3.3 million customers in New York and New England. Avangrid Renewables owns and operates 8.0 gigawatts of electricity capacity, primarily through wind power, with a presence in 22 states across the United States. AVANGRID supports the achievement of the Sustainable Development Goals approved by the member states of the United Nations, and was named among the World's Most Ethical companies in 2019 by the Ethisphere Institute. AVANGRID employs approximately 6,600 people. Iberdrola S.A., a corporation *(sociedad anónima)* organized under the laws of the Kingdom of Spain, a worldwide leader in the energy industry, directly owns 81.5% of outstanding shares of AVANGRID common stock. AVANGRID's primary business is ownership of its operating businesses, which are described below.

Our direct, wholly-owned subsidiaries include Avangrid Networks, Inc., or Networks, and Avangrid Renewables Holdings, Inc., or ARHI. ARHI in turn holds subsidiaries including Avangrid Renewables, LLC, or Renewables. Networks owns and operates our regulated utility businesses through its subsidiaries, including electric transmission and distribution and natural gas distribution, transportation and sales. Renewables operates a portfolio of renewable energy generation facilities primarily using onshore wind power and also solar, biomass and thermal power. The following chart depicts our current organizational structure.



Through Networks, we own electric generation, transmission and distribution companies and natural gas distribution, transportation and sales companies in New York, Maine, Connecticut and Massachusetts, delivering electricity to approximately 2.3 million electric utility customers and delivering natural gas to approximately 1.0 million natural gas public utility customers as of December 31, 2019. The interstate transmission and wholesale sale of electricity by these regulated utilities is regulated by the Federal Energy Regulatory Commission, or FERC, under the Federal Power Act, or FPA, including with respect to transmission rates. Further, Networks' electric and gas distribution utilities in New York, Maine, Connecticut and Massachusetts are subject to regulation by the New York State Public Service Commission, or NYPSC, the Maine Public Utilities Commission, or MPUC, the Connecticut Public Utilities Regulatory Authority, or PURA, and the Massachusetts Department of Public Utilities, or DPU, respectively. Networks strives to be a leader in safety, reliability and quality of service to its utility customers.

Through Renewables, we had a combined wind, solar and thermal installed capacity of 8,001 megawatts, or MW, as of December 31, 2019, including Renewables' share of joint projects, of which 7,259 MW was installed wind capacity. As of December 31, 2019, approximately 69% of the capacity was contracted, for an average period of 9.5 years, and 13% of installed capacity was hedged. Renewables is among the top three largest wind operators in the United States based on installed capacity as of December 31, 2019 and strives to lead the transformation of the U.S. energy industry to a sustainable, competitive, clean energy future. Renewables currently operates 61 wind farms in 21 states across the United States.

In December 2017, our management committed to a plan to sell the gas storage and trading businesses because they represented non-core businesses that are not aligned with our strategic objectives. At that time, we determined that the assets and liabilities associated with our gas trading and storage businesses met the criteria for classification as assets held for sale, but did not meet the criteria for classification as discontinued operations. On March 1, 2018, the Company closed a transaction to sell Enstor Energy Services, LLC, which operated AVANGRID's gas trading business, to CCI U.S. Asset Holdings LLC, a subsidiary

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of Castleton Commodities International, LLC. On May 1, 2018, the Company closed a transaction to sell Enstor Gas, LLC, which operated AVANGRID's gas storage business, to Amphora Gas Storage USA, LLC. The agreement included, among other things, a transition services agreement that obligated ARHI to provide certain transition services for up to one year after the closing date.

Further information regarding the amount of revenues from external customers, including revenues by products and services, a measure of profit or loss and total assets for each segment for each of the last three fiscal years is provided in Note 24 to our consolidated financial statements contained in this Annual Report on Form 10-K.

See "Item 7. *Management's Discussion and Analysis of Financial Condition and Results of Operations*" in this Annual Report for further details.

History

We were incorporated in 1997 as a New York corporation under the name NGE Resources, Inc. and subsequently changed our name to Energy East Corporation. The stock of Energy East Corporation was publicly traded on the New York Stock Exchange, or NYSE. In 2007, Iberdrola acquired Scottish Power Ltd., or Scottish Power, including Scottish Power Holdings, Inc., or SPHI, the parent company of Scottish Power's U.S. subsidiaries. Through this acquisition, Iberdrola acquired PPM Energy, a subsidiary that operated SPHI's U.S. wind business, thermal generation operations and the gas storage and energy management businesses, and changed PPM Energy's name to Iberdrola Renewables. In 2008, Iberdrola acquired Energy East Corporation, and we changed our name to Iberdrola USA, Inc. in December 2009. In 2013, we completed an internal corporate reorganization to create a unified corporate presence for the Iberdrola brand in the United States, bringing all of its U.S. energy companies under one single holding company, Iberdrola USA, Inc. The internal reorganization, completed in November 2013, resulted in the concentration of our principal businesses in two major subsidiaries: Networks, which held all of our regulated utilities; and Renewables, which held our renewable and thermal generation businesses and gas storage and marketing businesses.

We were the corporate parent of The Southern Connecticut Gas Company, or SCG, Connecticut Natural Gas Corporation, or CNG, and The Berkshire Gas Company, or BGC, prior to UIL Holdings Corporation, or UIL, acquiring those companies in 2010.

On December 16, 2015, we completed the acquisition of UIL, pursuant to which UIL merged with and into our wholly-owned subsidiary, Green Merger Sub, Inc., or Merger Sub, with Merger Sub surviving as our wholly-owned subsidiary. The acquisition was effected pursuant to the Agreement and Plan of Merger, dated as of February 25, 2015, or the Merger Agreement, by and among us, Merger Sub and UIL. Following the completion of the acquisition, Merger Sub was renamed "UIL Holdings Corporation" and we were renamed Avangrid, Inc. Immediately following the completion of the acquisition, former UIL shareowners owned 18.5% of the outstanding shares of common stock of AVANGRID, and Iberdrola owned the remaining shares. Effective as of April 30, 2016, UIL and its subsidiaries were transferred to a wholly-owned subsidiary of Networks.

Networks

Overview

Networks, a Maine corporation, holds our regulated utility businesses, including electric generation, transmission and distribution and natural gas distribution, transportation and sales. Networks serves as a super-regional energy services and delivery company through the eight regulated utilities it owns directly:

- New York State Electric & Gas Corporation, or NYSEG, which serves electric and natural gas customers across more than 40% of the upstate New York geographic area;
- Rochester Gas and Electric Corporation, or RG&E, which serves electric and natural gas customers within a nine-county region in western New York, centered around Rochester;
- The United Illuminating Company, or UI, which serves electric customers in southwestern Connecticut;
- Central Maine Power Company, or CMP, which serves electric customers in central and southern Maine;
- SCG, which serves natural gas customers in Connecticut;
- CNG, which serves natural gas customers in Connecticut;
- BGC, which serves natural gas customers in western Massachusetts; and
- Maine Natural Gas Corporation, or MNG, which serves natural gas customers in several communities in central and southern Maine.

For the year ended December 31, 2019, Networks distributed approximately 36.6 million megawatt-hours, or MWh, of electricity. As of December 31, 2019, Networks provided electric service to its approximately 2.3 million customers in the states of New York, Maine and Connecticut. In total, the electric system of Networks' regulated utilities consisted of 8,703 miles of transmission lines, 70,995 miles of distribution lines and 819 substations as of December 31, 2019. Furthermore, for the year

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ended December 31, 2019, Networks delivered approximately 207 million dekatherms, or DTh, of natural gas, to approximately 1.0 million customers, providing service in the states of New York, Maine, Connecticut and Massachusetts.

The demand for electric power and natural gas is affected by seasonal differences in the weather. Demand for electricity in each of the states in which Networks operates tends to increase during the summer months to meet cooling load or in winter months for heating load while statewide demand for natural gas tends to increase during the winter to meet heating load.

The following table sets forth certain information relating to the rate base, number of customers and the amount of electricity or natural gas provided by each of Networks' regulated utilities as of and for the year ended December 31, 2019:

Utility	Rate Base(1) (in billions)	Electricity Customers	Electricity Delivered (in MWh)	Natural Gas Customers	Natural Gas Delivered (in DTh)
NYSEG	$ 2.9	902,593	15,525,000	268,806	57,511,000
RG&E	$ 2.0	383,592	7,072,000	317,661	61,120,000
CMP	$ 2.4	636,341	9,039,000	—	—
MNG	$ 0.1	—	—	4,974	1,254,000
UI	$ 1.8	338,654	4,978,000	—	—
SCG	$ 0.6	—	—	203,269	37,177,000
CNG	$ 0.5	—	—	181,527	39,157,000
BGC	$ 0.1	—	—	40,500	10,444,000

(1) "Rate base" means the net assets upon which a utility can receive a specified return, based on the value of such assets. The rate base is set by the relevant regulatory authority and typically represents the value of specified property, such as plants, facilities and other investments of the utility. These rate base values have been calculated using the best estimates as of December 31, 2019.

During the last five years, Networks has invested nearly $6.4 billion in creating a delivery network with greater capacity and improved reliability, environmental security and sustainability, efficiency and automation. Networks continuously improves its grid to accommodate new requirements for advanced metering, demand response and enhanced outage management, while improving its flexibility for the integration and management of distributed energy resources, or DER.

New York

As of December 31, 2019, NYSEG served approximately 903,000 electricity customers and 269,000 natural gas customers across more than 40% of upstate New York's geographic area, while RG&E served approximately 384,000 electricity customers and 318,000 natural gas customers in a nine-county region centered around Rochester, in western New York.

In 2019, the nine hydroelectric plants owned by NYSEG and RG&E generated approximately 178 million kilowatt-hours, or kWh, of clean hydropower, which is enough energy to power approximately 25,000 homes across New York State, assuming an average electricity consumption of 600 kWh per month per customer. See "—Properties—Networks" for more information regarding Networks' electric generation plants.

Networks also holds an approximate 20% ownership interest in the regulated New York TransCo, LLC, or New York TransCo. Through New York TransCo, Networks has formed a partnership with Central Hudson Gas and Electric Corporation, Consolidated Edison, Inc., National Grid, plc, and Orange and Rockland Utilities, Inc. to develop a portfolio of interconnected transmission lines and substations to fulfill the objectives of the New York energy highway initiative, a proposal to install up to 3,200 MW of new electric generation and transmission capacity in order to deliver more power generated from upstate New York power plants to downstate New York.

Maine

As of December 31, 2019, CMP delivered electricity to more than 636,000 customers in an 11,000 square-mile service area in central and southern Maine. CMP completed a $1.4 billion investment plan in 2015 for the construction of upgrades to the bulk power transmission grid in Maine, the largest transmission investment in the history of Maine. This project included the construction of five new 345-kilovolt, or kV, substations and related facilities linked by approximately 440 miles of new transmission lines (referred to as the Maine Power Reliability Program, or MPRP).

CMP also owns 78% of the Maine Electric Power Corporation, or MEPCO, a single-asset 182-mile 345kV electric transmission line from the Maine/New Brunswick border to Wiscasset, Maine.

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As of December 31, 2019, MNG delivers natural gas to 4,974 customers in central and southern Maine. MNG continues to build out in 12 communities.

On February 14, 2018, the New England Clean Energy Connect, or NECEC, transmission project, a joint bid proposed by CMP and Hydro-Québec, was selected by the Massachusetts electric utilities and the Massachusetts Department of Energy Resources, or DOER, in the Commonwealth of Massachusetts's 83D clean energy Request for Proposal, or RFP, to move forward as the alternative to the Northern Pass Transmission project which failed to win approval from the New Hampshire Site Evaluation Committee by March 27, 2018. On March 28, 2018, the DOER informed CMP that the conditional selection of Northern Pass Transmission project had been terminated, making the NECEC transmission project the lone winning bid in the RFP. The proposed NECEC transmission project includes a 145-mile transmission line linking the electrical grids in Québec, Canada and New England. The project, which has an estimated cost of approximately $950 million, would add 1,200 MW of transmission capacity to supply New England with power from reliable hydroelectric generation.

On June 13, 2018, CMP entered into transmission service agreements, or TSAs, with the Massachusetts electric distribution companies, or the EDCs, and H.Q. Energy Services (U.S.) Inc., or HQUS, an affiliate of Hydro-Québec, which govern the terms of service and revenue recovery for the NECEC transmission project. Simultaneous with the execution of the TSAs with CMP, the EDCs have executed certain PPAs with HQUS for sales of electricity and environmental attributes to the EDCs. The EDCs submitted the TSAs and PPAs to the DPU for approval on July 23, 2018, and CMP filed the TSAs for approval by the FERC on August 20, 2018. On October 19, 2018, FERC issued an order accepting the TSAs for filing as CMP rate schedules effective as of October 20, 2018. On June 25, 2019, the Massachusetts DPU issued an Order approving the NECEC project long term power purchase agreements and the cost recovery by the EDCs of the TSA charges as required by the TSAs. This Order was subsequently appealed by NextEra Energy Resources, and CMP is coordinating its participation in the processing of the appeal with the MA EDCs; a judicial decision is expected by end of the second quarter of 2020. CMP also continues to negotiate with the EDCs the terms of assignment of the TSAs from CMP to NECEC Transmission LLC upon the project's transfer. On December 10, 2019, CMP submitted a petition to the FERC pursuant to Section 203 of the Federal Power Act, seeking the FERC's authorization to transfer the TSAs (FERC rate schedules) from CMP to NECEC Transmission LLC upon the project's transfer. The MPUC and FERC project's transfer proceedings are ongoing with a decision from the agencies expected at the end of the first quarter of 2020.

The NECEC project also requires certain permits, including environmental, from multiple state and federal agencies and a presidential permit from the U.S. Department of Energy, authorizing the construction, operation, maintenance and connection of facilities for the transmission of electric energy at the international border between the United States and Canada. These permitting activities are ongoing. CMP expects to obtain the applicable state and federal permits necessary to begin construction by the second quarter of 2020. See "Item 7. *Management's Discussion and Analysis of Financial Condition and Results of Operations*" in this Annual Report for further details.

Connecticut

As of December 31, 2019, UI served more than 339,000 residential, commercial and industrial customers in a service area of approximately 335 square miles in the southwestern part of Connecticut. The service area includes Bridgeport and New Haven and is home to a diverse array of business sectors including aerospace manufacturing, healthcare, biotech, financial services, precision manufacturing, retail and education. UI's retail electric revenues vary by season, with the highest revenues typically in the third quarter of the year reflecting seasonal rates, hotter weather and air conditioning use.

UI is also a party to a joint venture with Clearway Energy, Inc. (formerly NRG Yield, Inc.), which is an affiliate of Global Infrastructure Partners, or GIP, pursuant to which UI holds 50% of the membership interests in GCE Holding LLC, whose wholly-owned subsidiary, GenConn Energy LLC, or GenConn, operates peaking generation plants in Devon, Connecticut, or GenConn Devon, and Middletown, Connecticut, or GenConn Middletown. In September 2018, NRG Energy, Inc. sold its interests in NRG Yield, Inc. to GIP. The sale is not expected to have an impact on GenConn.

As of December 31, 2019, SCG and CNG provided local gas distribution services to approximately 385,000 customers in the greater Hartford-New Britain area, Greenwich and the southern Connecticut coast from Westport to Old Saybrook, including the cities of Bridgeport and New Haven.

Massachusetts

As of December 31, 2019, BGC provided local gas distribution services to approximately 41,000 customers in a service area in western Massachusetts, which includes the cities of Pittsfield, North Adams and Greenfield.

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Rate Base

These rate base values were calculated using the best estimates as of December 31, 2019. The rate base of Networks' regulated utilities for the years indicated below were as follows:

Rate base	2017	2018	2019
		(in millions)	
NYSEG Electric	$ 1,872	$ 2,067	$ 2,250
NYSEG Gas	534	585	610
RG&E Electric	1,218	1,386	1,453
RG&E Gas	428	497	516
Subtotal New York	**4,052**	**4,535**	**4,829**
CMP Dist	854	903	933
CMP Trans	1,460	1,460	1,469
MNG	67	71	76
Subtotal Maine	**2,381**	**2,434**	**2,478**
UI Dist	1,007	1,035	1,112
UI Trans	570	592	672
SCG	536	550	587
CNG	449	479	538
Subtotal Connecticut	**2,562**	**2,656**	**2,909**
BGC	107	111	136
Total	**$ 9,103**	**$ 9,736**	**$ 10,352**

Earnings Sharing Mechanisms

Networks' regulated utilities' rate plans approved by State regulators often include earnings sharing mechanisms, or ESM, that are intended to encourage regulated utilities to operate efficiently. Pursuant to ESMs, if certain of the regulated utilities of Networks earn more than certain threshold amounts, they must share with customers a specified percentage of these earnings. Below is a history of ESMs over the past three years:

	2017	2018	2019
NYSEG Electric	50% / 50%: 9.65% - 10.15% 75% / 25%: 10.15% - 10.65% 90% / 10%: over 10.65%; Based on Actual Equity Ratio up to 50%	50% / 50%: 9.75% - 10.25% 75% / 25%: 10.25% - 10.75% 90% / 10%: over 10.75%; Based on Actual Equity Ratio up to 50%	50% / 50%: 9.75% - 10.25% 75% / 25%: 10.25% - 10.75% 90% / 10%: over 10.75%; Based on Actual Equity Ratio up to 50%
NYSEG Gas	Same as above	Same as above	Same as above
RG&E Electric	Same as above	Same as above	Same as above
RG&E Gas	Same as above	Same as above	Same as above
CMP Dist.	No ESM	No ESM	No ESM
CMP Trans.	No ESM	No ESM	No ESM
MNG	50% / 50% over 11.55%	50% / 50% over 11.55%	50% / 50% over 11.55%
UI	50% / 50% over 9.10%	50% / 50% over 9.10%	50% / 50% over 9.10%
SCG	No ESM	50% / 50% over 9.25%	50% / 50% over 9.25%
CNG	50% / 50% over 9.18%	50% / 50% over 9.18%	50% / 50% over 9.18%
BGC	No ESM	No ESM	No ESM

Renewables

The Renewables business, based in Portland, Oregon, is engaged primarily in the design, development, construction, management and operation of generation plants that produce electricity using renewable resources and, with more than 60 renewable energy projects, is one of the leaders in renewable energy production in the United States based on installed capacity. Renewables' primary business is onshore wind energy generation, which represented approximately 90% of Renewables' combined installed capacity as of December 31, 2019. For the year ended December 31, 2019, Renewables produced approximately 16,952,000 MWh

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of energy through wind power generation. Renewables had a pipeline of approximately 16,000 MW (approximately 11,000 MW - onshore and approximately 5,000 MW - offshore) of future renewable energy projects in various stages of development as of December 31, 2019.

Renewables' growing strategic business is offshore wind. Renewables has access to two lease areas off the coast of the eastern United States that it is developing through Vineyard Wind, LLC, a 50-50 partnership with Copenhagen Infrastructure Partners (CIP), a fund management company based in Denmark. In total, the lease areas have the potential to generate up to 5,000 MW of renewable energy. Renewables is currently developing two wind projects with CIP in one of the lease areas, which is 166,886 acres. The second lease area, acquired in 2018, is 132,370 acres and located over 16 nautical miles off the coast of Massachusetts.

One of the projects that Vineyard Wind, LLC is developing is the Vineyard Wind I project, which is a utility-scale offshore wind project in the United States. The 800 MW offshore wind project, located 15 miles off the coast of Massachusetts, will generate clean energy for over 400,000 households and businesses in Massachusetts and reduce carbon emissions by over 1.6 million tons per year. The second Vineyard Wind, LLC project is the Park City Wind project, an 804 MW project located in the same lease area as Vineyard Wind I, that will deliver clean, reliable energy to the residents of Connecticut through contracts with the electric distribution companies in Connecticut. Both projects are expected to be commissioned in through the mid-2020's, subject to permitting, contract negotiation and for Park City Wind, finalized purchase power agreements.

Typically, Renewables enters into long-term lease agreements with property owners who lease their land for renewable energy projects. Electricity generated at a wind project is then transmitted to customers through long-term agreements with purchasers. There are a limited number of turbine suppliers in the market. Renewables' largest turbine suppliers, Siemens-Gamesa, in which Iberdrola had an 8.1% ownership interest until the whole ownership interest was sold in February 2020, and GE Wind, in the aggregate supplied turbines which accounted for 71% of Renewables' installed wind capacity as of December 31, 2019.

Renewables currently operates 61 wind farms in 21 states across the United States. To monetize the tax benefits resulting from production tax credits and accelerated tax depreciation available to qualifying wind energy projects, Renewables has entered into "tax equity" financing structures with third party investors for a portion of its wind farms. Renewables holds two operating wind farms under these structures through limited liability companies jointly owned by one or more third party investors. These investors generally provide an up-front investment or, in some cases, payments over time for their membership interests in the financing structures. In return, the investors receive specified cash distribution allocations and substantially all of the tax earnings and benefits generated by the wind farms, until such benefits achieve a negotiated return on their investment. Upon attainment of this target return, the sharing of the cash flows and tax benefits flip, with Renewables receiving substantially all of these amounts thereafter. We also have an option to repurchase the investor's interest within a certain timeframe after the target return is met. Renewables maintains operational and management control over the wind farm businesses, subject to investor approval of certain major decisions. See "—Properties—Renewables" for more information regarding Renewables' wind power generation properties.

Additionally, as part of the Renewables portfolio, Renewables operates two thermal generation facilities in the United States, with 636 MW of combined capacity as of December 31, 2019. Renewables worked closely with the City of Klamath Falls, Oregon to develop the Klamath Plant, which has a current capacity of 536 MW. The Klamath Plant operates by creating two useful forms of energy, electricity and process steam, from a single fuel source of natural gas. In addition, Renewables operates a highly flexible 100 MW Klamath Peaking Plant adjacent to the Klamath Plant, providing customers of Renewables additional capability to meet their peak summer and winter power needs.

In addition to its wind assets, Renewables operates four solar photovoltaic facilities with an installed capacity of 116 MW. The solar photovoltaic facilities produced over 262,000 MWh of renewable energy for the year ended December 31, 2019. Solar accounted for 1.5% of the total renewable energy generation from Renewables in these same periods.

Renewables is pursuing the continued development of a large pipeline of wind energy projects in various regions across the United States. Each site features a range of different atmospheric characteristics that ultimately drive the selection of turbine technology for the proposed project. As part of Renewables' wind resource assessment investigation, critical atmospheric parameters such as mean wind speed, extreme wind speed, turbulence intensity, and mean air density are characterized to represent long-term conditions, for over 20 years. The summary wind characteristics are then combined with a terrain, or orography, analysis to assess siting risks in order to mitigate any future operations and maintenance concerns that may arise due to improper turbine siting.

Renewables maintains close relationships with key turbine suppliers, including Siemens-Gamesa, GE, Vestas and others in order to identify the turbine technology that safely delivers the lowest cost of energy for each candidate project in its portfolio. Renewables has deployed the following mix of turbines under this strategy. See "—Properties—Renewables" for more information regarding Renewables' turbine technology.

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MFG	Model	Rating	Turbines	MW
Siemens-Gamesa	G83	2.0	60	120
Siemens-Gamesa	G87	2.0	650	1,300
Siemens-Gamesa	G90	2.0	236	472
Siemens-Gamesa	G97	2.0	109	218
Siemens-Gamesa	G114	2.0	282	581
Siemens-Gamesa	SWT2.3-93	2.3	44	101
GE	1.5s	1.5	133	200
GE	1.5sle	1.5	1,126	1,689
GE	2.3	2.3	83	184
GE	2.52	2.5	128	252
GE	2.5	2.5	9	23
MHI	MWT62/1.0	1.0	45	45
MHI	MWT92/2.4	2.4	167	401
MHI	MWT95/2.4	2.4	125	300
MHI	MWT102/2.4	2.4	1	2
Suzlon	S88	2.1	325	681
Vestas	NM48	0.7	3	2
Vestas	V47	0.7	34	22
Vestas	V82	1.7	98	161
Vestas	V126/3.45	3.45	14	48
Vestas	V136/3.6	3.6	109	392
Vestas	V136/3.8	3.8	17	65
Total			3,798	7,259

The Renewables meteorology team supports the commercial development of wind and solar energy projects in Renewables' pipeline by performing a wide variety of detailed investigations and analyses to characterize the expected wind and solar energy production from a proposed wind farm or solar plant in its pre-construction phase of development. These investigations include measuring the wind or solar resource with several well-equipped meteorological masts, and using energy modeling software packages that characterize the gross energy and relevant losses. For wind projects, state of the art laser-based and acoustic-based remote sensing equipment and computational fluid dynamics modeling software are used. The Renewables fleet of measurement masts consists of approximately 130 wind meteorological towers and 12 solar meteorological stations that are currently in operation. Additionally, a total of six light detecting and ranging and six sonic detecting and ranging remote sensing devices are deployed at sites across the United States to support wind project development. These remote sensing devices allow hub-height wind speed measurement from a ground-based sensor that can be rapidly deployed and moved as the project matures or changes in nature. The resulting pre-construction energy production estimates that utilize these measurements have been shown to be accurate in a multi-year internal study that compares results to actual, operational data at wind plants in a benchmarking analysis. This study provides a critical feedback loop that is used to define methodology requirements for future pre-construction energy production estimates to ensure confidence in project investment. Renewables' commitment to obtaining robust atmospheric measurement is driven by a company culture that values business case confidence and understands the role that accurate meteorological data plays in the pursuit of this goal.

Regulatory Environment and Principal Markets

Federal Energy Regulatory Commission

Among other things, the FERC regulates the transmission and wholesale sales of electricity in interstate commerce and the transmission and sale of natural gas for resale in interstate commerce. Certain aspects of Networks' businesses and Renewables' competitive generation businesses are subject to regulation by the FERC.

Pursuant to the FPA, electric utilities must maintain tariffs and rate schedules on file with the FERC, which govern the rates, terms and conditions for the provision of the FERC-jurisdictional wholesale power and transmission services. Unless otherwise exempt, any person that owns or operates facilities used for the wholesale sale or transmission of power in interstate commerce is a public utility subject to the FERC's jurisdiction. The FERC regulates, among other things, the disposition of certain utility property, the issuance of securities by public utilities, the rates, the terms and conditions for the transmission or wholesale sale of power in interstate commerce, interlocking officer and director positions, and the uniform system of accounts and reporting requirements for public utilities.

With respect to Networks' regulated electric utilities in Maine, New York and Connecticut, the FERC governs the return on equity, or ROE, on all transmission assets in Maine and Connecticut and certain New York TransCo assets in New York; the

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FERC also oversees the rates, terms and conditions of the transmission of electric energy in interstate commerce, interconnection service in interstate commerce (which applies to independent power generators, for example) and the rates, terms and conditions of wholesale sales of electric energy in interstate commerce, which includes cost-based rates, market-based rates and the operations of regional capacity and electric energy markets in New England administered by an independent entity, ISO New England, Inc., or ISO-NE, and in New York, administered by another independent entity, the New York Independent System Operator, Inc., or NYISO. The FERC approves CMP's, UI's and New York TransCo's regulated electric utilities transmission revenue requirements. Wholesale electric transmission revenues are recovered through formula rates that are approved by the FERC. CMP's, MEPCO's and UI's electric transmission revenues are recovered from New England customers through charges that recover costs of transmission and other transmission-related services provided by all regional transmission owners. NYSEG's and RG&E's electric transmission revenues are recovered from New York customers through charges that recover the costs of transmission and other transmission-related services provided by all transmission owners in New York. Several of our affiliates have been granted authority to engage in sales at market-based rates and blanket authority to issue securities and have also been granted certain waivers of the FERC reporting and accounting regulations available to non-traditional public utilities; however, we cannot be assured that such authorizations or waivers will not be revoked for these affiliates or will be granted in the future to other affiliates.

Pursuant to a series of orders involving the ROE for regionally planned New England electric transmission projects, the FERC established a base-level transmission ROE of 11.14%, as well as providing a 50-basis point ROE adder on Pool Transmission Facilities, or PTF, for participation in the regional transmission organization, or RTO, for New England and a 100-basis point ROE incentive for projects included in the ISO-NE Regional System Plan that were completed and on line as of December 31, 2008. Certain other transmission projects received authorization for incentives up to 125 basis points.

Since 2011, several parties have filed four separate complaints with the FERC against ISO-NE and several New England transmission owners, or NETOs, including UI, CMP and MEPCO, claiming that the current approved base ROE of 11.14% was not just and reasonable, seeking a reduction of the base ROE and a refund to customers for the 15-month refund periods beginning October 1, 2011 (Complaint I), December 27, 2012 (Complaint II), July 31, 2014 (Complaint III) and April 29, 2016 (Complaint IV).

Following various intermediate hearings, orders and appellate decisions, on October 16, 2018, the FERC issued an order directing briefs and proposing a new methodology to calculate the NETOs ROE that is contained in NETOs' transmission formula rate on file at the FERC, or the October 2018 Order. The FERC proposes to use this new methodology to resolve Complaints I, II, III, and IV filed by the New England state consumer advocates.

The new proposed ROE methodology set forth in the October 2018 Order considers more than just the two-step discounted cash flow, or DCF, analysis adopted in the FERC order on Complaint I vacated by the Court. The new proposed ROE methodology uses three financial analyses (i.e., DCF, the capital-asset pricing model, and the expected earnings analysis) to produce a range of returns to narrow the zone of reasonableness when assessing whether a complainant has met its initial burden of demonstrating that the utility's existing ROE is unjust and unreasonable. The new proposed ROE methodology establishes a range of just and reasonable ROEs of 9.60% to 10.99% and proposes a just and reasonable base ROE of 10.41% with a new ROE cap of 13.08%. Pursuant to the October 2018 Order, the NETOs filed briefs on the proposed methodology in all four Complaints on January 11, 2019 and replied to the initial briefs on March 8, 2019. On November 21, 2019, the FERC issued rulings on two complaints challenging the base return on equity for Midcontinent Independent System Operator, or MISO transmission owners. These rulings established a new zone of reasonableness based on equal weighting of the DCF and capital-asset pricing model for establishing the base return on equity. This resulted in a base return on equity of 9.88% as the midpoint of the zone of reasonableness. Various parties have requested rehearing on this decision. We cannot predict the outcome of this proceeding, and the potential impact it may have in establishing a precedent for our pending four Complaints.

The FERC has the right to review books and records of "holding companies," as defined in the Public Utility Holding Company Act of 2005, or PUHCA 2005, that are determined by the FERC to be relevant to the companies' respective FERC-jurisdictional rates. We are a holding company, as defined in PUHCA 2005.

The FERC has civil penalty authority over violations of any provision of Part II of the FPA, as well as any rule or order issued thereunder. FERC is authorized to assess a maximum civil penalty of $1.3 million per violation for each day that the violation continues. The FPA also provides for the assessment of criminal fines and imprisonment for violations under Part II of the FPA. Pursuant to the Energy Policy Act of 2005, or EPAct 2005, the North American Electric Reliability Corporation, or NERC, has been certified by the FERC as the Electric Reliability Organization for North America responsible for developing and overseeing the enforcement of electric system reliability standards applicable throughout the United States. FERC-approved reliability standards may be enforced by the FERC independently, or, alternatively, by NERC and the regional reliability organizations with frontline responsibility for auditing, investigating and otherwise ensuring compliance with reliability standards, subject to the FERC oversight.

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The gas distribution operations of NYSEG, RG&E, SCG, CNG and BGC are subject to the FERC regulation under the Natural Gas Act of 1938, or NGA, with respect to their gas purchases/sales and contracted transportation/storage capacity. FERC has civil penalty authority under the NGA to impose penalties for certain violations of up to $1.3 million per day for violations. FERC also has the authority to order the disgorgement of profits from transactions deemed to violate the NGA and EPAct 2005.

Market Anti-Manipulation Regulation

The FERC and the Commodity Futures Trading Commission, or CFTC, monitor certain segments of the physical and futures energy commodities market pursuant to the FPA, the Commodity Exchange Act and the Dodd-Frank Wall Street Reform and Consumer Protection Act, or the Dodd-Frank Act, including our businesses' energy transactions and operations in the United States. With regard to the physical purchases and sales of electricity and natural gas, the gathering storage, transmission and delivery of these energy commodities and any related trading or hedging transactions that some of our operating subsidiaries undertake, our operating subsidiaries are required to observe these anti-market manipulation laws and related regulations enforced by the FERC and CFTC. The FERC and CFTC hold substantial enforcement authority, including the ability to assess civil penalties of up to $1.3 million per day per violation, to order disgorgement of profits and to recommend criminal penalties.

State Regulation

Networks' regulated utilities are subject to regulation by the applicable state public utility commissions, including with regard to their rates, terms and conditions of service, issuance of securities, purchase or sale of utility assets and other accounting and operational matters. NYSEG and RG&E are subject to regulation by the NYPSC; CMP and MNG are subject to regulation by the MPUC; UI, SCG and CNG are subject to regulation by the PURA; and BGC is subject to regulation by the DPU. The NYPSC, MPUC and the Connecticut Siting Council, or CSC, exercise jurisdiction over the siting of electric transmission lines in their respective states, and each of the NYPSC, MPUC, PURA and DPU exercise jurisdiction over the approval of certain mergers or other business combinations involving Networks' regulated utilities. In addition, each of the utility commissions has the authority to impose penalties on these regulated utilities, which could be substantial, for violating state utility laws and regulations and their orders. In June 2019, the New York State legislature passed a new law titled the Climate Leadership and Community Protection Act, or CLCPA, which could have significant impacts on the operations of electric and gas utilities in New York. A Climate Action Council is being formed consistent with the CLCPA, and that Council will be providing guidance to New York State in reaching aggressive renewable and emission reduction goals delineated in the CLCPA.

Networks' regulated distribution utilities deliver electricity and/or natural gas to all customers in their service territory at rates established under cost of service regulation. Under this regulatory structure, Networks' regulated distribution utilities recover the cost of providing distribution service to their customers based on its costs and earn a return on their capital investment in utility assets.

The following provides a summary of Networks regulated utilities' most recent rate cases:

- *New York*. On June 15, 2016, the NYPSC approved NYSEG's and RG&E's Joint Proposal for a three-year rate plan for electric and gas service, which balanced the varied interests of the signatory parties including but not limited to maintaining the companies' credit quality and mitigating the rate impacts to customers. For more information on rate case activity in New York, see Note 5 of our consolidated financial statements included in Part II, Item 8, "Financial Statements and Supplementary Data" of this Annual Report on Form 10-K, which information is incorporated herein by reference.

  The NYSEG and RG&E 2016 three-year rate plan ended in April 2019, and the existing customer rates at that time were continued, along with other rate plan provisions, pending new rates being established as a result of a new rate case. On May 20, 2019, the companies file rated cases in New York for new tariffs effective in the second quarter of 2020. The proposed rates facilitate the companies' transition to a cleaner energy future while allowing for important initiatives such as vegetation management, hardening/resiliency and emergency preparedness. The companies entered into ongoing settlement discussions with the staff and other parties in October 2019. On February 26, 2020, the companies filed notice with the NYPSC that an agreement in principle has been reached among the companies, the NYDPS staff and certain other parties to the matter. As a result, drafting of a joint proposal (settlement agreement) has commenced.

- *Maine*. On May 1, 2013, CMP filed a distribution service rate case in order to recover past and future investments and provide safe and adequate service. On August 25, 2014, MPUC approved a stipulation agreement that provided for a distribution rate increase of approximately $24.3 million, effective July 1, 2014, with an allowed ROE of 9.45% and an allowed equity ratio of 50%. The stipulation provided for the implementation of a revenue decoupling mechanism, or RDM, reserve accounting and sharing of incremental storm costs, a separate proceeding for recovery of a new billing system and no earnings sharing. On March 1, 2018, the MPUC issued a Notice of Investigation initiating a summary investigation into CMP's metering, billing and customer communications practices. Due to the highly technical nature of CMP's customer billing system, on March 22, 2018 the MPUC issued an Order Initiating Audit commencing a forensic

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audit of CMP's customer billing system to identify any errors that have, or continue to result in billing inaccuracies. On July 10, 2018, the MPUC issued an Order Modifying Scope of Audit, which expanded the scope of the audit to include the customer communication practices that were originally identified in the Commission's Notice of Investigation. On May 29, 2018, a ten-person complaint was filed with the MPUC against CMP, Networks and AVANGRID. The complaint requested that the MPUC open a rate case to determine if CMP is making excessive returns on investment and, therefore, whether CMP's retail rates should be lower. The complaint also requested the MPUC deny certain costs associated with the October 2017 windstorm. On July 24, 2018, the MPUC issued an order dismissing the complaint and its associated request to deny the recovery of costs associated with the October 2017 windstorm. The order initiated an investigation into CMP's rates and revenue requirement and directed CMP to make a filing consistent with the requirements for a general rate case no later than October 15, 2018. Consistent with the order in the ten-person complaint proceeding, on August 7, 2018, the MPUC issued a Notice of Investigation, opening the proceeding in which CMP would make its rate case filing and through which the MPUC will examine the rates and revenue requirements of CMP.

On October 15, 2018, CMP filed a general rate case as directed by the MPUC requesting a ROE of 10% and an equity ratio of 55%. CMP's general rate case filing included a proposal to enhance the resiliency of the energy grid by expanding vegetation management and pursuing additional reliability measures such as pole replacements and addition of tree wire in selected areas. Such investments are designed to strengthen CMP's power grid so it can better stand up to severe weather. CMP planned to use savings from the Tax Act to pay for the costs of resiliency programs, other investments in infrastructure and certain cost increases since 2014.

On December 20, 2018, the MPUC released the findings of the forensic audit of CMP's customer billing system and customer communication practices. On January 14, 2019, the MPUC issued an Order and Notice of Investigation initiating an investigation of CMP's metering and billing practices and initiating a separate investigation of the audit of CMP's customer service and communication practices and incorporating such investigation into the general rate case. The Maine Office of Public Advocate, or OPA, for utility issues filed a motion to delay CMP's rate order decision to allow incorporation of the results of the separate metering and billing investigation. CMP did not oppose this motion.

In an order issued on February 19, 2020, the MPUC authorized an increase in CMP's distribution revenue requirement of $17 million, or approximately 7%, based on an allowed ROE of 9.25% and a 50% equity ratio. The rate increase is effective March 1, 2020. The MPUC also imposed a 1.00% ROE reduction (to 8.25%) for management efficiency associated with CMP's customer service performance following the implementation of its new billing system in 2017. The management efficiency adjustment will remain in effect until CMP has demonstrated satisfactory customer service performance on four specified service quality measures for a period of 18 consecutive months with measurement commencing on March 1, 2020. The order provides additional funding for staffing increases, vegetation management programs and storm restoration costs, while retaining the basic tiered structure for storm cost recovery implemented in the 2014 stipulation. The MPUC order also retains the revenue decoupling mechanism implemented in 2014. The order denies CMP's request to increase rates for higher costs associated with services provided by its affiliates and will instead initiate a management audit to assess the quality of these services as well as the impacts of the AVANGRID management structure on the quality of CMP's customer service.

On March 5, 2015, MNG filed a rate case in order to further recover future investments and provide safe and adequate service. On May 3, 2016, all active parties to the case filed a stipulation that settled all matters at issue in the case and reflected a 10-year rate plan through April 30, 2026. The MPUC approved the stipulation on May 17, 2016, for new rates effective June 1, 2016. The settlement structure for non-Augusta customers includes a 34.6% delivery revenue increase over five years with an allowed 9.55% ROE and 50% common equity ratio. The settlement structure for Augusta customers includes a ten-year rate plan with existing Augusta customers being charged rates equal to non-Augusta customers plus a surcharge that increases annually for five years. New Augusta customers will have rates set based on an alternate fuel market model. In year seven of the rate plan MNG will submit a cost of service filing for the Augusta area to determine if the rate plan should continue. This cost of service filing will exclude $15 million of initial 2012/2013 gross plant investment; however the stipulation allows for accelerated depreciation of these assets. If the Augusta area's cost of service filing illustrates results above a 14.55% ROE then the rate plan may cease, otherwise the rate plan would continue. A disallowance for the initial 2012/2013 gross plant investment is not part of the approved stipulation.

- *Connecticut*. In December 2016, PURA approved distribution rate schedules for UI for three years with rate increases of $43 million, $13 million and $3 million in 2017, 2018 and 2019, respectively, based on an ROE of 9.10% and a 50% equity ratio. The new rate schedules continued UI's existing ESM pursuant to which UI and its customers share on a 50/50 basis all distribution earnings above the allowed ROE in a calendar year, continued the existing decoupling mechanism, and approved the continuation of a requested storm reserve. Any dollars due to customers from the ESM continue to be first applied against any storm regulatory asset balance (if one exists at that time) or refunded to customers through a bill credit if such storm regulatory asset balance does not exist.

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In December 2017, PURA approved new tariffs for SCG effective January 1, 2018 for a three-year rate plan with rate increases of $1.5 million, $4.7 million and $5.0 million in 2018, 2019 and 2020, respectively. The new tariff also includes an RDM and Distribution Integrity Management Program, or DIMP, mechanism similar to the mechanisms authorized for CNG; ESM; the amortization of certain regulatory liabilities (most notably accumulated hardship deferral balances and certain accumulated deferred income taxes); and tariff increases based on a ROE of 9.25% and approximately 52% equity level. Any dollars due to customers from the ESM will be first applied against any environmental regulatory asset balance as defined in the settlement agreement (if one exists at that time) or refunded to customers through a bill credit if such environmental regulatory asset balance does not exist.

In December, 2018, PURA approved new tariffs for CNG effective January 1, 2019 for a three-year rate plan with rate increases of $9.9 million, $4.6 million and $5.2 million in 2019, 2020 and 2021, respectively. The new tariffs continued the RDM and DIMP mechanism, ESM and tariff increases based on an ROE of 9.30% and an equity ratio of 54% in 2019, 54.50% in 2020, and 55% in 2021.

For more information on rate case activity in Connecticut, see Note 5 of our consolidated financial statements included in Part II, Item 8, "Financial Statements and Supplementary Data" of this Annual Report on Form 10-K, which information is incorporated herein by reference.

- *Massachusetts*. On January 18, 2019, the DPU approved a settlement agreement between BGC and the Massachusetts Attorney General's Office providing for new distribution rates for BGC. The settlement agreement provides for a $1.6 million distribution base rate increase effective February 1, 2019 (with a make-whole provision back to January 1, 2019), and an additional $0.7 million base distribution increase effective November 1, 2019, if certain investments are made by BGC. The distribution rate increase is based on a 9.70% ROE and 54% equity ratio. The settlement agreement provides for the implementation of an RDM and pension expense tracker and also provides that BGC will not file to change base distribution rates to become effective before November 1, 2021.

In addition, as a result of a restructuring of the utility industry in New York, Maine, Connecticut and Massachusetts, most of Networks' distribution utilities' customers have the opportunity to purchase their electricity or natural gas supplies from third-party energy supply vendors. Most customers in New York, however, continue to purchase such supplies through the distribution utilities under regulated energy rates and tariffs. In Maine, CMP customers can also purchase electric supply from competitive providers, but the majority receive baseline standard offer service that is provided through a MPUC procurement process. Networks' regulated utilities in New York, Connecticut and Massachusetts and MNG purchase electricity or natural gas from unaffiliated wholesale suppliers and recover the actual approved costs of these supplies on a pass-through basis, as well as certain costs associated with industry restructuring, through reconciling rate mechanisms that are periodically adjusted.

In April 2014, the NYPSC instituted its Reforming the Energy Vision, or REV, proceeding, the goals of which are to improve electric system efficiency and reliability, encourage renewable energy resources, support DER, and empower customer choice. Within REV and its related proceedings, the NYPSC is moving toward the establishment of a Distributed System Platform, or DSP, to manage and coordinate DER, and to provide customers with market data and tools to manage their energy use. The NYPSC has determined distribution utilities should be the DSP providers. The NYPSC also is examining how its regulatory practices should be modified to incent utility practices to promote REV objectives. The REV-related proceedings involve a two-phased schedule with an initial order relating to policy determinations for DSP and related matters issued in February 2015 and an initial order for regulatory design and regulatory matters issued in May 2016. All electric utilities were ordered to file an initial Distributed System Implementation Plan, or DSIP, by June 30, 2016. An initial DSIP was filed by NYSEG and RG&E and included information regarding the potential deployment of Automated Metering Infrastructure, or AMI. A separate petition for the cost recovery associated with full deployment of AMI was filed by NYSEG and RG&E in December 2016 that was never acted upon. NYSEG and RG&E filed a new AMI request in their 2019 rate case filings.

In March 2017, the NYPSC issued three separate REV-related orders. These orders created a series of filing requirements for NYSEG and RG&E beginning in March 2017 and extending through the end of 2018. The three orders involve: (1) modifications to the electric utilities' proposed interconnection earnings adjustment mechanism, or EAM, framework; (2) further DSIP requirements, including filing of an updated DSIP plan by mid-2018 and implementing two energy storage projects at each company by the end of 2018; and (3) Net Energy Metering Transition including implementation of Phase One of the value of DER. In September 2017, the NYPSC issued another order related to the value of DER, requiring tariff filings, changes to Standard Interconnection Requirements, and planning for the implementation of automated consolidated billing. In July 2018, NYSEG and RG&E submitted an updated DSIP plan consistent with guidance received from the NY Department of Public Service. As of the end of 2018, both NYSEG and RG&E had deployed two energy storage projects each, consistent with the March 2017 NYPSC order requirements. Phase Two of the Value of DER proceeding was established, and several working group sessions occurred between the latter half of 2017 and all of 2018, primarily addressing issues pertaining to compensation for DER and rate design. In December 2018, the NYPSC Staff submitted whitepapers on standby and buyback service rate design, future value stack

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compensation and capacity value compensation. The NYPSC ruled on the proposals set forth in the whitepapers on May 16, 2019. NYSEG and RG&E filed proposed standby and buyback rates with the NYPSC on September 24, 2019. The NYPSC also issued an order on value stack compensation for high-capacity-factor resources on December 12, 2019.

State public utility commissions may also have jurisdiction over certain aspects of Renewables' competitive generation businesses. For example, in New York, certain Renewables' generation subsidiaries are electric corporations subject to "lightened" regulation by the NYPSC. As such, the NYPSC exercises its jurisdictional authority over certain non-rate aspects of the facilities, including safety, retirements and the issuance of debt secured by recourse to those generation assets located in New York. In Texas, Renewables' operations within the Electric Reliability Council of Texas, or ERCOT, footprint are not subject to regulation by FERC, as they are deemed to operate solely within the ERCOT market and not in interstate commerce. These operations are subject to regulation by the Public Utility Commission of Texas, or PUCT. In California, Renewables' generation subsidiaries are subject to regulation by the California Public Utilities Commission with regard to certain non-rate aspects of the facilities, including health and safety, outage reporting and other aspects of the facilities' operations.

Tax Cuts and Jobs Act

On December 22, 2017, the Tax Act was signed into law. The Tax Act significantly changed the federal taxation of business entities including, among other things, implementing a federal corporate tax rate decrease from 35% to 21% for tax years beginning after December 31, 2017. Reductions in accumulated deferred income tax balances due to the reduction in the corporate income tax rates will result in amounts previously and currently collected from utility customers for these deferred taxes to be refundable to such customers, generally through reductions in future rates. The Networks utilities have adjusted rates to reflect the lower federal tax rates in effect, and our rate case filings in New York and Maine include proposals for the return of excess deferred taxes to customers. For more information on the Tax Act proceedings, see Note 5 of our consolidated financial statements included in Part II, Item 8, "Financial Statements and Supplementary Data" of this Annual Report on Form 10-K, which information is incorporated herein by reference.

RTOs and ISOs

Networks' regulated electric utilities in New York, Connecticut and Maine, as well as some of Renewables' generation fleet, operate in or have access to organized energy markets, known as RTOs or independent system operators, or ISOs, particularly NYISO and ISO-NE. Each organized market administers centralized bid-based energy, capacity and ancillary services markets pursuant to tariffs approved by the FERC, or in the case of ERCOT, market rules approved by the PUCT. These tariffs and rules dictate how the energy, capacity and ancillary service markets operate, how market participants bid, clear, are dispatched, make bilateral sales with one another, and how entities with market-based rates are compensated. Certain of these markets set prices, referred to as Locational Marginal Prices that reflect the value of energy, capacity or certain ancillary services, based upon geographic locations, transmission constraints and other factors. Each market is subject to market mitigation measures designed to limit the exercise of market power. Some markets limit the prices of the bidder based upon some level of cost justification. These market structures impact the bidding, operation, dispatch and sale of energy, capacity and ancillary services.

The RTOs and ISOs are also responsible for transmission planning and operations within their respective regions. Each of Networks' transmission-owning subsidiaries in New York, Connecticut and Maine has transferred operational control over certain of its electric transmission facilities to its respective ISOs, such as ISO-NE and NYISO.

New Renewable Source Generation

Under Connecticut Public Act 11-80, or PA, Connecticut electric utilities are required to enter into long-term contracts to purchase Connecticut Class I Renewable Energy Certificates, or RECs, from renewable generators located on customer premises. Under this program, UI is required to enter into contracts totaling approximately $200 million in commitments over approximately 21 years. The obligations were initially expected to phase in over a six-year solicitation period and to peak at an annual commitment level of about $13.6 million per year after all selected projects are online. PA 17-144, PA 18-50, and PA 19-35 extended the original six-year solicitation period of the program by adding seventh, eighth, ninth, and tenth years, and increased the original funding level of this program by adding up to $64 million in additional commitments by UI. UI expects to partially mitigate the cost of these contracts through the resale of the RECs. PA 11-80 provides that the remaining costs (and any benefits) of these contracts, including any gain or loss resulting from the resale of the RECs, are fully recoverable from (or credited to) customers through electric rates.

Pursuant to Connecticut statute, in January 2017, UI entered into a master agreement with the Connecticut Green Bank to procure Connecticut Class I RECs produced by residential solar installations in 15-year tranches, with a final tranche to commence no later than 2022. UI's contractual obligation is to procure 20% of RECs produced by about 255 MW of residential solar installations. Connecticut statutes provides that the net costs (and any benefits) of these contracts, including any gain or loss resulting from the resale of the RECs, are fully recoverable from (or credited to) customers through electric rates

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In October of 2018, UI entered into five PPAs totaling approximately 50 MW from developers of offshore wind and fuel cell generation. These PPAs originated from an RFP issued by DEEP, under PA 17-144 which provides that the net costs of the PPAs are recoverable through electric rates. The PPAs were filed for PURA approval on October 25, 2018. On December 19, 2018, PURA issued its final decision approving the five PPAs and approved UI's use of the non by-passable federally mandated congestion charges for all customers to recover the net costs of the PPAs.

On December 28, 2018, DEEP issued a directive to UI to negotiate and enter into PPAs with 12 projects, totaling approximately 12 million MWh, which were selected as a result of the Zero Carbon RFP issued by DEEP pursuant to PA 17-3, which provides that the net costs of the PPAs are recoverable through electric rates. One of the selected projects is the Millstone nuclear facility located in Waterford, Connecticut and owned by Dominion Energy, Inc. The PPA with Dominion was executed and approved by PURA in September 2019. Of the eleven other projects, one dropped out and PPAs with nine other projects were executed and approved by PURA in November 2019. The remaining PPA has been executed and submitted for approval to PURA.

Pursuant to Connecticut Act Concerning the Procurement of Energy Derived From Offshore Wind, DEEP solicited proposals from providers of energy derived from offshore wind facilities that are Class I renewable energy sources for up to two thousand (2,000) MW in the aggregate. On December 5, 2019, DEEP announced that it had selected Vineyard Wind ("Vineyard"), an affiliate of UI, to provide 804 MW of offshore wind through the development of its Park City Wind Project. DEEP also ordered Eversource and UI to negotiate PPAs with Vineyard. Similar to the case with the zero carbon PPAs discussed above, the net costs of the PPAs are recoverable through electric rates.

Under Maine law 35-A M.R.S.A §§ 3210-C, 3210-D, the MPUC is authorized to conduct periodic requests for proposals seeking long-term supplies of energy, capacity or RECs, from qualifying resources. The MPUC is further authorized to order Maine transmission and distribution utilities to enter into contracts with sellers selected from the MPUC's competitive solicitation process. Pursuant to a MPUC Order dated October 8, 2009, CMP entered into a 20-year agreement with Evergreen Wind Power III, LLC, on March 31, 2010, to purchase capacity and energy from Evergreen's 60 Megawatt (MW) Rollins wind farm in Penobscot County, Maine. CMP's purchase obligations under the Rollins contract are approximately $7 million per year. Pursuant to a MPUC Order dated December 18, 2017, CMP entered into a 20-year agreement with Dirigo Solar, LLC on September 10, 2018, to purchase capacity and energy from multiple Dirigo solar facilities throughout CMP's service territory. CMP's purchase obligations under the Dirigo contract will increase as additional solar facilities are brought on line, eventually reaching a level of approximately $4 million per year. Pursuant to a MPUC Order dated November 6, 2019, CMP entered into a 20-year agreement with Maine Aqua Ventus I GP LLC on December 9, 2019, to purchase capacity and energy from an off-shore wind under development near Monhegan Island, Maine. CMP's purchase obligations under the Maine Aqua Ventus contract will be approximately $12 million per year once the facility begins commercial operation. In accordance with MPUC orders, CMP either sells the purchased energy from these facilities in the ISO New England markets or periodically auctions the purchased output to wholesale buyers in the New England regional market. Under applicable law, CMP is assured recovery of any differences between power purchase costs and achieved market revenues through a reconcilable component of its retail distribution rates. Although the MPUC has conducted multiple requests for proposals under M.R.S.A §3210-C and has tentatively accepted long-term proposals from other sellers, these selections have not yet resulted in additional currently effective contracts with CMP.

Environmental, Health and Safety

Permitting and Other Regulatory Requirements

Networks. Similar to Renewables, Networks' distribution utilities in New York, Maine, Connecticut and Massachusetts are subject to various federal, state and local laws and regulations in connection with the environmental, health and safety effects of its operations. The distribution utilities of Networks are subject to regulation by the applicable state public utility commission with respect to the siting and approval of electric transmission lines, with the exception of UI, the siting of whose transmission lines is subject to the jurisdiction of the CSC, and with respect to pipeline safety regulations for intrastate gas pipeline operators.

The National Environmental Policy Act, or NEPA, requires that detailed statements of the environmental effect of Networks' facilities be prepared in connection with the issuance of various federal permits and licenses. Federal agencies are required by NEPA to make an independent environmental evaluation of the facilities as part of their actions during proceedings with respect to these permits and licenses.

Under the federal Toxic Substances Control Act, the Environmental Protection Agency, or EPA, has issued regulations that control the use and disposal of Polychlorinated Biphenyls, or PCBs. PCBs were widely used as insulating fluids in many electric utility transformers and capacitors manufactured before the federal Toxic Substances Control Act prohibited any further manufacture of such PCB equipment. Fluids with a concentration of PCBs higher than 500 parts per million and materials (such as electrical capacitors) that contain such fluids must be disposed of through burning in high temperature incinerators approved by the EPA. For our gas distribution companies, PCBs are sometimes found in the distribution system. Networks tests any distribution piping being removed or repaired for the presence of PCBs and complies with relevant disposal procedures, as needed.

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Under the federal Resource Conservation and Recovery Act, or RCRA, the generation, transportation, treatment, storage and disposal of hazardous wastes are subject to regulations adopted by the EPA. All of Networks' subsidiaries have complied with the notification and application requirements of present regulations, and the procedures by which the subsidiaries handle, store, treat and dispose of hazardous waste products comply with these regulations.

Prior to the last quarter of the 20th century, when environmental best practices laws and regulations were implemented, utility companies, including Networks' subsidiaries, often disposed of residues from operations by depositing or burying them on-site or disposing of them at off-site landfills or other facilities. Typical materials disposed of include coal gasification byproducts, fuel oils, ash, and other materials that might contain PCBs or that otherwise might be hazardous. In recent years it has been determined that such disposal practices, under certain circumstances, can cause groundwater contamination.

Renewables. Renewables' projects are subject to a variety of state environmental review and permitting requirements. Many states where Renewables' projects are located, or may be located in the future, have laws that require state agencies to evaluate a broad array of environmental impacts before granting state permits. Generally, state agencies evaluate similar issues as federal agencies, including the project's impact on wildlife, historic sites, aesthetics, wetlands and water resources, agricultural operations and scenic areas. States may impose different or additional monitoring or mitigation requirements than federal agencies. Additional approvals may be required for specific aspects of a project, such as stream or wetland crossings, impacts to designated significant wildlife habitats, storm water management and highway department authorizations for oversize loads and state road closings during construction. Permitting requirements related to transmission lines may be required in certain cases.

Renewables' projects also are subject to local environmental and regulatory requirements, including county and municipal land use, zoning, building and transportation requirements. Permitting at the local municipal or county level often consists of obtaining a special use or conditional use permit under a land use ordinance or code, or, in some cases, rezoning is required for a project. Obtaining a permit usually requires that Renewables demonstrates that the project will conform to certain development standards specified under the ordinance so that the project is compatible with existing land uses and protects natural and human environments. Local or state regulatory agencies may require modeling and measurement of permissible sound levels in connection with the permitting and approval of Renewables' projects. Local or state agencies also may require Renewables to develop decommissioning plans for dismantling the project at the end of its functional life and establish financial assurances for carrying out the decommissioning plan.

In addition to permits required under state and local laws, Renewables' projects may be subject to permitting and other regulatory requirements arising under federal law. For example, if a project is located near wetlands, a permit may be required from the U.S. Army Corps of Engineers, or Army Corps, with respect to the discharge of dredged or fill material into the waters of the United States. The Army Corps may also require the mitigation of any loss of wetland functions and values that accompanies the project's activities. In addition, Renewables may be required to obtain permits under the federal Clean Water Act for water discharges, such as storm water runoff associated with construction activities, and to follow a variety of best management practices to ensure that water quality is protected and impacts are minimized. Renewables' projects also may be located, or partially located, on lands administered by the U.S. Bureau of Land Management, or BLM. Therefore, Renewables may be required to obtain and maintain BLM right-of-way grants for access to, or operations on, such lands. To obtain and maintain a grant, there must be environmental reviews conducted, a plan of development implemented and a demonstration that there has been compliance with the plan to protect the environment, including measures to protect biological, archeological and cultural resources encountered on the grant.

Renewables' projects may be subject to requirements pursuant to the Endangered Species Act, or ESA, and analogous state laws. For example, federal agencies granting permits for Renewables' projects consider the impact on endangered and threatened species and their habitat under the ESA, which prohibits and imposes stringent penalties for harming endangered or threatened species and their habitats. Renewables' projects also need to consider the Migratory Bird Treaty Act, or MBTA, and the Bald and Golden Eagle Protection Act, or BGEPA, which protect migratory birds and bald and golden eagles and are administered by the U.S. Fish and Wildlife Service. Criminal liability can result from violations of the MBTA and the BGEPA, even for incidental takings of migratory birds. For example, the U.S. Department of Justice, or DOJ, has previously enforced substantial penalties and mitigation measures against two large wind farm operators, pursuant to which those operators pled guilty to criminal violations of the MBTA.

In addition to regulations, voluntary wind turbine siting guidelines established by the U.S. Fish and Wildlife Service set forth siting, monitoring and coordination protocols that are designed to support wind development in the United States while also protecting both birds and bats and their habitats. These guidelines include provisions for specific monitoring and study conditions which need to be met in order for projects to be in adherence with these voluntary guidelines. Most states also have similar laws. Because the operation of wind turbines may result in injury or fatalities to birds and bats, federal and state agencies often recommend or require that Renewables conduct avian and bat risk assessments prior to issuing permits for its projects. They may also require ongoing monitoring or mitigation activities as a condition to approving a project.

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Global Climate Change and Greenhouse Gas Emission Issues

Global climate change and greenhouse gas emission issues continue to receive an increased focus from state governments and the federal government. In November 2010, the EPA published final rules for monitoring and reporting requirements for petroleum and natural gas systems that emit greenhouse gases under the authority of the Clean Air Act beginning in 2011. These regulations apply to facilities that emit greenhouse gases above the threshold level of 25,000 metric tons equivalent per year. SCG and CNG both exceed this threshold and are subject to reporting requirements. The liquefied natural gas, or LNG, facilities owned and/or contracted by SCG and CNG are also subject to the monitoring and reporting requirements under the regulations. Similarly, Networks is subject to reporting requirements under provisions of the greenhouse gases regulations, which regulate electric transmission and distribution equipment that emit sulfur hexafluoride.

We are continuously evaluating the regulatory risks and regulatory uncertainty presented by climate change and greenhouse gas emission. Such concerns could potentially lead to additional rules and regulations as well as requirements imposed through the ratemaking process that impact how we operate our business. We expect that any costs of these rules, regulations and requirements would be recovered from customers.

OSHA and Certain Other Federal Safety Laws

We are subject to the requirements of the federal Occupational Safety and Health Act, as amended, or OSHA, and comparable state laws that regulate the protection of the health and safety of employees. In addition, OSHA's hazard communication standard and standards administered by other federal as well as state agencies, including the Emergency Planning and Community Right to Know Act and the related implementing regulations require that information be maintained about hazardous materials used or produced in operations of our subsidiaries and that this information be provided to employees, state and local government authorities and citizens.

Management, Disposal and Remediation of Hazardous Substances

We own or lease real property and may be subject to federal, state and local requirements regarding the storage, use, transportation and disposal of petroleum products and toxic or hazardous substances, including spill prevention, control and counter-measure requirements. Project properties and materials stored or disposed thereon may be subject to the federal RCRA, the Toxic Substances Control Act, the Comprehensive Environmental Response, Compensation and Liability Act and analogous state laws. If any of our owned or leased properties are contaminated, whether during or prior to our ownership or operation, we could be responsible for the costs of investigation and cleanup and for any related liabilities, including claims for damage to property, persons or natural resources. Such responsibility may arise even if we were not at fault and did not cause the contamination. In addition, waste generated by our operating subsidiaries is at times sent to third party disposal facilities. If such facilities become contaminated, the operating subsidiary and any other persons who arranged for the disposal or treatment of hazardous substances at those sites may be jointly and severally responsible for the costs of investigation and remediation, as well as for any claims of damages to third parties, their property or natural resources.

On September 16, 2015, UI signed a partial consent order that was then issued by DEEP in August 2016 related to the investigation and remediation of the English Station site. The consent order requires UI to investigate and remediate certain environmental conditions within the perimeter of the English Station site. Under the consent order, to the extent that the cost of this investigation and remediation is less than $30 million, UI is required to remit to the State of Connecticut the difference between such cost and $30 million to be applied to a public purpose as determined in the discretion of the Governor of the State of Connecticut, the Attorney General of the State of Connecticut and the Commissioner of DEEP. However, UI is obligated to comply with the consent order even if the cost of such compliance exceeds $30 million. The state may discuss options with UI on recovering or funding any cost above $30 million, such as through public funding or recovery from third parties, however it is not bound to agree to or support any means of recovery or funding. UI has initiated its process to investigate and remediate the environmental conditions within the perimeter of the English Station site pursuant to the consent order.

Cyber Security

The Company promotes a strong culture of cyber security and safe use of the information and communications systems and other cyber assets in order to detect, prevent, defend and respond to cyber-attacks or cyber-incidents. The implementation of a robust cyber security program over the years includes the creation of a Cyber-Security Committee, the approval of new policies and procedures, training and awareness programs, tools, systems and dedicated teams.

Customers

Networks delivers natural gas and electricity to residential, commercial and institutional customers through its regulated utilities in New York, Maine, Connecticut and Massachusetts. Networks' customer payment terms are regulated by the states of New York, with respect to NYSEG and RG&E; Maine, with respect to CMP and MNG; Connecticut, with respect to UI, SCG and

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CNG; and Massachusetts, with respect to BGC, and each of the regulated utilities must provide extended payment arrangements to customers for past due balances. See "—Networks" for more information relating to the customers of Networks.

Renewables sells the majority of its output to large investor-owned utilities, public utilities and other credit-worthy entities. Additionally, Renewables generates and provides power, among other services, to federal and state agencies, institutional retail and joint action agencies. Offtakers typically purchase renewable energy from Renewables through long-term PPAs, allowing Renewables to limit its exposure to market volatility. Approximately 69% of Renewables' wind generating capacity is fully committed under PPAs as of December 31, 2019, with an average duration of 9.5 years. Renewables also delivers thermal output to wholesale customers in the Western United States.

Competition

Networks' regulated utilities do not generally face competition from other companies that transmit and distribute electricity and natural gas. However, demand for electricity and natural gas may be negatively impacted by federal and state legislation mandating that certain percentages of power delivered to end users be produced from renewable resources, such as wind, thermal and solar energy.

Networks faces competition from self-contained micro-grids that integrate renewable energy sources in the areas served by Networks. However, there has been limited development of these micro-grids in Networks' service areas to date, and Networks expects that growth in distributed generation of renewable energy will continue due to financial incentives being provided by federal and state legislation. Networks has experienced significant growth in alternative distribution sources of generation on its network over the past ten years, with approximately 90% of the growth coming from solar photovoltaic facilities.

Renewables has competitive advantages, including a robust development pipeline, a management team with extensive experience, strong relationships with suppliers and clients, expert regulatory knowledge and brand awareness. However, Renewables faces competition throughout the life cycles of its energy facilities, including during the development phase, in the identification and procurement of suitable sites with high wind resource availability, grid connection capacity and land availability. Renewables also competes with other suppliers in securing long-term PPAs with power purchasers and participates in competitive bilateral and organized energy markets with other energy sources for power that is not sold under PPAs. Competitive conditions may be substantially affected by various forms of energy legislation and regulation considered from time to time by federal, state and local legislatures and administrative agencies.

Properties

Networks

The following table sets forth certain information relating to Networks' electricity generation facilities and their respective locations, type and installed capacity as of December 31, 2019. Unless noted otherwise, Networks owns each of these facilities and all our generating properties are regulated under cost of service regulation.

Operating Company	Facility Location	Facility Type	Installed Capacity (in MW)	Year(s) Commissioned
NYSEG	Newcomb, NY	Diesel Turbine	4.3	1967, 2017
NYSEG	Blue Mountain, NY	Diesel Turbine	2.0	2019
NYSEG	Long Lake, NY	Diesel Turbine	2.0	2019
NYSEG	Eastern New York (6 locations)	Hydroelectric	61.4	1921—1983
RG&E	Rochester, NY (3 locations)	Hydroelectric	57.1	1917—1960

UI is also party to a 50-50 joint venture with certain affiliates of Clearway Energy, Inc. in GCE Holding LLC, whose wholly-owned subsidiary, GenConn, operates two 188 MW peaking generation plants, GenConn Devon and GenConn Middletown, in Connecticut.

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The following table sets forth certain operating data relating to the electricity transmission and distribution activities of each of Networks' regulated utilities as of December 31, 2019.

Utility	State	Substations	Transmission Lines (in miles)	Overhead Distribution Lines (in pole miles)	Underground Lines (in miles)	Total Distribution (in miles)	Electricity Customers
NYSEG	New York	429	4,548	32,223	2,911	35,134	902,593
RG&E	New York	155	1,095	5,940	2,935	8,875	383,592
CMP	Maine	207	2,921	21,803	1,545	23,348	636,341
UI	Connecticut	28	139	2,893	745	3,638	338,654

The following table sets forth certain operating data relating to the natural gas transmission and distribution activities of each of Networks' regulated utilities, as of December 31, 2019:

Utility	State	Natural Gas Customers	Transmission Pipeline (in miles)	Distribution Pipeline (in miles)
NYSEG	New York	268,806	20	8,382
RG&E	New York	317,661	105	8,999
MNG	Maine	4,974	2	216
SCG	Connecticut	203,269	—	2,472
CNG	Connecticut	181,527	—	2,185
BGC	Massachusetts	40,500	—	764

CNG owns and operates an LNG plant which can store up to 1.2 Bcf of natural gas and can vaporize up to 100,000 Dth per day of LNG to meet peak demand. SCG has contract rights to and operates a similar plant, which is owned by an affiliate, that can also store up to 1.2 Bcf of natural gas. SCG's LNG facilities can vaporize up to 82,000 Dth per day of LNG to meet peak demand. SCG and CNG have also contracted for 20.6 Bcf of storage with a maximum peak day delivery capability of 216,000 Dth per day.

Renewables

The following table sets forth Renewables' portfolio of wind projects as of December 31, 2019. Unless noted otherwise, Renewables wholly owns each of these facilities.

Location	Wind Project	Turbines	Total Installed Capacity (MW)	Commercial Operation Date	North American Electric Reliability Corporation (NERC) Region
Arizona	Dry Lake I	30 (Suzlon S88, 2.1 MW)	63	2009	WECC
	Poseidon Wind (1)	15.5 (Suzlon, 2.1 MW)	33	2010	WECC
California	Dillon	45 (Mitsubishi, 1 MW)	45	2008	WECC
	Manzana	126 (GE, 1.5 MW)	189	2011	WECC
	Mountain View III	34 (Vestas V47, 0.66 MW)	22	2003	WECC
	Phoenix Wind Power	3 (Vestas, 0.66 MW)	2	1999	WECC
	Shiloh	100 (GE, 1.5 MW)	150	2006	WECC
	Tule	57 (GE, 2.3 MW)	131	2017	WECC
Colorado	Colorado Green	108 (GE, 1.5 MW)	162	2003	WECC
	Twin Buttes	50 (GE, 1.5 MW)	75	2007	WECC
	Twin Buttes II	30 (Gamesa G114, 2.10 MW); 6 (Gamesa G114, 2.0 MW)	75	2017	WECC
Illinois	Providence Heights	36 (Gamesa G87, 2.0 MW)	72	2008	MRO
	Streator Cayuga Ridge South	150 (Gamesa, 2.0MW)	300	2010	MRO
	Otter Creek	17 (Vestas, 3.8 MW); 4 (Vestas, 3.5 MW)	78	2020	MRO
Iowa	Barton	80 (Gamesa, 2.0 MW)	160	2009	MRO
	Flying Cloud	29 (GE, 1.5 MW)	44	2004	MRO
	New Harvest	50 (Gamesa G87, 2.0W)	100	2012	MRO

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Location	Wind Project	Turbines	Total Installed Capacity (MW)	Commercial Operation Date	North American Electric Reliability Corporation (NERC) Region
	Top of Iowa II	40 (Gamesa G87, 2.0 MW)	80	2008	MRO
	Winnebago I	10 (Gamesa G87, 2.0 MW)	20	2008	MRO
Kansas	Elk River	100 (GE, 1.5 MW)	150	2005	MRO
Massachusetts	Hoosac	19 (GE, 1.5 MW)	29	2012	NPCC
Minnesota	Elm Creek	66 (GE, 1.5 MW)	99	2008	MRO
	Elm Creek II	62 (Mitsubishi, 2.4)	149	2010	MRO
	MinnDakota	100 (GE, 1.5 MW)	150	2008	MRO
	Moraine I	34 (GE, 1.5 MW)	51	2003	MRO
	Moraine II	33 (GE, 1.5 MW)	50	2009	MRO
	Trimont	67 (GE, 1.5 MW)	101	2005	MRO
Missouri	Farmers City	73 (Gamesa G87, 2.0 MW)	146	2009	MRO
New Hampshire	Groton	24 (Gamesa G87, 2.0 MW)	48	2012	NPCC
	Lempster	12 (Gamesa G87, 2 MW)	24	2008	NPCC
New Mexico	El Cabo	140 (Gamesa G114, 2.1 MW); 2 (Gamesa G114, 2.0 MW)	298	2017	WECC
New York	Hardscrabble	37 (Gamesa G90, 2.0 MW)	74	2011	NPCC
	Maple Ridge I(2)	70 (Vestas V82, 1.65 MW)	116	2006	NPCC
	Maple Ridge II(2)	27 (Vestas V82, 1.65 MW)	45	2006	NPCC
North Carolina	Desert Wind	104 (Gamesa G114, 2.0 MW)	208	2016	SERC
North Dakota	Rugby	71 (Suzlon S88, 2.1 MW)	149	2009	MRO
Ohio	Blue Creek	152 (Gamesa G90 – 2.0 MW)	304	2012	RFC
Oregon	Hay Canyon	48 (Suzlon S88, 2.1 MW)	101	2009	WECC
	Klondike I	16 (GE, 1.5 S – 1.5 MW)	24	2001	WECC
	Klondike II	50 (GE, 1.5 S – 1.5 MW)	75	2005	WECC
	Klondike III	44 (Siemens, 2.3 MW); 80 (GE, 1.5 SLE, 1.5 MW); 1 (Mitsubishi, 2.4 MW)	224	2007	WECC
	Klondike IIIa	51 (GE, 1.5 MW)	77	2008	WECC
	Leaning Juniper II	74 (GE, 1.5 MW); 42 (Suzlon, 2.1 MW)	199	2011	WECC
	Montague	51 (Vestas, 3.6 MW); 5 (Suzlon, 3.45 MW)	201	2019	WECC
	Pebble Springs	47 (Suzlon, 2.1 MW)	99	2009	WECC
	Star Point	47 (Suzlon, 2.1 MW)	99	2010	WECC
Pennsylvania	Casselman	23 (GE, 1.5 MW)	35	2008	RFC
	Locust Ridge I	13 (Gamesa G87, 2.0)	26	2006	RFC
	Locust Ridge II	50 (Gamesa G87, 2.0 MW)	100	2009	RFC
	South Chestnut	22 (Gamesa, 2.0 MW)	44	2012	RFC
South Dakota	Buffalo Ridge I	24 (Suzlon, 2.1 MW)	50	2009	MRO
	Buffalo Ridge II	105 (Gamesa G87, 2.0 MW)	210	2010	MRO
	Coyote Ridge (3)	35 (GE, 2.52 MW); 8 (GE, 2.3 MW)	20	2019	MRO
Texas	Baffin	101 (Gamesa G97, 2.0 MW)	202	2015	TRE
	Barton Chapel	60 (Gamesa, 2.0 MW)	120	2009	TRE
	Karankawa	93 (GE, 2.52 MW); 22 (GE, 2.3 MW); 9 (GE, 2.5 MW)	307	2019	TRE
	Patriot	58 (Vestas, 3.6 MW); 5 (Vestas, 3.45 MW)	226	2019	TRE
	Peñascal I	84 (Mitsubishi, 2.4 MW)	202	2009	TRE
	Peñascal II	83 (Mitsubishi, 2.4 MW)	199	2010	TRE
Vermont	Deerfield	7 (Gamesa G87, 2.0 MW); 8 (Gamesa G97, 2.0 MW)	30	2017	NPCC
Washington	Big Horn I	133 (GE, 1.5 MW)	200	2006	WECC

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Location	Wind Project	Turbines	Total Installed Capacity (MW)	Commercial Operation Date	North American Electric Reliability Corporation (NERC) Region
	Big Horn II	25 (Gamesa, 2.0 MW)	50	2010	WECC
	Juniper Canyon	63 (Mitsubishi, 2.4 MW)	151	2011	WECC

(1) Jointly owned with Axium; capacity amounts represent only Renewables' share of the wind farm.
(2) Jointly owned with Horizon Wind Energy; capacity amounts represent only Renewables' share of the wind farm.
(3) Jointly owned with WEC Infrastructure; capacity amounts represent only Renewables' share of the wind farm.

Additionally, set forth below are the solar and thermal facilities operated by Renewables as of December 31, 2019. Unless otherwise noted, Renewables owns each such facility.

Facility	Location	Type of Facility	Installed Capacity (MW)	Commercial Operation Date
Poseidon Solar(1)	Pinal County, Arizona	Solar	10	2011
San Luis Valley Solar Ranch(2)	Alamosa County, Colorado	Solar	30	2012
Gala Solar	Deschutes County, Oregon	Solar	56	2017
Wy'East Solar	Sherman County, Oregon	Solar	10	2018
Klamath Cogeneration	Klamath Falls, Oregon	Thermal	536	2001
Klamath Peakers	Klamath Falls, Oregon	Thermal	100	2009

(1) Formerly Copper Crossing Solar Ranch. The name change occurred as part of our sale of a 50% interest in this project in 2019. See Note 22 to the financial statements in Part II, Item 8 of this form 10-K for more information on the sale. Capacity represents the 50% portion owned by Renewables.
(2) Operated pursuant to a sale-and-leaseback agreement.

Infrastructure Protection and Cyber Security Measures

We have risk-based security measures in place designed to protect our facilities, assets and cyber-infrastructure, such as our transmission and distribution system.

While we have not had any significant security breaches, a physical security intrusion could potentially lead to theft and the release of critical operating information. In addition to physical security intrusions, a cyber breach could potentially lead to theft and the release of critical operating information or confidential customer information.

To manage these operational risks, pursuant to the cybersecurity risk policy and corporate security policy approved by the AVANGRID board, we have implemented cyber and physical security measures and continue to strengthen our security posture by improving and expanding our physical and cyber security capabilities to protect critical assets.

In an effort to reduce our vulnerability to cyber attacks, the AVANGRID board appointed a senior officer responsible for security (chief security officer) and we have established a dedicated corporate security office, responsible for improving and coordinating security and NERC compliance across the company. We have adopted a comprehensive company-wide physical and cyber security program, which is supported by a governance program to manage, oversee and assist us in meeting our corporate, legal and regulatory responsibilities with regard to the protection of our cyber, physical and information assets.

However, as threats evolve and grow increasingly more sophisticated, we cannot ensure that a potential security breach may not occur or quantify the potential impact of such an event. We continue to invest in technology, processes, security measures and services to predict, detect, mitigate and protect our assets, both physical and cyber. These investments include upgrades to our cyber-infrastructure assets, network architecture and physical security measures, and compliance with emerging industry best practice and regulation.

Employees

As of December 31, 2019, we had 6,597 employees excluding twelve international assignees. Of these 6,597 employees, 49.0% are represented by a union. The following table provides an overview of the number of employees at each business segment as of December 31, 2019:

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Business Segment	Number of Employees (excluding International Assignees)	% of Union Workforce Subject to Collective Bargaining Agreement
Networks	5,375	60.2%
Renewables	871	—
Corporate	351	—
Total	6,597	49.0%

We have not experienced any work stoppages in the last five years and enjoy good relations with our labor unions. Virtually all of our employees work full-time.

Available Information

Copies of our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and any amendments to these reports filed with the SEC may be requested, viewed or downloaded on-line, free of charge, on our website www.avangrid.com. Printed copies of these reports may be obtained free of charge by writing to our Investor Relations Department at 180 Marsh Hill Road, Orange, Connecticut, 06477.

Item 1A. Risk Factors

Risks Relating to Our Regulatory Environment

Our businesses are subject to substantial regulation by federal, state and local regulatory agencies and our businesses, results of operations and prospects may be materially adversely affected by legislative or regulatory changes, as well as liability under, or any future inability to comply with, existing or future regulations or requirements.

The operations of our businesses are subject to, and influenced by, complex and comprehensive federal, state and local regulation and legislation, including regulations promulgated by state utility commissions and the FERC. This extensive regulatory and legislative framework, portions of which are more specifically identified in the following risk factors, regulates, among other things and to varying degrees, the industries in which our subsidiaries operate, our business segments, rates for our products and services, financings, capital structures, cost structures, construction, environmental obligations (including in respect of, among others, air emissions, water consumption, water discharge, protections for wildlife and humans, nuisance prohibitions and allowances, regulation of gas infrastructure operations and associated environmental and facility permitting), development and operation of electric generation facilities and electric and gas transmission and distribution facilities, natural gas transportation, processing and storage facilities, acquisition, disposal, depreciation and amortization of facilities and other assets, service reliability, hedging, derivatives transactions and commodities trading.

In our business planning and in the management of our subsidiaries' operations, we must address the effects of regulation on our businesses, including the significant and increasing compliance costs imposed on our operations as a result of such regulation, and any inability or failure to do so timely and adequately could have a material adverse effect on our businesses, results of operations, financial condition and cash flows. The federal, state and local political and economic environment has had, and may in the future have, an adverse effect on regulatory decisions with negative consequences for our businesses. These decisions may require, for example, our businesses to cancel or delay planned development activities, to reduce or delay other planned capital expenditures or investments or otherwise incur costs that we may not be able to recover through rates, any of which could have a material adverse effect on the business, results of operations, financial condition and cash flows of our businesses. In addition, changes in the nature of the regulation of our business could have a material adverse effect on our business, results of operations, financial condition and cash flows. We are unable to predict future legislative or regulatory changes, initiatives or interpretations, and there can be no assurance that we will be able to respond adequately or sufficiently quickly to such changes, although any such changes, initiatives or interpretations may increase costs and competitive pressures on us, which could have a material adverse effect on our business, results of operations, financial condition and cash flows. There can be no assurance that we will be able to respond adequately or sufficiently quickly to such rules and developments, or to any other changes that reverse or restrict the competitive restructuring of the energy industry in those jurisdictions in which such restructuring has occurred. Any of these events could have a material adverse effect on our business, results of operations, financial condition and cash flows.

Our businesses are subject to the jurisdiction of various federal, state and local regulatory agencies including, but not limited to, the FERC, the CFTC, the DOE and the EPA. Further, Networks' regulated utilities in New York, Maine, Connecticut and Massachusetts are subject to the jurisdiction of the NYPSC, the MPUC, the New York State Department of Environmental Conservation, the Maine Department of Environmental Protection, the PURA, the CSC, the DEEP and the DPU. These regulatory agencies cover a wide range of business activities, including, among other items, the retail and wholesale rates for electric energy, capacity and ancillary services, and for the transmission and distribution of these products, the costs charged to Networks' customers

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through tariffs including cost recovery clauses, the terms and conditions of Networks' services, procurement of electricity for Networks' customers, issuances of securities, the provision of services by affiliates and the allocation of those service costs, certain accounting matters, and certain aspects of the siting, construction and transmission and distribution systems. The FERC has the authority to impose penalties, which could be substantial, for violations of the FPA, the NGA, or related rules, including reliability and cyber security rules as described in further detail below. The Financial Accounting Standards Board, or FASB, or the SEC, may enact new accounting standards that could impact the way we are required to record revenue, expenses, assets and liabilities. Certain regulatory agencies have the authority to review and disallow recovery of costs that they consider excessive or imprudently incurred and to determine the level of return that our businesses are permitted to earn on invested capital.

The regulatory process, which may be adversely affected by the political, regulatory and economic environment in New York, Maine, Connecticut and Massachusetts, as applicable, may limit our ability to increase earnings and does not provide any assurance as to achievement of authorized or other earnings levels. The disallowance of the recovery of costs incurred by us or a decrease in the rate of return that we are permitted to earn on our invested capital could have a material adverse effect on our business, results of operation, financial condition and cash flows. Certain of these regulatory agencies also have the authority to audit the management and operations of our businesses in New York, Maine, Connecticut and Massachusetts and require or recommend operational changes. Such audits and post-audit work require the attention of our management and employees and may divert their attention from other regulatory, operational or financial matters.

As previously described, we are subject to a variety of federal, state, local laws and regulations. The introduction of new laws or regulations or changes in existing laws or regulations, or the interpretation thereof, may alter the environment in which we do business and could increase the costs of doing business for us or restrict our actions and adversely affect our financial condition, operating results and cash flows.

Any failure to meet the reliability standards mandated by NERC could have a material adverse effect on our business, results of operation, financial condition and cash flows.

As a result of the EPAct 2005, owners, operators and users of bulk electric systems are subject to mandatory reliability standards developed by NERC and are subject to oversight by the FERC in the U.S. and governmental authorities in Canada. The standards are based on the functions that need to be performed to ensure that the bulk electric system operates reliably. Networks' and Renewables' businesses have been, and will continue to be, subject to routine audits and monitoring with respect to compliance with applicable NERC reliability standards, including standards approved by the FERC that could result in an increase in the number of assets (including cyber-security assets) designated as "BES Cyber Systems," which would subject such assets to NERC cyber-security standards. The implementation of the Balancing Authority registration for the Northwest Renewable assets in 2018 has brought increased NERC compliance requirements and additional compliance risks including increase in assets, budgets and experienced resources. This registration as a Balancing Authority also changes the NERC audit cycle from six years down to three years for Renewables. NERC and the FERC can be expected to continue to refine existing reliability standards as well as develop and adopt new reliability standards. Compliance with modified or new reliability standards may subject Networks' and/or Renewables' businesses to new requirements resulting in higher operating costs and/or increased capital expenditures. If Networks' and/or Renewables' businesses were found not to be in compliance with the mandatory reliability standards, it could be subject to penalties of up to $1.3 million per day per violation. Both the costs of regulatory compliance and the costs that may be imposed as a result of any actual or alleged compliance failures could have a material adverse effect on our business, results of operation, financial condition, reputation and prospects. AVANGRID will be subject to NERC audits for Renewables in February 2020 and for NYSEG in June 2020. Both audits will include operations and planning standards (including Balancing Authority standards for Renewables) and critical infrastructure protection standards.

The NYPSC has initiated a proceeding that may result in the alteration of the public utility model in New York State and could materially and adversely impact our business and operations in New York State.

In April 2014, the NYPSC commenced a proceeding titled REV, which is an initiative to reform New York State's energy industry and regulatory practices. REV has followed several simultaneous paths, including a formal Track 1 dealing with market design and platform technology and Track 2 dealing with regulatory reform. REV's objectives include the promotion of more efficient use of energy, increased utilization of renewable energy resources such as wind and solar in support of New York State's renewable energy goals and wider deployment of "distributed" energy resources, such as micro grids, on-site power supplies, and storage. Track 1 of the REV initiative involves the examination of the role that distribution utilities will have in the enablement of market-based deployment of DER to promote load management, system efficiency and peak load reductions. NYSEG and RG&E are participating in all aspects of the REV initiative with other New York utilities as well as providing their unique perspective.

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Various other REV-related proceedings have also been initiated by the NYPSC, each of which is following its own schedule. These proceedings include the Clean Energy Fund, Demand Response Tariffs, Community Choice Aggregation, Large Scale Renewables and Community Distributed Generation.

Track 2 of the REV initiative is also underway, and through a NYPSC Staff Whitepaper review process, is examining potential changes in current regulatory, tariff, market design and incentive structures which could better align utility interests with achieving New York State and NYPSC policy objectives. New York utilities will also be addressing related regulatory issues in their individual rate cases. A Track 2 order was issued in May 2016, and includes guidance related to the potential for EAMs, platform service revenues, innovative rate designs and data utilization and security. NYSEG and RG&E continue to engage through a number of working groups that have been established to assist the implementation of the DSIP items and delivering the Value of DER/Net Metering changes.

We are not able to predict the outcome of the REV proceeding or its impact on our business, results of operations, financial condition and cash flows. While the end result of the REV process at the NYPSC remains unclear, it could alter the utility model in New York in a manner that could create material adverse impacts on our businesses and operations in New York.

Changes in regulatory and/or legislative policy could negatively impact Networks' transmission planning and cost allocation.

The existing FERC-approved ISO-NE, transmission tariff allocates the costs of transmission facilities that provide regional benefits to all customers of participating transmission-owning utilities in New England. As new investment in regional transmission infrastructure occurs in any one state, its cost is shared across New England in accordance with a FERC-approved formula found in the transmission tariff. Participating New England transmission owners' agreement to this regional cost allocation is set forth in the transmission operating agreement. This agreement can be modified with the approval of a majority of the transmission-owning utilities and approval by the FERC. In addition, other parties, such as state regulators, may seek certain changes to the regional cost allocation formula, which could have adverse effects on the rates Networks' distribution companies in New England charge their retail customers. The FERC has found that the New England rate protocols lacked transparency and have established a hearing and settlement procedures. We cannot predict the outcome of this proceeding.

The FERC has issued rules requiring all RTOs and transmission owning utilities to make compliance changes to their tariffs and contracts in order to further encourage the construction of transmission for generation, including renewable generation. This compliance will require RTOs (such as ISO-NE and NYISO) and the transmission owners in New England and New York to develop methodologies that allow for regional planning and cost allocation for transmission projects chosen in the regional plan that are designed to meet public policy goals such as reducing greenhouse gas emissions or encouraging renewable generation. Such compliance may also allow non-incumbent utilities and other entities to participate in the planning and construction of new projects in Networks' service areas and regionally.

Changes in RTO tariffs, transmission owners' agreements or legislative policy, or implementation of these new FERC planning rules, could adversely affect our transmission planning, results of operations, financial condition and cash flows.

We are subject to numerous environmental laws, regulations and other standards, including rules and regulations with respect to climate change, which could result in capital expenditures, increased operating costs and various liabilities, and could require us to cancel or delay planned projects or limit or eliminate certain operations.

Our businesses are subject to environmental laws and regulations, including, but not limited to, extensive federal, state and local environmental statutes, rules and regulations relating to air quality, water quality and usage, climate change, emissions of greenhouse gases (including, but not limited to carbon dioxide), waste management, hazardous wastes (including the clean-up of former manufactured gas and electric generation facilities), marine, avian and other wildlife mortality and habitat protection, historical artifact preservation, natural resources and health and safety (including, but not limited to, electric and magnetic fields from power lines and substations, and ice throw, shadow flicker and noise related to wind turbines) that could, among other things, prevent or delay the development of power generation, power or natural gas transmission, or other infrastructure projects, restrict the output of some existing facilities, limit the availability and use of some fuels required for the production of electricity, require additional pollution control equipment, and otherwise increase costs, increase capital expenditures and limit or eliminate certain operations. There are significant capital, operating and other costs associated with compliance with these environmental statutes, rules and regulations, and those costs could be even more significant in the future as a result of new legislation. For example, new laws, regulations or treaties relating to climate change could mandate new or increased requirements to control or reduce the emission of greenhouse gases, such as carbon dioxide, taxes or fees on fossil fuels or emissions, cap and trade programs, emission limits and clean or renewable energy standards or mandates that require curtailment of operations for certain periods of time due to potential electromagnetic interference. Violations of current or future laws, rules, regulations or other standards could expose our subsidiaries to regulatory and legal proceedings, disputes with, and legal challenges by, third parties, and potentially significant civil fines, criminal penalties and other sanctions, which could have an adverse effect on our operations, financial condition and cash flows.

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Our regulated utility operations may not be able to recover costs in a timely manner or at all or obtain a return on certain assets or invested capital through base rates, cost recovery clauses, other regulatory mechanisms or otherwise.

Our regulated utilities in New York, Maine, Connecticut and Massachusetts are subject to periodic review of their rates by the NYPSC, MPUC, PURA and DPU, respectively, and the retail rates charged to our regulated utilities' customers through base rates and cost recovery clauses are subject to the jurisdiction of the NYPSC, MPUC, PURA and DPU, as applicable. New rates may be proposed by Network's businesses, which are then subject to review, modification and final authorization and implementation by regulators. Alternatively, regulators may review the rates of Networks' regulated utilities on their own motion. Networks' regulated utilities' rate plans cover specified periods, but rates determined pursuant to a plan generally continue in effect until a new rate plan is approved by the state utility regulator. Networks' regulated utilities' business rate plans approved by state utility regulators limit the rates Networks' regulated utilities can charge their customers. The rates are generally designed for, but do not guarantee, the recovery of Networks' regulated utilities' respective cost of service and the opportunity to earn a reasonable rate of return (ROE). Actual costs may increase due to inflation or other factors and exceed levels provided for such costs in the rate plans for Networks' regulated utilities. Utility regulators can initiate proceedings to prohibit Networks' regulated utilities from recovering from their customers the cost of service (including energy costs) that the regulators determine to have been imprudently incurred. Networks' regulated utilities defer for future recovery certain costs including major storm costs and environmental costs. In a number of proceedings in recent years, Networks' regulated subsidiaries have been denied recovery, or deferred recovery pending the next general rate case, including denials or deferrals related to major storm costs and construction expenditures. In some instances, denial of recovery may cause the regulated subsidiaries to record an impairment of assets. If Networks' regulated utilities' costs are not fully and timely recovered through the rates ultimately approved by regulators, our cash flows, results of operations and financial condition, and our ability to earn a return on investment and meet financial obligations, could be adversely affected.

Current electric and gas rate plans of Networks' regulated utilities include RDMs and the provisions for the recovery of energy costs, including reconciliation of the actual amount paid by such regulated utilities. There is no guarantee that such decoupling mechanisms or recovery and reconciliation mechanism will remain part of the rate plan of Networks in future rate proceedings.

In addition, there are pending challenges at the FERC against New England transmission owners (including UI and CMP) seeking to lower the ROE that these transmission owners are allowed by the FERC to receive for wholesale transmission service pursuant to the ISO-NE Open Access Transmission Tariff. Reductions to ROE adversely impact the revenues that Networks' regulated utilities receive from wholesale transmission customers and could have a material adverse effect on our business, results of operations, financial condition and cash flows.

Harming of protected species can result in curtailment of wind project operations and could have a material adverse effect on our business, results of operation, financial condition and cash flows.

The operation of energy projects and transmission of energy can adversely affect endangered, threatened or otherwise protected animal species under federal and state statutes, laws, rules and regulations. Wind projects involve a risk that protected flying species, such as birds and bats, will be harmed due to collision. Transmission and distribution lines are another source of potential avian collision as well as electrocution. Energy generation and transmission facilities can result in impacts to protected wildlife, including death caused by collision, electrocution and poisoning. Energy infrastructure occasionally affects endangered or protected species. Our businesses observe industry guidelines and government-recommended best practices to avoid, minimize and mitigate harm to protected species, but complete avoidance is not possible and subsequent penalties may result. Where appropriate, our businesses can apply for an "incidental take" permit for some protected species, which may be conditioned upon the institution of costly avoidance and remediation measures.

Violations of wildlife protection laws in certain jurisdictions may result in civil or criminal penalties, including violations of certain laws protecting migratory birds, endangered species and eagles. The ESA and analogous state laws restrict activities without a permit that may adversely affect endangered and threatened species or their habitat. The ESA also provides for private causes of action against a development project, an operating facility, or the agency that oversees the alleged violation of law. Complying with the state and federal laws protecting migratory birds, endangered species and eagles may require implementation of operating restrictions or a temporary, seasonal, or permanent ban on operations in affected areas, which can have a material adverse effect on the revenue of those projects. For example, there have been recent sightings of the protected California condor at Renewables' Manzana wind facility. Any incidental taking of a California condor could result in substantial financial, legal and reputational harm to us.

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Renewables relies in part on governmental policies that support utility-scale renewable energy. Any reductions to, or the elimination of, governmental mandates and incentives that support utility-scale renewable energy or the imposition of additional taxes or other assessments on renewable energy, could result in a material adverse effect on our business, results of operations, financial condition and cash flows.

Renewables relies, in part, upon government policies that support utility-scale renewable energy projects and enhance the economic feasibility of developing and operating wind energy projects in regions in which Renewables operates or plans to develop and operate renewable energy facilities. The federal government and many state and local jurisdictions have policies or other mechanisms, such as tax incentives or renewable portfolio standards, or RPS, that support the sale of energy from utility-scale renewable energy facilities, such as wind -energy facilities. As a result of budgetary constraints, political factors or otherwise, federal, state and local governments from time to time may review their policies and other mechanisms that support renewable energy and consider actions that would make them less conducive to the development or operation of renewable energy facilities. Any reductions to, or the elimination of, governmental policies or other mechanisms that support renewable energy or the imposition of additional taxes or other assessments on renewable energy, could result in, among other items, the lack of a satisfactory market for the development of new renewable energy projects, Renewables abandoning the development of new renewable energy projects, a loss of Renewables' investments in the projects and reduced project returns, any of which could have a material adverse effect on our business, results of operations, financial condition and cash flows.

Our businesses may face risks related to obtaining governmental approvals and permits in respect of project siting, financing, construction, operation and the negotiation of project development agreements which could delay a project and result in a material adverse effect on our business, results of operations, financial condition and cash flows.

Renewables owns, develops, constructs and/or operates electricity generation, including renewable and thermal generators, and associated transmission facilities. Networks develops, constructs, manages and operates transmission and distribution facilities to meet customer needs. As part of these operations, our businesses must periodically apply for licenses and permits from various local, state, federal and other regulatory authorities and abide by their respective conditions. In particular, with respect to Renewables, over the past years noise standards and siting criteria in the Northeast, where population density is higher compared to the Northwest, where Renewables also operates, have grown more restrictive. Federal and state siting legislation has increased its focus on potential conflicts with military installations. Offshore wind also incorporates a new and more complex permitting process and has higher development costs. If our businesses are unsuccessful in obtaining necessary licenses or permits on acceptable terms, there is a delay in obtaining or renewing necessary licenses or permits or regulatory authorities initiate any associated investigations or enforcement actions or impose related penalties or disallowances on us, they individually or in the aggregate could have a material adverse effect on our businesses, results of operations, financial condition and cash flows.

Our operating subsidiaries' purchases and sales of energy commodities and related transportation and services expose us to potential regulatory risks that could have a material adverse effect on our business, results of operations, financial condition and cash flows.

Under the EPAct 2005 and the Dodd-Frank Act, our businesses are subject to enhanced FERC and CFTC statutory authority to monitor certain segments of the physical and financial energy commodities markets. These agencies have imposed broad regulations prohibiting fraud and manipulation of the electricity and gas markets. Under these laws, the FERC and CFTC have promulgated regulations that have increased compliance costs and imposed reporting requirements on our businesses. These regulations require our operating subsidiaries to comply with certain margin requirements for our over-the-counter derivative contracts with certain CFTC- or SEC-registered entities that require us to post cash collateral with respect to swap transactions, that could potentially have a material adverse effect on our liquidity or our ability to hedge commodity or interest rate risks.

With regard to the physical purchases and sales of energy commodities, the physical trading of energy commodities and any related transportation and/or hedging activities that some of our operating subsidiaries undertake, our operating subsidiaries are required to observe the market-related regulations and certain reporting and other requirements enforced by the FERC, the CFTC and the SEC. Additionally, to the extent that the operating subsidiaries enter into transportation contracts with natural gas pipelines or transmission contracts with electricity transmission providers that are subject to FERC regulation, the operating subsidiaries are subject to FERC requirements related to the use of such transportation or transmission capacity. Any failure on the part of our operating subsidiaries to comply with the regulations and policies of the FERC, the CFTC or the SEC relating to the physical or financial trading and sales of natural gas or other energy commodities, transportation or transmission of these energy commodities or trading or hedging of these commodities could result in the imposition of significant civil and criminal penalties. Failure to comply with such regulations, as interpreted and enforced, could have a material adverse effect on our business, results of operations, financial condition and cash flows.

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Renewables' ability to generate revenue from certain utility-scale wind energy power plants depends on having continuing interconnection arrangements, PPAs, or other market mechanisms and depends upon interconnecting utility and RTO rules, policies, procedures and FERC tariffs that do not present restrictions to current and future wind project operations.

The electric generation facilities owned by Renewables rely on interconnection and/or transmission agreements and transmission networks in order to sell the energy generated by such facility. If the interconnection and/or transmission agreement of an electric generating facility Renewables owns is terminated for any reason, Renewables may not be able to replace it with an interconnection or transmission arrangement on terms as favorable as the existing arrangement, or at all, or it may experience significant delays or costs in securing a replacement. If a transmission network to which one or more of Renewables' electric generating facilities is connected experiences outages or curtailments, the affected projects may lose revenue. These factors could materially affect Renewables' ability to forecast operations and negatively affect our business, results of operations, financial condition and cash flows. In addition, certain of Renewables' operating facilities' generation of electricity may be physically or economically curtailed, and off-takers or transmission or interconnection providers may be permitted to restrict wind project operations without paying full compensation to Renewables pursuant to PPAs or interconnection agreements or FERC tariff provisions or rules, policies or procedures of RTOs, which may reduce our revenues and impair our ability to capitalize fully on a particular facility's generating potential. Such curtailments or operational limitations could have a material adverse effect on our business, financial condition, results of operations and cash flows. Furthermore, economic congestion on the transmission grid (for instance, a negative price difference between the location where power is put on the grid by a project and the location where power is taken off the grid by the project's customer) in certain of the bulk power markets in which Renewables operates may occur and its businesses may be responsible for those congestion costs. Similarly, negative congestion costs may require that the wind projects either not participate in the energy markets or bid and clear at negative prices which may require the wind projects to pay money to operate each hour in which prices are negative. If such businesses were liable for such congestion costs or if the wind projects are required to pay money to operate in any given hour when prices are negative, then our financial results could be adversely affected.

New Tariffs imposed on imported goods may increase the capital expense in projects and have a negative impact on expected returns.

Changes in tariffs may affect the final cost of a significant portion of capital expenses in projects, with renewable projects being more exposed. Tariffs have been imposed in the recent years to imports of solar panels, aluminum and steel, among other goods or raw materials. Additional tariffs for wind towers are under consideration by the Federal Government. Trade disputes between the U.S. and other countries may result in additional tariffs or changes in existing ones. Depending on the timing and contractual terms, tariff changes may have adverse impacts to the buyer of these goods which could affect expected returns on approved projects.

Risks Relating to Our Business and Operations

Disruptions, uncertainty or volatility in the credit and capital markets may negatively affect our liquidity and capital needs and our ability to meet our growth objectives and can also materially adversely affect our results of operations and financial condition.

A crisis affecting the banking system or the financial markets including severe volatility in stock and bond markets or the markets reliant on using the London Interbank Offer Rate, or LIBOR, as the basis for interest rate calculations could impact our financial operating conditions, our day-to-day activities, our liquidity and cash positions, the loss of significant investment opportunities, the value of our business and our financial condition. In addition, during periods of slow or little economic growth, energy conservation efforts often increase as well as the amount of uncollectible customer accounts often increase. These factors may also reduce earnings and cash flow.

Increases in interest rates or reductions in credit ratings could have an adverse impact on our cash flows, results of operations and financial condition.

Trends in the general level of interest rates and in the debt capital and credit markets could increase the cost of our borrowings and our ability to access the credit markets. We have floating rate exposure under our commercial paper program, our credit facilities and our term loan that closely tracks movements in LIBOR. LIBOR is the subject of recent national, international and other regulatory guidance and proposals for reform. These reforms and other pressures may cause LIBOR to be discontinued or to perform differently than in the past. The consequences of these developments cannot be entirely predicted, but could include fluctuations in interest rates or an increase in the cost of credit facility borrowings. The cost of new long-term debt can be affected by the level of U.S. treasury rates and conditions in the debt capital markets that affect credit spreads.

In addition, AVANGRID and certain of its subsidiaries have credit ratings which directly affect the cost of maintaining and borrowing under revolving credit facilities and which indirectly affect the cost of borrowing under our commercial paper program

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and the cost of new long-term debt raised in the debt capital markets. In addition, we intend to access the capital markets and issue securities from time to time, and a decrease in credit ratings or outlook could adversely affect our liquidity, increase borrowing costs and decrease demand for our debt or equity securities and increase the expense and difficulty of financing our operations and investments. Lower credit ratings could increase the cost of debt and equity capital and, depending on the rating and market conditions, preclude access to the debt and equity capital markets. Any of these events could have a materially adverse effect on our business, results of operations, financial condition and cash flows.

If Networks' electricity and natural gas transmission, transportation and distribution systems do not operate as expected, they could require unplanned expenditures, including the maintenance and refurbishment of Networks' facilities, which could adversely affect our business, results of operations, financial position and cash flows.

Networks' ability to operate its electricity and natural gas transmission, transportation and distribution systems is critical to the financial performance of our business. The ongoing operation of Networks' facilities involves risks customary to the electric and natural gas industry that include the breakdown, failure, loss of use or destruction of Networks' facilities, equipment or processes or the facilities, equipment or processes of third parties due to natural disasters, war or acts of terrorism, operational and safety performance below expected levels, errors in the operation or maintenance of these facilities and the inability to transport electricity or natural gas to customers in an efficient manner. These and other occurrences could reduce potential earnings and cash flows and increase the costs of repairs and replacement of assets. Losses incurred by Networks in respect of such occurrences may not be fully recoverable through insurance or customer rates. Further, certain of Networks' facilities require periodic upgrading and improvement.

In addition, unplanned outages typically increase Networks' operation and maintenance expenses. Any unexpected failure, including failure associated with breakdowns, forced outages or any unanticipated capital expenditures, accident, failure of major equipment, shortage of or inability to acquire critical replacement or spare parts could result in reduced profitability, harm to our reputation or regulatory penalties. For more information, see "*Risks Relating to Our Regulatory Environment*" above.

Our businesses' operations and power production may fall below expectations due to the impact of severe weather or other natural events, which could adversely affect our cash flows, results of operations and financial position.

Weather conditions directly influence the demand for electricity and natural gas and other fuels and affect the price of energy and energy-related commodities. Severe weather, such as ice and snow storms, hurricanes and other natural disasters, such as floods, fires and earthquakes, can be destructive and cause power outages, bodily injury and property damage or affect the availability of fuel and water, which may require additional costs or loss of revenues, for example, the costs incurred to restore service and repair damaged facilities, to obtain replacement power and to access available financing sources, may not be recoverable from customers and could adversely affect our cash flows, results of operations and financial position. Also, these events may impact reliability metrics subject to negative rate adjustments or penalties. Many of our facilities could be placed at greater risk of damage should changes in the global climate produce unusual variations in temperature and weather patterns, resulting in more intense, frequent and extreme weather events, abnormal levels of precipitation, wildfires and a change in sea level. A disruption or failure of electric generation, transmission or distribution systems or natural gas production, transmission, transportation, storage or distribution systems in the event of ice and snow storms, long periods of severe weather, hurricane, tornado or other severe weather event, or otherwise, could prevent us from operating our business in the normal course and could result in any of the adverse consequences described above. Because utility companies, including our regulated utilities, have large customer bases, they are subject to adverse publicity focused on the reliability of their distribution services and the speed with which they are able to respond to electric outages, natural gas leaks and similar interruptions caused by storm damage or other unanticipated events. Adverse publicity of this nature could harm our reputations and the reputations of our subsidiaries.

Furthermore, Renewables can incur damage to wind turbine equipment, either through natural events such as lightning strikes that damage blades or in-ground electrical systems used to collect electricity from turbines, or may experience production shut-downs or delayed restoration of production during extreme weather conditions resulting from, among other things, icing on the blades or restricted access to sites. Many of the operating facilities of Networks are located either in, or close to, densely populated public places. A failure of, or damage to, these facilities, could result in bodily injury or death, property damage, the release of hazardous substances, extended service interruptions and loss of revenues. The cost of repairing damage to Networks' facilities and the potential disruption of their operations due to storms, natural disasters or other catastrophic events could be substantial. In respect of our businesses where cost recovery is available, recovery of costs to restore service and repair damaged facilities is or may be subject to regulatory approval, and any determination by the regulator not to permit timely and full recovery of the costs incurred could have a material adverse effect on our business, results of operations, financial condition and cash flows.

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If wind conditions are unfavorable or below Renewables' production forecasts, or Renewables' wind turbines are not available for operation, Renewables projects' electricity generation and the revenue generated from its projects may be substantially below our expectations.

Changing wind patterns or lower than expected wind resource could cause reductions in electricity generation at Renewables' projects, which could affect the revenues produced by these wind generating facilities. Renewables' wind projects are sited, developed and operated to maximize wind performance. Prior to siting a wind facility, detailed studies are conducted to measure the wind resource in order to estimate future production. However, wind patterns or wind resource in the future might deviate from historical patterns and are difficult to predict. These events could negatively impact the results of operations of Renewables, which may vary significantly from period to period, depending on the level of available resources. To the extent that resources are not available at planned levels, the financial results from these facilities may be less than expected. Changing wind patterns or lower than expected wind resources could also degrade equipment or components and the interconnection and transmission facilities' lives or maintenance costs. Replacement and spare parts for wind turbines and key pieces of electrical equipment may be difficult or costly to acquire or may be unavailable. The loss of any suppliers or service providers or inability to find replacement suppliers or service providers or to purchase turbines at rates currently offered by Renewables' existing suppliers or a change in the terms of Renewables' supply or operations and maintenance agreements, such as increased prices for maintenance services or for spare parts, could have a material adverse effect on Renewables' ability to construct and maintain wind farms or the profitability of wind farm development and operation.

The revenues generated by Renewables' facilities depend upon Renewables' ability to maintain the working order of its wind turbines. A natural disaster, severe weather, accident, failure of major equipment, shortage of or inability to acquire critical replacement or spare parts, failure in the operation of any future transmission facilities that Renewables may acquire, including the failure of interconnection to available electricity transmission or distribution networks, could damage or require Renewables to shut down its turbines or related equipment and facilities, leading to decreases in electricity generation levels and revenues. Additionally, Renewables' operating projects generally do not hold spare substation main transformers in inventory. These transformers are designed specifically for each wind power project, and order lead times can be lengthy. If one of Renewables' projects had to replace any of its substation main transformers, it would be unable to sell all of its power until a replacement is installed.

If Renewables experiences a prolonged interruption at one of its operating projects due to natural events or operational problems and such events are not fully covered by insurance, Renewables' electricity generation levels could materially decrease, which could have a material adverse effect on its business, results of operation and financial condition and could adversely affect our cash flows, results of operations and financial position.

Cyber breaches, acts of war or terrorism, grid disturbances or security breaches involving the misappropriation of confidential and proprietary customer, employee, financial or system operating information could negatively impact our business.

Cyber breaches, acts of war or terrorism or grid disturbances resulting from internal or external sources could target our generation, transmission and distribution facilities or our information technology systems. In the regular course of business, we maintain sensitive customer, employee, financial and system operating information and are required by various federal and state laws to safeguard this information. Cyber or physical security intrusions could potentially lead to disabling damage to our generation, transmission and distribution facilities and to theft and the release of critical operating information or confidential customer or employee information, which could adversely affect our operations or adversely impact our reputation, and could result in significant costs, fines and litigation. We routinely experience attempts by external parties to penetrate and attack our networks and systems. Although such attempts have not resulted in any material breaches, disruptions or loss of business - critical information, our systems and procedures for preparing and protecting against such attacks and mitigating such risks may prove to be insufficient in the future and such attacks could have an adverse impact on our business and operations. Additionally, because our generation and transmission facilities are part of an interconnected regional grid, we face the risk of blackout due to a disruption on a neighboring interconnected system. Additionally, the Company maintains a specific insurance program for cyber-risk in accordance with insurance market current offerings, which will need to be periodically reviewed due to the rapid evolution and broad range of cyber risks. While we maintain insurance coverage that is designed to address losses or claims that may arise in connection with cyber risks, such insurance coverage may be insufficient to cover all losses or claims that may arise from such risks. As threats evolve and grow increasingly more sophisticated, we may incur significant costs to upgrade or enhance our security measures to protect against such risks and we may face difficulties in fully anticipating or implementing adequate preventive measures or mitigating potential harms. In addition, we cannot ensure that a potential security breach may not occur or quantify the potential impact of such an event. Any such cyber breaches could result in a significant decrease in revenues, significant expense to repair system damage or security breaches, adverse impact on our reputation, regulatory penalties and liability claims, which could have a material adverse effect on our cash flows, results of operations and financial condition.

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Risks including but not limited to any physical security breach involving unauthorized access, electricity or equipment theft and vandalism could adversely affect our business operations and adversely impact our reputation.

A physical attack on our transmission and distribution infrastructure could interfere with our normal business operations and affect our ability to control our transmission and distribution assets. A physical security intrusion could potentially lead to theft and the release of critical operating information, which could adversely affect our operations or adversely impact our reputation, and could result in significant costs, fines and litigation. Additionally, certain of our power generation and transmission and distribution assets and equipment are at risk for theft and damage. Theft of, or damage to, components such as copper wire or solar panels can cause significant disruption to Networks' and Renewables' operations, respectively, and can lead to operating losses at those locations. Furthermore, Renewables can incur damage to wind turbine equipment through vandalism, such as gunshots into towers or other generating equipment. Such damage can cause disruption of operations for unspecified periods which may lead to operating losses at those locations.

Our risk management policies cannot fully eliminate the risk associated with some of our operating subsidiaries' commodity trading and hedging activities, which may result in significant losses.

Renewables has exposure to commodity price movements through their "natural" long positions in electricity in addition to proprietary trading and hedging activities.

Networks and Renewables manage the exposure to risks of commodity price movements through internal risk management policies, enforcement of established risk limits and risk management procedures. These risk policies, risk limits and risk management procedures may not work as planned and cannot eliminate all risks associated with these activities. Even when these risk policies and procedures are followed, and decisions are made based on projections and estimates of future performance, results of operations may be diminished if the judgments and assumptions underlying those decisions prove to be incorrect. Our risk management tools and metrics associated with our hedging and trading procedures, such as daily value at risk, or VaR, stop loss limits and liquidity guidelines, are based on historical price movements. Due to the inherent uncertainty involved in price movements and potential deviation from historical pricing behavior, we are unable to assure that our risk management tools and metrics will be effective to protect against material adverse effects on our business, financial condition, results of operations and prospects. Factors, such as future prices and demand for power and other energy-related commodities, become more difficult to predict and the calculations become less reliable the further into the future estimates are made. As a result, we cannot fully predict the impact that some of our subsidiaries' commodity trading and hedging activities and risk management decisions may have on our business, results of operations, financial condition and cash flows.

We expect to invest in development opportunities in all segments of our business, but such opportunities may not be successful, projects may not commence operation as scheduled and/or within budget or at all, which could have a material adverse effect on our business prospects.

We are pursuing broader development investment opportunities related to all segments of our business, particularly in respect of additional opportunities in electric transmission, renewable energy generation, interconnections to generating resources and other development investment opportunities. The development, construction and expansion of such projects involve numerous risks. Various factors could result in increased costs or result in delays or cancellation of these projects. Offshore wind brings significant development costs associated with single projects. Risks include regulatory approval processes, permitting, new legislation, economic events, environmental and community concerns, negative publicity, design and siting issues, difficulties in obtaining required rights of way, construction delays and cost overruns, including delays in equipment deliveries, particularly of wind turbines or transformers, severe weather, competition from incumbent facilities and other entities, and actions of strategic partners. There may be delays or unexpected developments in completing current and future construction projects. While most of Renewables' construction projects are constructed under fixed-price and fixed-schedule contracts with construction and equipment suppliers, these contracts provide for limitations on the liability of these contractors to pay liquidated damages for cost overruns and construction delays. These circumstances could prevent Renewables' construction projects from commencing operations or from meeting original expectations about how much electricity it will generate or the returns it will achieve. In addition, for Renewables' projects that are subject to PPAs, substantial delays could cause defaults under the PPAs, which generally require the completion of project construction by a certain date at specified performance levels. A delay resulting in a wind project failing to qualify for federal production tax credits could result in losses that would be substantially greater than the amount of liquidated damages paid to Renewables. Any turbines associated with the approximately 700 MW of wind farms that Renewables plans to place in service during 2020 that do not reach commercial operation by December 31, 2020 are at risk of not qualifying for production tax credits, thereby reducing the economics of the project. Our ability to reach commercial operation in a timely manner is contingent on many variables including availability and timely delivery of materials and components, which rely in part on a global markets, which markets could be subject to political crises, public health crises or other catastrophic events that are outside of our control. For example, in December 2019, a strain of coronavirus was reported to have occurred in Wuhan, China. The

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outbreak of coronavirus has already resulted in supply chain and transportation disruptions worldwide and the extent to which the coronavirus may impact timelines of these projects is uncertain.

In May 2018, Vineyard Wind, LLC (AVANGRID has a 50% voting interest), or Vineyard Wind, was selected to build 800 MW of offshore wind in Massachusetts. The company still needs to obtain certain regulatory approvals before starting construction. A delay in obtaining all necessary permits may impact expected returns of this project or affect the final investment decision outcome. The Bureau of Ocean Energy Management, or BOEM, delayed the issuance of its Environmental Impact Study and Record of Decision for Vineyard Wind in order to perform a cumulative analysis of projects in the area. BOEM recently announced a new permitting timeline pursuant to which it is expected that BOEM will issue the Record of Decision in December 2020. The company is assessing the impacts of this timeline on the commencement of construction and commercial operation of Vineyard Wind.

In 2018, CMP was selected to construct a transmission line (NECEC) to provide renewable energy to Massachusetts. The company is going through a permitting process that includes federal, state and local permits that will need to be approved before the project starts construction. As is typical with large projects, we could experience delays, including in regulatory approvals, permitting and construction. Should any of these factors result in such delays or cancellations, our growth projections, financial position, results of operations and cash flows could be adversely affected or our future growth opportunities may not be realized as anticipated. In August 2019 a group of Maine voters submitted an application for Citizen's Initiative ("Referendum") to enact legislation to prevent the NECEC transmission project from proceeding. The proposed Citizen Initiative directs the MPUC to amend its May 3, 2019 order that granted the CPCN for the NECEC, one of the key State Permits. The Citizen Initiative's petition was issued for signature gathering on October 18, 2019. A petition requires signatures numbering not less than 10% of the total vote for Governor cast in the last election (63,067 signatures) by February 2020 to proceed to the ballot. The Citizen Initiative reported that it received over 75,000 signatures and these signatures are now being confirmed by the State Attorney's office. We are not able to predict the outcome of this initiative.

Advances in technology and rate design initiatives could impair or eliminate the competitive advantage of our business or could result in customer defection, which could have a material adverse effect on our growth, business, financial condition and results of operations.

The emergence of technology and initiatives designed to reduce greenhouse gas emissions or limit the effects of global warming and overall climate change has increased the development of new technologies for solar generation, energy efficiency and for investment in research and development to make those technologies more efficient and cost effective. There is a potential that new technology or rate design incentives could adversely affect the demand for services of our regulated subsidiaries thus impacting our revenues, which could adversely affect our cash flows, results of operations and financial concerns. For example, net energy metering allows electricity customers who supply their own electricity from on-site generation to pay only for the net energy obtained from the utility. Further, the behind-the-meter storage systems and grid integration components such as inverters or electronics could result in electricity delivery customers abandoning the grid system or replacing part of grid services with self-supply or self-balancing, which could impact the return on current or future Networks' assets deployed and designed to serve projected load. Such emergence of alternative sources of energy supply can result in customers relying on the power grid for limited use, such as in the case of a deficit or an emergency, or completely abandoning the grid, which is known as customer defection. While currently the regulated utilities of Networks are subject to RDMs for distribution service, they are either legislatively or regulatory in nature and there is no assurance such mechanisms will always be available. The progressive reduction in the costs of distributed energy assets, as a result of technological improvements, large scale deployment in certain jurisdictions and constructive support regimes could result in customer defection (individually or integrated in micro-grids) when a net benefit analysis of investing in self-supply and storage of energy compared to energy provided by utility service appears attractive for certain customer classes. Similarly, future investments in Networks could be impacted if adequate rate making does not fully contemplate the characteristics of an integrated reliable grid from a unified perspective, regardless of customer disconnection. Further, the interoperability, integration and standard connection of these distributed energy devices and systems could place a burden on the system of Networks' operating subsidiaries, without adequately compensating them. Furthermore, the technologies used in the renewable energy sector change and evolve rapidly. Techniques for the production of electricity from renewable sources are constantly improving and becoming more complex. In order to maintain Renewables' competitiveness and expand its business, Renewables must adjust effectively to changes in technology. If Renewables fails to react effectively to current and future technological changes in the sector in a timely manner, Renewables' future business growth, results of operations and financial condition could be materially adversely affected.

Renewables' revenue may be reduced significantly upon expiration or early termination of PPAs if the market price of electricity decreases and Renewables is otherwise unable to negotiate favorable pricing terms.

Renewables' portfolio of PPAs is made up of PPAs that primarily have fixed or otherwise predetermined electricity prices for the life of the PPA. A decrease in the market price of electricity, including lower prices for traditional fossil fuels, could result in a decrease in revenues once a PPA has expired or upon a renewal of a PPA. Any decrease in the price payable to Renewables

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under new PPAs could have a material adverse effect on our business, results of operations, financial conditions and cash flows. For the majority of Renewables' wind energy generation projects, upon the expiration of a PPA, the project becomes a merchant project subject to market risks, unless Renewables can negotiate a renewal of the PPA. If Renewables is not able to replace an expiring or early terminated PPA with a contract on equivalent terms and conditions or otherwise obtain prices that permit operation of the related facility on a profitable basis, the affected site may temporarily or permanently cease operations and trigger an asset value impairment. The majority of the Renewables PPAs are fixed price contracts. An early termination of any may result in economic losses.

There are a limited number of purchasers of utility-scale quantities of electricity, which exposes Renewables' utility-scale projects to additional risk that could have a material adverse effect on its business.

Since the transmission and distribution of electricity is highly concentrated in most jurisdictions, there are a limited number of possible purchasers for utility-scale quantities of electricity in a given geographic location, including transmission grid operators, state and investor-owned power companies, public utility districts and cooperatives. As a result, there is a concentrated pool of potential buyers for electricity generated by Renewables' businesses, which may restrict our ability to negotiate favorable terms under new PPAs and could impact our ability to find new customers for the electricity generated by our generation facilities should this become necessary. Renewables' PPA portfolio is mostly contracted with low risk regulated utility companies. In the past few years, there has been increased participation from commercial and industrial businesses. The higher long-term business risk profile of these companies results in increased credit risk. Furthermore, if the financial condition of these utilities and/or power purchasers deteriorated or the RPS programs, climate change programs or other regulations to which they are currently subject and that compel them to source renewable energy supplies change, demand for electricity produced by Renewables' businesses could be negatively impacted.

Lower prices for other fuel sources may reduce the demand for wind and solar energy development, which could have a material adverse effect on Renewables' ability to grow its business.

Wind and solar energy demand is affected by the price and availability of other fuels, including nuclear, coal, natural gas and oil, as well as other sources of renewable energy. To the extent renewable energy, particularly wind energy, becomes less cost-competitive due to reduced government targets, increases in the cost of wind energy, new regulations, incentives that favor other forms of energy, cheaper alternatives or otherwise, demand for wind energy and other forms of renewable energy could decrease. Slow growth or a long-term reduction in the demand for renewable energy could have a material adverse effect on Renewables' ability to grow its business.

Volatility in the price of natural gas and home heating oil could adversely impact the demand for gas conversions and could have a material adverse effect on our regulated gas utilities' ability to grow their businesses.

Conversion from home heating oil to natural gas requires a significant investment by customers. If the price of natural gas does not remain sufficiently below the prices of home heating oil, current oil heating customers may elect not to convert to natural gas. Volatility in oil prices demonstrates the difficulty to predict future home heating costs. In addition, any new regulations imposed on natural gas, particularly on extraction of natural gas from shale formations, could lead to substantial increases in the price of natural gas. Reduced prices for heating oil or increases in in prices for natural gas may cause potential natural gas customers to forgo converting their heating systems to natural gas and as a result, could negatively impact the forecasted growth of the CNG, SCG and BGC businesses, and their cash flows, results of operations and financial condition.

Our subsidiaries do not own all of the land on which their projects are located and their use and enjoyment of real property rights for their projects may be adversely affected by the rights of lienholders and leaseholders that are superior to those of the grantors of those real property rights to our subsidiaries' projects, which could have a material adverse effect on their business, results of operations, financial condition and cash flows.

Our subsidiaries do not own all of the land on which their projects are located. For example, Renewables does not own all of the land on which its wind projects are located. Such projects generally are, and future projects may be, located on land occupied under long-term easements, leases and rights of way. The ownership interests in the land subject to these easements, leases and rights of way may be subject to mortgages securing loans or other liens and other easements, lease rights and rights of way of third parties that were created previously. As a result, some of the rights under such easements, leases or rights of way held by our operating subsidiaries may be subject to the rights of these third parties, and the rights of our operating subsidiaries to use the land on which their projects are or will be located and their projects' rights to such easements, leases and rights of way could be lost or curtailed. Any such loss or curtailment of the rights of our operating subsidiaries to use the land on which their projects are or will be located could have a material adverse effect on their business, results of operations, financial condition and cash flows.

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We and our subsidiaries are subject to litigation or administrative proceedings, the outcome or settlement of which could adversely affect our business, results of operations, financial condition and cash flows.

AVANGRID and our operating subsidiaries have been and continue to be involved in legal proceedings, administrative proceedings, claims and other litigation that arise in the ordinary course of business. These actions may include environmental claims, employment-related claims, class action suits and contractual disputes or claims for personal injury or property damage that occur in connection with services performed relating to the operation of our businesses, or actions by regulatory or tax authorities. Unfavorable outcomes or developments relating to these proceedings or future proceedings, such as judgments for monetary damages, injunctions or denial or revocation of permits, could have a material adverse effect on our business, financial condition, reputation and results of operations. In addition, settlement of claims could adversely affect our business, results of operations, financial condition and cash flows.

Storing, transporting and distributing natural gas involves inherent risks that could cause us to incur significant financial losses.

There are inherent hazards and operation risks in gas distribution activities, such as leaks, accidental explosions and mechanical problems that could cause the loss of human life, significant damage to property, environmental pollution and impairment of operations. The location of pipelines and storage facilities near populated areas, including residential areas, commercial business centers and industrial sites, could increase the level of damages resulting from these risks. These activities may subject us to litigation and administrative proceedings that could result in substantial monetary judgments, fines or penalties. To the extent that the occurrence of any of these events is not fully covered by insurance or natural gas hedges, they could adversely affect our revenue, earnings and cash flow.

We are not able to insure against all potential risks and may become subject to higher insurance premiums, and our ability to obtain insurance and the terms of any available insurance coverage could be materially adversely affected by international, national, state or local events and company-specific events, as well as the financial condition of insurers.

Our businesses and activities are exposed to the risks inherent in the construction and operation of our respective assets, such as electrical power plants, wind power plants and other renewable energy projects and natural gas storage and distribution facilities, including breakdowns, manufacturing defects, natural disasters, terrorist attacks, cyber attacks and sabotage. Our subsidiaries are also exposed to third party liability risks and environmental risks. While our operating subsidiaries maintain insurance coverage, such insurance may not continue to be offered on an economically feasible basis and may not cover all events that could give rise to a loss or claim involving the assets or operations of our subsidiaries. For example, Renewables currently has 700 MW of installed capacity in California subject to known earthquake risks and approximately 1,100 MW of installed capacity on the Texas Gulf Coast subject to known hurricane and windstorm risks. Further, while insurance coverage applies to property damages and business interruptions, this coverage is limited as a result of severe insurance market restrictions and we are generally not fully insured against all significant losses. In addition, our subsidiaries' insurance policies are subject to annual review by their insurers. Our ability to obtain insurance and the terms of any available insurance coverage could be materially adversely affected by international, national, state or local events and company-specific events, as well as the financial condition of insurers. If insurance coverage is not available or obtainable on acceptable terms, we may be required to pay costs associated with adverse future events. If one of our operating subsidiaries were to incur a serious uninsured loss or a loss significantly exceeding the limits of their insurance policies, the results could have a material adverse effect on our business, results of operations, financial condition and cash flows.

Furthermore, Networks' gas distribution and transportation activities involve a variety of inherent hazards and operating risks, such as leaks, accidents, explosions, fires and mechanical problems and could result in serious injury to employees and non-employees, loss of human life, significant damage to property, environmental pollution and impairment of our subsidiaries' operations. In accordance with customary industry practice, our subsidiaries maintain insurance against some, but not all, of these risks and losses. The location of natural gas pipelines and other facilities near populated areas, including residential areas, commercial business centers and industrial sites, could increase the level of damages that could potentially result from these risks. The occurrence of any of these events not fully covered by insurance could adversely affect our business, results of operations, financial position and cash flows.

The benefits of any warranties provided by the suppliers of equipment for Networks and Renewables' projects may be limited by the ability of a supplier to satisfy its warranty obligations, or if the term of the warranty has expired or has liability limits which could have a material adverse effect on our business, results of operation, financial condition and cash flows.

Networks and Renewables expect to benefit from various warranties, including product quality and performance warranties, provided by suppliers in connection with the purchase of equipment. The suppliers of our operating subsidiaries may fail to fulfill their warranty obligations or a particular defect may not be covered by a warranty. Even if a supplier fulfills its obligations, the warranty may not be sufficient to compensate the operating subsidiary for all of its losses. In addition, these warranties generally

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expire within two to five years after the date each equipment item is delivered or commissioned and are subject to liability limits. If installation is delayed, the operating subsidiaries may lose all or a portion of the benefit of a warranty. If Networks or Renewables seeks warranty protection and a supplier is unable or unwilling to perform its warranty obligations, whether as a result of its financial condition or otherwise, or if the term of the warranty has expired or a liability limit has been reached, there may be a reduction or loss of warranty protection for the affected equipment, which could have a material adverse effect on our business, results of operation, financial condition and cash flows.

A disruption in the wholesale energy markets or failure by an energy supplier could adversely affect our business and results of operation.

Almost all the electricity and gas that Networks sells to full-service customers is purchased through the wholesale energy markets or pursuant to contracts with energy suppliers. A disruption in the wholesale energy markets or a failure on the part of energy suppliers or operators of energy delivery systems that connect to Networks' energy facilities could adversely affect Networks' ability to meet its customers' energy needs and adversely affect our business and results of operation.

The increased cost of purchasing natural gas during periods in which natural gas prices are rising significantly could adversely impact our earnings and cash flow.

The rates that are permitted to be charged by our regulated natural gas utilities that allow for rate recovery generally allow such businesses to recover their cost of purchasing natural gas. In general, the various regulatory agencies allow our regulated utilities to recover the costs of natural gas purchased for customers on a dollar-for-dollar basis (in the absence of disallowances), without a profit component. Networks' regulated natural gas utilities periodically adjust customer rates for increases and decreases in the cost of gas purchased by such regulated utilities for sale to its customers. Under the regulatory body-approved gas cost recovery pricing mechanisms, the gas commodity charge portion of gas rates charged to customers may be adjusted upward on a periodic basis. If the cost of purchasing natural gas increases and Networks' regulated natural gas utilities are unable to recover these costs from its customers immediately, or at all, Networks may incur increased costs associated with higher working capital requirements and/or realize increased costs. In addition, any increases in the cost of purchasing natural gas may result in higher customer bad debt expense for uncollectible accounts and reduced sales volume and related margins due to lower customer consumption.

Pension and post-retirement benefit plans could require significant future contributions to such plan that could adversely impact our business, results of operations, financial condition and cash flows.

We provide defined benefit pension plans and other post-retirement benefits administered by our subsidiaries for a significant number of employees, former employees and retirees. Financial market disruptions and significant declines in the market values of the investments held to meet the pension and post-retirement obligations, discount rate assumptions, participant demographics and increasing longevity, and changes in laws and regulations may require us to make significant contributions to the plans. Large funding requirements or significant increases in expenses could adversely impact our business, results of operations, financial condition and cash flows.

Our existing credit facilities contain, and agreements that we may enter into in the future may contain, covenants that could restrict our financial flexibility.

Our existing credit facilities, and the credit facilities of our subsidiaries, contain covenants imposing certain requirements on our business including covenants regarding the ratio of indebtedness to total capitalization. Furthermore, our subsidiaries periodically issue long-term debt, historically consisting of both secured and unsecured indebtedness. These third-party debt agreements also contain covenants, including covenants regarding the ratio of indebtedness to total capitalization. These requirements may limit our ability and the ability of our subsidiaries to take advantage of potential business opportunities as they arise and may adversely affect our conduct and our operating subsidiaries' current business, including restricting our ability to finance future operations and capital needs and limiting the subsidiaries' ability to engage in other business activities. Other covenants place or could place restrictions on our ability and the ability of our operating subsidiaries to, among other things, incur additional debt, create liens, and sell or transfer assets.

Agreements we and our operating subsidiaries enter into in the future may also have similar or more restrictive covenants, especially if the general credit market deteriorates. A breach of any covenant in the existing credit facilities or the agreements governing our other indebtedness would result in an event of default. Certain events of default may trigger automatic acceleration of payment of the underlying obligations or may trigger acceleration of payment if not remedied within a specified period. Events of default under one agreement may trigger events of default under other agreements, although our regulated utilities are not subject to the risk of default of affiliates. Should payments become accelerated as the result of an event of default, the principal and interest on such borrowing would become due and payable immediately. If that should occur, we may not be able to make all

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of the required payments or borrow sufficient funds to refinance the accelerated debt obligations. Even if new financing is then available, it may not be on terms that are acceptable to us.

We may be unable to meet our financial obligations and to pay dividends on our common stock if our subsidiaries are unable to pay dividends or repay loans from us.

We are a holding company and, as such, have no revenue-generating operations of our own. We are dependent on dividends and the repayment of loans from our subsidiaries and on external financings to provide the cash that is necessary to make future investments, service debt we have incurred, pay administrative costs and pay dividends. Our subsidiaries are separate legal entities and have no independent obligation to pay us dividends. Prior to paying us dividends, the subsidiaries have financial obligations that must be satisfied, including among others, their operating expenses and obligations to creditors. Furthermore, our regulated utilities are restricted by regulatory decision from paying us dividends unless a minimum equity-to-total capital ratio is maintained. The future enactment of laws or regulations may prohibit or further restrict the ability of our subsidiaries to pay upstream dividends or to repay funds. In addition, in the event of a subsidiary's liquidation or reorganization, our right to participate in a distribution of assets is subject to the prior claims of the subsidiary's creditors. As a result, our ability to pay dividends on our common stock and meet our financial obligations is reliant on the ability of our subsidiaries to generate sustained earnings and cash flows and pay dividends to and repay loans from us.

Our investments and cash balances are subject to the risk of loss.

Our cash balances and the cash balances at our subsidiaries may be deposited in banks, may be invested in liquid securities such as commercial paper or money market funds or may be deposited in a liquidity agreement in which we are a participant along with other affiliates of the Iberdrola Group. Bank deposits in excess of federal deposit insurance limits would be subject to risks in the counterparty bank. Liquid securities and money market funds are subject to loss of principal, more likely in an adverse market situation, and to the risk of illiquidity.

We and our subsidiaries may suffer the loss of key personnel or the inability to hire and retain qualified employees, which could result in a material adverse effect on our business, financial condition, results of operations and prospects.

The operations of our operating subsidiaries depend on the continued efforts of our employees and our subsidiaries' employees. Retaining key employees and maintaining the ability to attract new employees are important to our financial performance and for our subsidiaries' operations and financial performance. We cannot guarantee that any member of our management or of our subsidiaries' management will continue to serve in any capacity for any particular period of time. In addition, a significant portion of our and our subsidiaries' workforce, including many workers with specialized skills maintaining and servicing the electrical infrastructure, will be eligible to retire over the next five to ten years. Such highly skilled individuals cannot be quickly replaced due to the technically complex work they perform. If a significant amount of such workers retire and are not replaced, the subsequent loss in productivity and increased recruiting and training costs could result in a material adverse effect on our business, financial condition, results of operations and prospects.

We and our subsidiaries face the risk of strikes, work stoppages or an inability to negotiate future collective bargaining agreements on commercially reasonable terms which could have a material adverse effect on our business, results of operations, financial condition and cash flows.

A majority of the employees at Networks' facilities are subject to collective bargaining agreements with various unions. Additionally, unionization activities, including votes for union certification, could occur among non-union employees. If union employees strike, participate in a work stoppage or slowdown or engage in other forms of labor strike or disruption, our subsidiaries could experience reduced power generation or outages if replacement labor is not procured. The ability to procure such replacement labor is uncertain, though risks are reduced by rigorous contingency planning. Strikes, work stoppages or an inability to negotiate future collective bargaining agreements on commercially reasonable terms could have a material adverse effect on our business, results of operations, financial condition and cash flows.

Changes in tax laws, as well as judgments and estimates used in the determination of tax-related asset and liability amounts, could materially adversely affect our business, results of operations, financial condition and cash flows.

Our provision for income taxes and reporting of tax-related assets and liabilities require significant judgments and the use of estimates. Amounts of tax-related assets and liabilities involve judgments and estimates of the timing and probability of recognition of income, deductions and tax credits, including, but not limited to, estimates for potential adverse outcomes regarding tax positions that have been taken and the ability to utilize tax benefit carryforwards, such as net operating loss, or NOL, and tax credit carryforwards. Actual income taxes could vary significantly from estimated amounts due to the future impacts of, among other things, changes in tax laws, regulations and interpretations, our financial condition and results of operations.

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The success of our business depends on achieving our strategic objectives, which may be through acquisitions, joint ventures, dispositions and restructurings.

We are continuously reviewing the alternatives available to ensure that we meet our strategic objectives, which include, among other things, acquisitions, joint ventures, dispositions and restructuring. With respect to potential acquisitions, joint ventures and restructuring actions, we may not achieve expected returns and other benefits as a result of various factors, including integration and collaboration challenges, such as personnel and technology. In addition, we may not achieve anticipated cost savings from restructuring actions. We also may participate in joint ventures with other companies or enterprises in various markets, including joint ventures where we may have a lesser degree of control over the business operations, which may expose us to additional operational, financial, legal or compliance risks. We also continue to evaluate the potential disposition of assets and businesses that may no longer help us meet our objectives or sell a stake of these assets as a way to maximize the value of our business. When we decide to sell assets or a business, we may encounter difficulty in finding buyers or executing alternative exit strategies on acceptable terms in a timely manner, which could delay the accomplishment of our strategic objectives. Alternatively, we may dispose of a business at a price or on terms that are less than we had anticipated. Failure to achieve our strategic objectives could have a material adverse effect on our business, results of operations, financial condition and cash flows.

Risks Relating to Ownership of Our Common Stock

The trading price and volume of our common stock may be volatile and the value of your investment could decline.

The trading price of and demand for shares of our common stock could fluctuate and will depend on a number of conditions, including:

- the risk factors described in this Annual Report on Form 10-K;
- general economic conditions in the U.S. and internationally, including changes in interest rates;
- changes in electricity and natural gas prices;
- actual, anticipated or unanticipated fluctuations in our quarterly and annual results and those of our competitors;
- our businesses, operations, results and prospects;
- future mergers and strategic alliances;
- market conditions in the energy industry;
- changes in law, government regulation, taxes, legal proceedings or other developments;
- shortfalls in our operating results from levels forecasted by securities analysts or by us;
- investor sentiment toward the stock of energy companies in general;
- announcements concerning us or our competitors;
- maintenance of acceptable credit ratings or credit quality;
- the likelihood, timing and amount of future equity issuances;
- the level of dividends and expectations for future dividend levels; and
- the general state of the securities markets.

These and other factors may impair the development or sustainability of a liquid market for shares of our common stock and the ability of investors to sell shares at an attractive price. These factors also could cause the market price and demand for shares of our common stock to fluctuate substantially, which may negatively affect the price and liquidity of shares of our common stock. These fluctuations could cause you to lose all or part of your investment in shares of our common stock. Many of these factors and conditions are beyond our control and may not be related to our operating performance.

If securities or industry analysts do not publish research or publish inaccurate or unfavorable research about us or our businesses, the price and trading volume of our common stock could decline.

The trading market for our common stock will, to some extent, depend on the research and reports that securities or industry analysts publish about us or our business. We do not have any control over these analysts. If one or more of the analysts who cover us should downgrade our shares or change their opinion of our business prospects or report inaccurate information, our share price would likely decline. If one or more of these analysts cease coverage of us or fail to publish reports on us regularly, demand for our common stock could decrease, which might cause our stock price and trading volume to decline.

Iberdrola exercises significant influence over us, and its interests may be different from yours. Additionally, future sales or issuances of our common stock by Iberdrola. could have a negative impact on the price of our common stock.

Iberdrola owns approximately 81.5% of outstanding shares of our common stock and will be able to exercise significant influence over our business policies and affairs, including the composition of our board of directors and any action requiring the approval of our shareholders, including the adoption of amendments to the certificate of incorporation and bylaws and the approval of a merger or sale of substantially all of our assets, subject to applicable law and the limitations set forth in the shareholder agreement to which we and Iberdrola are parties. The directors designated by Iberdrola may have significant authority to effect

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decisions affecting our capital structure, including the issuance of additional capital stock, incurrence of additional indebtedness, the implementation of stock repurchase programs and the decision of whether or not to declare dividends.

The interests of Iberdrola may conflict with the interests of our other shareholders. For example, Iberdrola may support certain long-term strategies or objectives for us that may not be accretive to shareholders in the short term. The concentration of ownership may also delay, defer or even prevent a change in control, even if such a change in control would benefit our other shareholders, and may make some transactions more difficult or impossible without the support of Iberdrola. This significant concentration of share ownership may adversely affect the trading price for shares of our common stock because investors may perceive disadvantages in owning stock in companies with shareholders who own significant percentages of a company's outstanding stock.

Further, sales of our common stock by Iberdrola or the perception that sales may be made by it could significantly reduce the market price of shares of our common stock. Even if Iberdrola does not sell a large number of shares of our common stock into the market, its right to transfer such shares may depress the price of our common stock. Furthermore, pursuant to the shareholder agreement, Iberdrola is entitled to customary registration rights of our common stock, including the right to choose the method by which the common stock is distributed, a choice as to the underwriter and fees and expenses to be borne by us. Iberdrola also retains preemptive rights to protect against dilution in connection with issuances of equity by us. If Iberdrola exercises its registration rights and/or its preemptive rights, the market price of shares of our common stock may be adversely affected.

Additionally, being a controlled company, relevant risks materializing at the ultimate parent level could have a negative impact on our share price, financial condition, credit ratings or reputation.

We have elected to take advantage of the "controlled company" exemption to the corporate governance rules for NYSE-listed companies, which could make shares of our common stock less attractive to some investors or otherwise harm our stock price.

Under the rules of the NYSE, a company in which over 50% of the voting power is held by an individual, a group or another company is a "controlled company" and is not required to have:

- a majority of its board of directors be independent directors;
- a compensation committee, or to have such committees be composed entirely of independent directors; and
- a nominating and corporate governance committee, or to have such committee composed entirely of independent directors.

In October 2016, our board determined that it was in the best interests of the company to establish a compensation, nominating and corporate governance committee. In light of our status as a controlled company, we currently rely on the NYSE exemptions with respect to board, compensation committee and nominating and corporate governance committee independence.

Because we are a controlled company, you will not have the same protections afforded to shareholders of companies that are subject to all of the corporate governance requirements of the NYSE without regard to the exemptions available for "controlled companies." Our status as a controlled company could make our shares of common stock less attractive to some investors or otherwise harm our stock price.

Our dividend policy is subject to the discretion of our board of directors and may be limited by our debt agreements and limitations under New York law.

Although we currently anticipate paying a regular quarterly dividend, any such determination to pay dividends is at the discretion of our board of directors and dependent on conditions such as our financial condition, earnings, legal requirements, including limitations under New York law, restrictions in our debt agreements that limit our ability to pay dividends to shareholders and other factors the board of directors deem relevant. Our board of directors may, in its sole discretion, change the amount or frequency of dividends or discontinue the payment of dividends entirely. For these reasons, investors may not be able to rely on dividends to receive a return on their investments.

If we are unable to implement and maintain effective internal control over financial reporting in the future, investors may lose confidence in the accuracy and completeness of our financial reports and the trading price of our common stock may be negatively affected.

As a public company, we are subject to reporting, disclosure control and other obligations under the Exchange Act, the Sarbanes-Oxley Act, or SOX, the Dodd-Frank Act, as well as rules adopted, and to be adopted, by the SEC and the NYSE. For example, beginning with the 2016 Annual Report on Form 10-K, Section 404 of SOX requires our management to report on the effectiveness of our internal control over financial reporting and our independent registered public accounting firm to attest to the effectiveness of our internal controls. Our management and other personnel will continue to devote a substantial amount of time

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to these compliance activities. If we are not able to comply with the requirements of Section 404 in a timely manner or if we are unable to conclude that our internal control over financial reporting is effective, our ability to accurately report our cash flows, results of operations or financial condition could be inhibited and additional financial and management resources could be required. Any failure to maintain internal control over financial reporting or if our independent registered public accounting firm determines the we have a material weakness or significant deficiency in our internal control over financial reporting, could cause investors to lose confidence in the accuracy and completeness of our financial reports, a decline in the market price of our common stock, or subject us to sanctions or investigations by the NYSE, the SEC or other regulatory authorities. Failure to remedy any material weakness or significant deficiency in our internal control over financial reporting, or to implement or maintain other effective control systems required of public companies, could also restrict our future access to the capital markets and reduce or eliminate the trading market for our common stock. Further, as a result of becoming a public company, we have incurred and will continue to incur higher legal, accounting and other expenses than we did as a private company, and these expenses may increase even more in the future.

Item 1B. ***Unresolved Staff Comments.***

None

Item 2. ***Properties.***

We have included descriptions of the location and general character of our principal physical operating properties by segment in "Item 1. *Business*", which is incorporated herein by reference. The principal offices of AVANGRID and Networks are located in Orange, Connecticut; Portland, Maine; and Rochester, New York, while Renewables' headquarters is located in Portland, Oregon. In addition, AVANGRID and its subsidiaries have various administrative offices located throughout the United States. AVANGRID leases part of its administrative and local offices.

The following table sets forth the principal properties of AVANGRID, by location, type, lease or ownership and size as of December 31, 2019:

Location	Type of Facility	Lease/Owned	Size (square feet)
Orange, Connecticut	Office	Owned	127,310
Augusta, Maine	Office	Leased	220,400
Portland, Maine	Office	Leased	15,194
Rochester, New York	Office	Owned	122,494
Portland, Oregon	Office	Leased	63,543

We believe that our office facilities are adequate for our current needs and that additional office space can be obtained if necessary.

Item 3. ***Legal Proceedings.***

For information with respect to this item see Notes 14 and 15 of our consolidated financial statements included in Part II, Item 8, "Financial Statements and Supplementary Data" of this Annual Report on Form 10-K, which information is incorporated herein by reference.

Item 4. ***Mine Safety Disclosures.***

Not applicable.

Information about our Executive Officers

The names and ages of all executive officers of AVANGRID as of March 2, 2020 and a brief account of the business experience during the past five years of each executive officer are as follows:

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Name	Age (1)	Title
James P. Torgerson	67	Chief Executive Officer
Douglas K. Stuver	56	Senior Vice President – Chief Financial Officer
Scott M. Tremble	40	Senior Vice President – Controller
Alejandro de Hoz García-Bellido	52	President and Chief Executive Officer of Renewables
David T. Flanagan	72	Executive Chairman of CMP
Peter T. Church	47	Senior Vice President – Human Resources & Corporate Administration
Ignacio Estella	50	Senior Vice President – Corporate Development
Robert D. Kump	58	Deputy Chief Executive Officer and President
Carl A. Taylor	55	President and Chief Executive Officer of NYSEG and RG&E
R. Scott Mahoney	54	Senior Vice President – General Counsel and Corporate Secretary
Anthony Marone	56	President and Chief Executive Officer of Networks

(1) Age as of December 31, 2019.

James P. Torgerson. Mr. Torgerson was appointed Chief Executive Officer of AVANGRID on December 16, 2015, upon consummation of the acquisition of UIL. Previously, Mr. Torgerson served as president and chief executive officer of UIL since 2006. Prior to 2006, Mr. Torgerson was president and chief executive officer of Midcontinent Independent System Operator, Inc. Mr. Torgerson serves as the chair of the board of directors of the American Gas Association and as a trustee of the Yale-New Haven Hospital, a Director of Yale New Haven Health System, board and executive committee member of the Edison Electric Institute (EEI). Mr. Torgerson co-chairs EEI's Board Committee for Reliability, Security and Business Continuity which includes responsibility related to cyber security for the EEI member utilities. Mr. Torgerson also is a member of the Electricity Sub-sector Coordinating Council (ESCC), that coordinates with the Federal Government (DOE, DHS, DOD, FBI and others) on physical and cyber security and natural disasters impacting the electric grid. Mr. Torgerson is the former chairman and director of the Connecticut Business and Industry Association and the former chairman of the Connecticut Institute for the 21st Century. Mr. Torgerson holds a bachelor's of business administration degree in accounting from Cleveland State University.

Douglas K. Stuver. Mr. Stuver was appointed Senior Vice President - Chief Financial Officer of AVANGRID on July 8, 2018, and is responsible for AVANGRID's investor relations corporate communications, risk management, treasury and purchasing divisions. Mr. Stuver joined AVANGRID in 2015 as Managing Director, Finance of Avangrid Renewables, LLC and served as Vice President – Controller of Avangrid Renewables, LLC from 2017 until 2018. Prior to joining the Company, he served as chief financial officer of the Company's prior affiliate, PacifiCorp, from 2008 to 2015. Mr. Stuver graduated magna cum laude with a B.A. from University of Pittsburgh and is a Certified Public Accountant (inactive status).

Scott M. Tremble. Mr. Tremble was appointed Senior Vice President – Controller of AVANGRID on May 1, 2018, and is responsible for the execution and recording of AVANGRID's transactional processes while meeting mandatory reporting requirements and tax obligations. Mr. Tremble also serves as a director of AVANGRID's subsidiaries Networks, Renewables and UIL. Mr. Tremble joined the Company as chief accounting officer of Avangrid Management Company, LLC, a wholly-owned subsidiary of AVANGRID, in 2015, and was responsible for oversight in the areas of consolidation, financial reporting, internal controls, technical accounting, and corporate accounting for the Company. From 2014 to 2015, he served as the international controller of Cole Haan LLC. Mr. Tremble started his career at PricewaterhouseCoopers in October 2002 and served various roles, including, most recently, as senior manager in the assurance practice. Mr. Tremble received his B.S. in Accountancy from Bentley University and is a Certified Public Accountant.

Alejandro de Hoz García-Bellido. Mr. de Hoz García-Bellido was appointed President and Chief Executive Officer of Renewables on October 15, 2019. Mr. de Hoz García-Bellido previously served as Vice President of U.S. Offshore Wind of Renewables from November 3, 2017 until October 15, 2019. Prior to joining Renewables, Mr. de Hoz García-Bellido served as Offshore Business Performance director within the Iberdrola offshore business from 2013 until 2017, based both in London and Madrid, responsible for preparing Iberdrola's offshore pipeline for competitive auction processes both in the U.K. and Germany, as well as coordinating the teams to take awarded projects through the financial close. Prior to this, he held different positions within the Iberdrola group in developing the onshore wind business internationally, including the establishment in the French market and the development of the Mexican and Brazilian markets. Mr. de Hoz García-Bellido holds a degree in Physics from the University Complutense of Madrid and an MBA from ICAI-ICADE University of Madrid.

David T. Flanagan. Mr. Flanagan was appointed Executive Chairman of the Board of Directors of CMP effective February 18, 2020. Previously, Mr. Flanagan served as Chief Executive Officer of CMP from 1994 to 2000. Most recently, Mr. Flanagan served as the Interim President of the University of Southern Maine from 2014 until 2015. He also served as President and Chief

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Executive Officer at Preservation Management Inc., a management company specializing in affordable housing, from 2010 to 2013 and as General Counsel for the United States Senate Homeland Security Committee for the Hurricane Katrina investigation from 2005 until 2006. Prior to joining Central Maine Power Company, he served as legal counsel to the Governor of the State of Maine from 1979 to 1984 and as a member of the Board of Trustees of the University of Maine System from 1986 to 1995. Mr. Flanagan holds a Bachelor's Degree from Harvard University and a J.D. from Boston College Law School.

Peter T. Church. Mr. Church was appointed Senior Vice President – Human Resources & Corporate Administration of AVANGRID on October 31, 2018, and is responsible for ensuring that human resources strategies and initiatives support AVANGRID's mission and objectives, overseeing all aspects of human resources management, practices and operations, and coordinates AVANGRID's other corporate administrative functions including health and safety, general services, and information technology and systems. Prior to joining AVANGRID, Mr. Church held a number of executive positions at UnitedHealth Group from 2012 to 2018 including serving as the Chief Talent Officer, Vice President, Human Capital - Commercial Markets, and Vice President, Talent Acquisition and Workforce Insights. Mr. Church earned both a Bachelor of Arts in Psychology as well as a Master of Arts in General/Experimental Psychology from the University of Hartford.

Ignacio Estella. Mr. Estella was appointed Senior Vice President – Corporate Development of AVANGRID on December 17, 2015, and is responsible for delivering non-organic growth opportunities for the Company beyond those of its present businesses. Previously, Mr. Estella served as corporate vice president of business origination of Iberdrola from May 2009 until November 2013 and vice president – corporate development of Iberdrola USA, Inc., from December 2013 to December 16, 2015. He served as gas markets development director of Iberdrola between February 2007 and April 2009. Mr. Estella holds a degree in law and business administration from the Universidad Pontificia Comillas and a Master of Public Administration, with concentration in industry analysis and strategic negotiation from Harvard University.

Robert D. Kump. Mr. Kump was appointed Deputy Chief Executive Officer and President of AVANGRID on June 5, 2019. Mr. Kump served as President and Chief Executive Officer of Networks from November 2010 until June 5, 2019 and as AVANGRID's Chief Corporate Officer from January 2014 to December 2016. Mr. Kump also served as a director of AVANGRID's subsidiaries CMP, NYSEG, and RG&E from 2009 until June 5, 2019, and as the Chief Executive Officer of Avangrid Service Company from October 2009 until June 5, 2019. Mr. Kump held various positions from February 1997 to October 2009 as AVANGRID's senior vice president and chief financial officer, vice president, controller and chief accounting officer, treasurer and secretary. Mr. Kump also previously held a number of positions at NYSEG from 1986 to 1997, including senior accountant-external financial reporting, director-investor relations, director-financial services, and treasurer. Mr. Kump earned a B.A. in accounting from Binghamton University and is a C.P.A. in New York.

Carl A. Taylor. Mr. Taylor was appointed President and Chief Executive Office of NYSEG and RG&E on June 30, 2017. Previously, Mr. Taylor served as Vice President of Customer Service of AVANGRID. Mr. Taylor started with NYSEG in 1987 as an electrical engineer in the generation planning area and progressed through positions of increasing seniority in the organization including president of NYSEG Solutions, Inc., a subsidiary of NYSEG. He earned a Bachelor of Electrical Engineering Degree from Rochester Institute of Technology and a Master's of Business Administration Degree from State University of New York at Binghamton.

R. Scott Mahoney. Mr. Mahoney was appointed Senior Vice President – General Counsel of AVANGRID on December 17, 2015. He was appointed Secretary of AVANGRID on January 27, 2016, and previously served as vice president-general counsel and secretary of Networks. Mr. Mahoney previously served as Deputy General Counsel and Chief FERC Compliance Officer for AVANGRID from January 2007 to June 2012, and previously served in legal and senior executive positions at AVANGRID subsidiaries from October 1996 until January 2007. Mr. Mahoney also serves on the board of directors of the Gulf of Maine Research Institute. Mr. Mahoney earned a B.A. from St. Lawrence University, a J.D. from the University of Maine, a master's degree in environmental law from the Vermont Law School, and a postgraduate diploma in business administration from the University of Warwick. He has received bar admission to the State of Maine, the State of New York, the U.S. Court of Appeals, the U.S. District Court and the U.S. Court of Military Appeals and is a State of Connecticut Authorized House Counsel.

Anthony Marone. Mr. Marone was appointed President and Chief Executive Officer of Networks on June 5, 2019. In this role, he has overall responsibility for Avangrid Networks' electric and natural gas operating companies in Connecticut and Massachusetts and functional responsibility for AVANGRID's regulatory and asset management and planning. Mr. Marone also serves as President – Connecticut and Massachusetts Operations of Networks, director of Avangrid Enterprises, Inc., Avangrid Networks, Inc., Avangrid Networks New York TransCo, LLC, Avangrid Service Company, Berkshire Energy Resources, The Berkshire Gas Company, Central Maine Power Company, CMP Group, Inc., Connecticut Energy Corporation, Connecticut Natural Gas Corporation, CTG Resources, Inc., Mainecom Services, New York State Electric & Gas Corporation, RGS Energy Group, Inc., Rochester Gas and Electric Corporation, The Southern Connecticut Gas Company, Thermal Energies, Inc., UIL Group, LLC, UIL Holdings Corporation, The Union Water-Power Company, United Capital Investment, Inc., The United Illuminating Company, United Resources, Inc., Xcelecom, Inc., and Xcel Services, Inc. Previously Mr. Marone served as senior vice president of customer

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and business services of UIL since May 14, 2013. Mr. Marone served as senior vice president – business services of UI and vice president of business services of UIL from November 16, 2010 to May 2013. Mr. Marone received his master's degree in engineering and business management from the University of New Haven and a bachelor's degree in mechanical engineering from the New York Institute of Technology.

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PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.

Market Information and Holders

Our shares of common stock began trading on the NYSE on December 17, 2015, under the symbol "AGR." Prior to that time, there was no public market for shares of our common stock.

As of February 28, 2020, there were 3,280 shareholders of record.

Dividends

AVANGRID expects to continue paying quarterly cash dividends, although there is no assurance as to the amount of future dividends, which depends on future earnings, capital requirements and financial condition.

Further information regarding payment of dividends is provided in "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" of this Annual Report on Form 10-K.

Performance Graph

The line graph appearing below compares the change in AVANGRID's total shareowner return on its shares of common stock with the return on the S&P Composite-500 Stock Index, the S&P Electric Utilities Index and the S&P Utilities Index for the period December 17, 2015 through December 31, 2019.

	December 17, 2015	December 31, 2019
AVANGRID	$ 100.00	$ 164.50
S&P 500	$ 100.00	$ 171.70
S&P Electric Utilities Index	$ 100.00	$ 170.89
S&P Utilities Index	$ 100.00	$ 172.56

The above information assumes that the value of the investment in shares of AVANGRID's common stock and each index was $100 on December 17, 2015, including dividend reinvestment during this time period. The changes displayed are not necessarily indicative of future returns.

Recent Sales of Unregistered Securities

None.

Issuer Repurchases of Equity Securities

There were no repurchases of common stock of AVANGRID during the fourth quarter of the year ended December 31, 2019.

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Equity Compensation Plan Information

For information regarding securities authorized for issuance under equity compensation plans, see Part III, Item 12 of this Annual Report on Form 10-K.

Item 6. *Selected Financial Data*

The following selected consolidated financial data should be read in conjunction with the consolidated financial statements and the notes thereto in Item 8 of Part II, "Financial Statements and Supplementary Data," and the information contained in Item 7 of Part II, "Management's Discussion and Analysis of Financial Condition and Results of Operations." Historical results are not necessarily indicative of future results.

	Year Ended December 31, (millions, except per share data)				
Consolidated Statements of Income Data: *	**2019**	**2018**	**2017**	**2016**	**2015**
Operating Revenues	**$ 6,338**	**$ 6,478**	**$ 5,963**	**$ 6,018**	**$ 4,367**
Operating Income	1,003	1,127	505	1,194	599
Income Before Income Tax	**819**	**768**	**123**	**1,009**	**302**
Income tax expense (benefit)	143	170	(259)	377	29
Net Income	**676**	**598**	**382**	**632**	**273**
Net loss (income) attributable to noncontrolling interests	24	(3)	(1)	—	—
Net Income Attributable to Avangrid, Inc.	**$ 700**	**$ 595**	**$ 381**	**$ 632**	**$ 273**
Total Earnings Per Common Share, Basic and Diluted	$ 2.26	$ 1.92	$ 1.23	$ 2.04	$ 1.07
Weighted-average Number of Common Shares Outstanding:					
Basic	309,491,082	309,503,319	309,502,861	309,512,553	254,588,212
Diluted	309,514,910	309,712,628	309,661,883	309,817,322	254,605,111

Consolidated Balance Sheet Data:*					
As of December 31, (Millions)	**2019**	**2018**	**2017**	**2016**	**2015**
Total Property, Plant and Equipment	**$ 25,218**	**$ 23,459**	**$ 22,669**	**$ 21,548**	**$ 20,711**
Total Other Assets	**$ 3,828**	**$ 3,675**	**$ 3,589**	**$ 3,976**	**$ 3,795**
Total Assets	**$ 34,416**	**$ 32,167**	**$ 31,671**	**$ 31,309**	**$ 30,743**

As of December 31, (Millions)	**2019**	**2018**	**2017**	**2016**	**2015**
Liabilities					
Current portion of debt	$ 730	$ 394	$ 183	$ 349	$ 206
Non-current debt	$ 6,716	$ 5,368	$ 5,196	$ 4,510	$ 4,530
Total Liabilities	**$ 18,830**	**$ 16,764**	**$ 16,575**	**$ 16,101**	**$ 15,593**
Total Stockholder's Equity	**$ 15,237**	**$ 15,104**	**$ 15,077**	**$ 15,195**	**$ 15,137**
Total Equity	**$ 15,586**	**$ 15,403**	**$ 15,096**	**$ 15,208**	**$ 15,150**

*Selected financial data for UIL is included from December 16, 2015.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

You should read the following discussion of our financial condition and results of operations in conjunction with the consolidated financial statements and the notes thereto included elsewhere in this Annual Report on Form 10-K. In addition to historical consolidated financial information, the following discussion contains forward-looking statements that reflect our plans, estimates and beliefs. Our actual results could differ materially from those discussed in the forward-looking statements. Factors that could cause or contribute to these differences include those discussed below and elsewhere in this Annual Report on Form 10-K, particularly in Part I, Item 1A, "Risk Factors."

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AVANGRID is a leading sustainable energy company with approximately $34 billion in assets and operations in 24 states. AVANGRID has two primary lines of business - Avangrid Networks and Avangrid Renewables. Avangrid Networks owns eight electric and natural gas utilities, serving approximately 3.3 million customers in New York and New England. Avangrid Renewables owns and operates 8.0 gigawatts of electricity capacity, primarily through wind power, with a presence in 22 states across the United States. AVANGRID supports the achievement of the Sustainable Development Goals approved by the member states of the United Nations, and was named among the World's Most Ethical companies in 2019 by the Ethisphere Institute. AVANGRID employs approximately 6,600 people. Iberdrola S.A., a corporation *(sociedad anónima)* organized under the laws of the Kingdom of Spain, a worldwide leader in the energy industry, directly owns 81.5% of outstanding shares of AVANGRID common stock. AVANGRID's primary business is ownership of its operating businesses, which are described below.

Our direct, wholly-owned subsidiaries include Avangrid Networks, Inc., or Networks, and Avangrid Renewables Holdings, Inc., or ARHI. ARHI in turn holds subsidiaries including Avangrid Renewables, LLC, or Renewables. Networks owns and operates our regulated utility businesses through its subsidiaries, including electric transmission and distribution and natural gas distribution, transportation and sales. Renewables operates a portfolio of renewable energy generation facilities primarily using onshore wind power and also solar, biomass and thermal power.

In December 2017, our management committed to a plan to sell the gas storage and trading businesses because they represented non-core businesses that are not aligned with our strategic objectives. At that time, we determined that the assets and liabilities associated with our gas trading and storage businesses met the criteria for classification as assets held for sale, but did not meet the criteria for classification as discontinued operations. On March 1, 2018, the Company closed a transaction to sell Enstor Energy Services, LLC, which operated AVANGRID's gas trading business, to CCI U.S. Asset Holdings LLC, a subsidiary of Castleton Commodities International, LLC. On May 1, 2018, the Company closed a transaction to sell Enstor Gas, LLC, which operated the AVANGRID's gas storage business, to Amphora Gas Storage USA, LLC. The agreement included, among other things, a transition services agreement that obligated ARHI to provide certain transition services for up to one year after the closing date.

On December 16, 2015, we completed our acquisition of UIL. Immediately following the completion of the acquisition, former UIL shareowners owned 18.5% of the outstanding shares of common stock of AVANGRID, and Iberdrola owned the remaining shares. The acquisition was accounted for as a business combination. The results of operations of UIL since December 16, 2015, the acquisition date, have been included in the consolidated results of AVANGRID. Effective as of April 30, 2016, UIL and its subsidiaries were transferred to a wholly-owned subsidiary of Networks.

Through Networks, we own electric generation, transmission and distribution companies and natural gas distribution, transportation and sales companies in New York, Maine, Connecticut and Massachusetts, delivering electricity to approximately 2.3 million electric utility customers and delivering natural gas to approximately 1.0 million natural gas public utility customers as of December 31, 2019.

Networks, a Maine corporation, holds our regulated utility businesses, including electric transmission and distribution and natural gas distribution, transportation and sales. Networks serves as a super-regional energy services and delivery company through the eight regulated utilities it owns directly:

- New York State Electric & Gas Corporation, or NYSEG, which serves electric and natural gas customers across more than 40% of the upstate New York geographic area;
- Rochester Gas and Electric Corporation, or RG&E, which serves electric and natural gas customers within a nine-county region in western New York, centered around Rochester;
- The United Illuminating Company, or UI, which serves electric customers in southwestern Connecticut;
- Central Maine Power Company, or CMP, which serves electric customers in central and southern Maine;
- The Southern Connecticut Gas Company, or SCG, which serves natural gas customers in Connecticut;
- Connecticut Natural Gas Corporation, or CNG, which serves natural gas customers in Connecticut;
- The Berkshire Gas Company, or BGC, which serves natural gas customers in western Massachusetts; and
- Maine Natural Gas Corporation, or MNG, which serves natural gas customers in several communities in central and southern Maine.

Through Renewables, we had a combined wind, solar and thermal installed capacity of 8,001 megawatts, or MW, as of December 31, 2019, including Renewables' share of joint projects, of which 7,259 MW was installed wind capacity. As of December 31, 2019, approximately 69% of the capacity was contracted, for an average period of 9.5 years, and 13% of installed capacity was hedged. Being among the top three largest wind operators in the United States based on installed capacity as of December 31, 2019, Renewables strives to lead the transformation of the U.S. energy industry to a sustainable, competitive, clean energy future. Renewables currently operates 61 wind farms in 21 states across the United States.

Summary of Results of Operations

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Our operating revenues decreased by 2%, from $6,478 million for the year ended December 31, 2018, to $6,338 million for the year ended December 31, 2019.

Networks business revenues decreased mainly due to the pass-through of decreased purchased power and gas driven by lower commodity prices and volumes in the period. Renewables had an increase in revenues mainly due to an increase in thermal revenue and favorable mark to market, or MtM, changes on energy derivative transactions entered into for economic hedging purposes in the period, offset by unfavorable impacts from lower merchant pricing.

Net income attributable to AVANGRID increased by 18% from $595 million for the year ended December 31, 2018, to $700 million for the year ended December 31, 2019, primarily due to increased revenue and gain from the sale of assets in Renewables business in the period.

Adjusted net income (a non-GAAP financial measure) decreased by 2%, from $684 million for the year ended December 31, 2018 to $673 million for the year ended December 31, 2019. The decrease is primarily due to a $21 million decrease in Networks driven by increased non-deferrable outage restoration costs and an increase in personnel costs (net of capitalized staff costs) driven by headcount and overtime increases and a $28 million decrease in Corporate mainly driven by higher interest expense, offset by a $38 million increase in Renewables driven mainly by thermal revenue increase and a gain from the sale of assets and associated change in control during the period.

For additional information and reconciliation of the non-GAAP adjusted net income to net income attributable to AVANGRID, see "*—Non-GAAP Financial Measures*".

See "*—Results of Operations*" for further analysis of our operating results for the year.

Our financial condition and financing capability will be dependent on many factors, including the level of income and cash flow of its subsidiaries, conditions in the bank and capital markets, economic conditions, interest rates and legislative and regulatory developments.

Networks

Electric Transmission and Distribution and Natural Gas Distribution

The operating subsidiaries of Networks are regulated electric distribution and transmission and natural gas transportation and distribution utilities whose structure and operations are significantly affected by legislation and regulation. The FERC regulates, under the FPA, the interstate transmission and wholesale sale of electricity by these regulated utilities, including transmission rates and allowed ROE on transmission assets. Further, the distribution rates and allowed ROEs for Networks' regulated utilities in New York, Maine, Connecticut and Massachusetts are subject to regulation by the NYPSC, the MPUC, PURA and DPU, respectively. Legislation and regulatory decisions implementing legislation establish a framework for Networks' operations. Other factors affecting Networks' financial results are operational matters, such as the ability to manage expenses, uncollectibles and capital expenditures, in addition to major weather disturbances and environmental regulation. Networks expects to continue to make significant capital investments in its distribution and transmission infrastructure.

Pursuant to Maine law, CMP earns revenue for the delivery of energy to its retail customers, but is prohibited from selling power to them. CMP generally does not enter into purchase or sales arrangements for power with ISO-NE, the New England power pool, or any other ISO or similar entity. CMP generally sells all of its power entitlements under its nonutility generator and other PPAs to unrelated third parties under bilateral contracts. If the MPUC does not approve the terms of bilateral contracts, it can direct CMP to sell power entitlements that it receives from those contracts on the spot market through ISO-NE. NYSEG and RG&E enter into power purchase and sales transactions with the NYISO to have adequate supplies for their customers who choose to purchase energy directly from them. Customers may also choose to purchase energy from other energy supply companies.

Under Connecticut law, UI's retail electricity customers are able to choose their electricity supplier while UI remains their electric distribution company. UI purchases power for those of its customers under standard service rates who do not choose a retail electric supplier and have a maximum demand of less than 500 kilowatts and its customers under supplier of last resort service for those who are not eligible for standard service and who do not choose to purchase electric generation service from a retail electric supplier. The cost of the power is a "pass-through" to those customers through the generation services charge on their bills.

UI has wholesale power supply agreements in place for its entire standard service load for the first half of 2020, 70% of its standard service load for the second half of 2020 and 40% of its standard service load for the first half of 2021. Supplier of last resort service is procured on a quarterly basis and UI has a wholesale power supply agreement in place for the second quarter of 2020. However, from time to time there are no bidders in the procurement process for supplier of last resort service and in such cases UI manages the load directly.

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For additional information regarding Networks, including a comprehensive overview of our regulated businesses, please see the section entitled, "Business—Networks" in Part I, Item 1 in this report.

Revenues

Networks utilizes regulatory deferrals to evaluate its financial condition and operating performance by reconciling differences between actual revenue received or cost incurred with the rate allowances provided under the tariffs set by the state utilities commissions and the FERC. Regulatory deferrals create regulatory assets and liabilities under the FERC, consistent with generally accepted accounting principles for financial reporting in the United States, or U.S. GAAP. Regulatory deferrals in New York include electric and gas supply costs, PPAs, net plant reconciliations (downward only), revenue decoupling, system benefit charges, RPS, energy efficiency portfolio standards, economic development programs, earnings sharing mechanism, low income programs, pension costs, other post-employment benefits costs, environmental remediation costs, major storm costs, distribution vegetation management costs (downward only), research and development, incremental maintenance initiatives (downward only), property taxes, Reforming the Energy Vision, or REV, initiatives, Nuclear Electric Insurance Limited credits, credit and debit card fees, power tax, 2017 Tax Act, exogenous costs and certain legislative, accounting, regulatory and tax related actions.

Regulatory deferrals in Maine include stranded costs, distribution revenue decoupling, power tax regulatory asset, 2017 Tax Act, environmental remediation, storm reserve accounting, electric thermal storage pilot costs, standard offer retainage costs, AMI opt-out program costs, AMI deferral costs, AMI legal / health proceeding costs, conservation program costs, demand side management costs, low income program costs, electric lifeline program costs, make-ready line extension costs, electric vehicle pilot program costs and transmission planning and related cost allocation.

Regulatory deferrals in Connecticut include electric and gas supply costs, PPAs, revenue decoupling, earnings sharing mechanism, system benefit charges, certain hardship bad debt expense, transmission revenue requirements, gas distribution integrity management program costs, gas system expansion costs, certain public policy costs, certain environmental remediation costs, major storm costs and certain legislative, accounting, regulatory and tax related actions.

Regulatory deferrals in Massachusetts include gas supply costs, gas supply-related bad debt costs, environmental remediation costs, arrearage management program costs, gas system enhancement program costs, energy efficiency program costs, 2017 Tax Act and certain other public policy costs.

Each of Networks' regulated utilities' rate plans, other than MNG, contain an RDM under which their actual energy delivery revenues are compared on a periodic basis with the authorized delivery revenues and the difference accrued, with interest, for refund to or recovery from customers, as applicable.

NYSEG, RG&E and UI are energy delivery companies and also provide energy supply as providers of last resort. Energy costs that are set on the wholesale markets are passed on to consumers. The difference between actual energy costs that are incurred and those that are initially billed are reconciled in a process that results in either immediate or deferred tariff adjustments. These procedures apply to other costs, which are in most cases exceptional, such as the effects of extreme weather conditions, environmental factors, regulatory and accounting changes and treatment of vulnerable customers, that are offset in the tariff process.

Pursuant to agreements with, or decisions of the NYPSC and the MPUC, Networks' Maine and New York regulated utilities are each subject to a minimum equity ratio requirement that is tied to the capital structure assumed in establishing revenue requirements. Pursuant to these requirements, each of NYSEG, RG&E, CMP and MNG must maintain a minimum equity ratio equal to the ratio in its currently effective rate plan or decision measured using a trailing 13-month average. On a monthly basis, each utility must maintain a minimum equity ratio of no less than 300 basis points below the equity ratio used to set rates. The minimum equity ratio requirement has the effect of limiting the amount of dividends that can be paid if the minimum equity ratio is not maintained and can, under certain circumstances, require that AVANGRID contribute equity capital. For CMP and MNG, equity distributions that would result in equity falling below the minimum level are prohibited. For NYSEG and RG&E, equity distributions that would result in a 13-month average common equity less than the maximum equity ratio utilized for the earnings sharing mechanism, or ESM, are prohibited if the credit rating of NYSEG, RG&E, AVANGRID or Iberdrola are downgraded by a nationally recognized rating agency to the lowest investment grade with a negative watch or downgraded to noninvestment grade. UI, SCG, CNG and BGC may not pay dividends if paying such dividend would result in a common equity ratio lower than 300 basis points below the equity percentage used to set rates in the most recent distribution rate proceeding as measured using a trailing 13-month average calculated as of the most recent quarter end. In addition, UI, SCG, CNG and BGC are prohibited from paying dividends to their parent if the utility's credit rating, as rated by any of the three major credit rating agencies, falls below investment grade, or if the utility's credit rating, as determined by two of the three major credit rating agencies, falls to the lowest investment grade and there is a negative watch or review downgrade notice. We believe that these minimum equity ratio requirements do not present any material risk with respect to our performance, cash flow or ability to pay quarterly dividends. In the ordinary course, Networks utilities manage their capital structures to allow the maximum level of returns consistent with the levels of equity authorized to set rates, and accordingly, compliance with these requirements does not alter ordinary equity level

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management. Additionally, the lower monthly minimum equity ratio requirement (a cushion of 300 basis points) provides flexibility to have short-term fluctuations that result in temporary shortfalls of the maximum equity ratio in any given month. The regulated utility subsidiaries are also prohibited by regulation from lending to unregulated affiliates.

Rates

In December 2016, PURA approved distribution rate schedules for UI for three years that became effective January 1, 2017, and which, among other things, provides for annual tariff increases and an ROE of 9.10% based on a 50% equity ratio, continued UI's existing ESM pursuant to which UI and its customers share on a 50/50 basis all distribution earnings above the allowed ROE in a calendar year, continued the existing decoupling mechanism, and approved the continuation of the requested storm reserve. Any dollars due to customers from the ESM continue to be first applied against any storm regulatory asset balance (if one exists at that time) or refunded to customers through a bill credit if such storm regulatory asset balance does not exist.

In December 2017, PURA approved new tariffs for SCG effective January 1, 2018, for a three-year rate plan with rate increases of $1.5 million, $4.7 million and $5.0 million in 2018, 2019, and 2020, respectively. The new tariffs also include an RDM and Distribution Integrity Management Program, or DIMP, a mechanism similar to the mechanisms authorized for CNG; ESM; the amortization of certain regulatory liabilities (most notably accumulated hardship deferral balances and certain accumulated deferred income taxes) and tariff increases based on a ROE of 9.25% and approximately 52% equity level. Any dollars due to customers from the ESM will be first applied against any environmental regulatory asset balance as defined in the settlement agreement (if one exists at that time) or refunded to customers through a bill credit if such environmental regulatory asset balance does not exist.

In December, 2018, PURA approved new tariffs for CNG effective January 1, 2019 for a three-year rate plan with rate increases of $9.9 million, $4.6 million and $5.2 million in 2019, 2020 and 2021, respectively. The new tariffs continued the RDM and DIMP mechanism, ESM and tariff increases based on an ROE of 9.30% and an equity ratio of 54% in 2019, 54.50% in 2020, and 55% in 2021.

On January 18, 2019, the DPU approved a settlement agreement between BGC and the Massachusetts Attorney General's Office providing for new distribution rates for BGC. The settlement agreement provides for a $1.6 million distribution base rate increase effective February 1, 2019 (with a make-whole provision back to January 1, 2019), and an additional $0.7 million base distribution increase effective November 1, 2019, if certain investments are made by BGC. The distribution rate increase is based on a 9.70% ROE and 54% equity ratio. The settlement agreement provides for the implementation of an RDM and pension expense tracker and also provides that BGC will not file to change base distribution rates to become effective before November 1, 2021.

On June 15, 2016, the NYPSC approved NYSEG's and RG&E's Joint Proposal for a three-year rate plan for electric and gas service which balanced the varied interests of the signatory parties including but not limited to maintaining the companies' credit quality and mitigating the rate impacts to customers. The proposal reflects many customer attributes including acceleration of the companies' natural gas leak prone main replacement programs and increased electric vegetation management to provide continued safe and reliable service. The delivery rate increase in the proposal can be summarized as follows:

	May 1, 2016		May 1, 2017		May 1, 2018	
	Rate Increase	Delivery Rate Increase	Rate Increase	Delivery Rate Increase	Rate Increase	Delivery Rate Increase
Utility	(Millions)	%	(Millions)	%	(Millions)	%
NYSEG Electric	$ 29.6	4.10%	$ 29.9	4.10%	$ 30.3	4.10%
NYSEG Gas	$ 13.1	7.30%	$ 13.9	7.30%	$ 14.8	7.30%
RG&E Electric	$ 3.0	0.70%	$ 21.6	5.00%	$ 25.9	5.70%
RG&E Gas	$ 8.8	5.20%	$ 7.7	4.40%	$ 9.5	5.20%

The allowed rate of return on common equity for NYSEG Electric, NYSEG Gas, RG&E Electric and RG&E Gas is 9.00%. The equity ratio for each company is 48%; however, the actual equity ratio of up to 50% is used for earnings sharing calculation purposes. The customer share of any earnings above allowed levels increases as ROE increases, with customers receiving 50%, 75% and 90% of earnings over 9.5%, 10.0% and 10.5% ROE, respectively, in the first rate year covering the period May 1, 2016 – April 30, 2017. The earnings sharing levels increased in rate year two (May 1, 2017 – April 30, 2018) to 9.65%, 10.15% and 10.65% ROE, respectively. The earnings sharing levels further increased in rate year three (May 1, 2018 – April 30, 2019) to 9.75%, 10.25% and 10.75% ROE, respectively. The Joint Proposal reflected the recovery of deferred NYSEG Electric storm costs of approximately $262 million, of which $123 million will be amortized over ten years and the remaining $139 million will be amortized over five years. The Joint Proposal also continued reserve accounting for qualifying major storms ($21.4 million

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annually for NYSEG Electric and $2.5 million annually for RG&E Electric). Incremental maintenance costs incurred to restore service in qualifying divisions are chargeable to the major storm reserve provided they meet certain thresholds.

The NYSEG and RG&E 2016 three-year rate plan ended in April 2019, and the existing customer rates at that time were continued, along with other rate plan provisions, pending new rates being established as a result of a new rate case. On May 20, 2019, NYSEG and RG&E filed rate cases with the New York State Department of Public Service (NYDPS) for new tariffs. The effective date of new tariffs, assuming an approximately 11-month suspension period, will be April 20, 2020. The proposed rates facilitate the companies' transition to a cleaner energy future while allowing for important initiatives such as vegetation management, hardening/resiliency and emergency preparedness. The companies are requesting delivery revenues to be based on a 9.50% ROE and 50% equity ratio. The below table provides a summary of the initial proposed delivery rate increases, delivery revenue percentages and total revenue percentages for all four businesses:

Utility	Requested Revenue Increase (Millions)	Delivery Revenue %	Total Revenue %
NYSEG Electric	$ 156.7	20.4%	10.4%
NYSEG Gas	$ 6.3	3.0%	1.4%
RG&E Electric	$ 31.7	7.0%	4.1%
RG&E Gas	$ 5.8	3.3%	1.4%

NYPSC staff and other parties filed responsive testimony on September 15, 2019. NYPSC staff is recommending an 8.2% ROE and 48% equity. NYPSC staff recommended the following rate increases/decreases: NYSEG electric a rate increase of $76.7 million, NYSEG Gas a rate decrease of $15.9 million, RG&E Electric a rate increase of $0.7 million and RG&E Gas a rate decrease of $22.5 million. NYPSC Staff is also recommending NYSEG credit the environmental reserve by $31.1 million due to the legal rulings in 2017 and 2018 that denied insurance claims against OneBeacon and Century Indemnity in an insurance lawsuit. The companies entered into settlement discussion with the staff and other parties in October 2019. On February 26, 2020, the companies filed notice with the NYPSC that an agreement in principle has been reached among the companies, the NYDPS staff and certain other parties to the matter. As a result, drafting of a joint proposal (settlement agreement) has commenced.

On August 25, 2014, the MPUC approved a stipulation agreement for a CMP rate change which provided for a distribution rate increase of approximately $24.3 million effective July 1, 2014 with an allowed ROE of 9.45% and an allowed equity ratio of 50%. The stipulation provided for the implementation of an RDM, reserve accounting and sharing of incremental storm costs, a separate proceeding for recovery of a new billing system and no earnings sharing.

On March 1, 2018, the MPUC issued a Notice of Investigation initiating a summary investigation into CMP's metering, billing, and customer communications practices. Due to the highly technical nature of CMP's customer billing system, on March 22, 2018 the MPUC issued an Order Initiating Audit commencing a forensic audit of CMP's customer billing system to identify any errors that have, or continue to result in billing inaccuracies. On July 10, 2018, the MPUC issued an Order Modifying Scope of Audit, which expanded the scope of the audit to include the customer communication practices that were originally identified in the Commission's Notice of Investigation.

On May 29, 2018, a ten-person complaint was filed with the MPUC against CMP, Networks and AVANGRID. The complaint requested that the MPUC open a rate case to determine if CMP is making excessive returns on investment and, therefore, whether CMP's retail rates should be lower. The complaint also requested the MPUC deny certain costs associated with the October 2017 windstorm. On July 24, 2018, the MPUC issued an order dismissing the complaint and its associated request to deny the recovery of costs associated with the October 2017 windstorm. The order initiated an investigation into CMP's rates and revenue requirement and directed CMP to make a filing consistent with the requirements for a general rate case no later than October 15, 2018.

On October 15, 2018, CMP filed a general rate case as directed by the MPUC requesting a ROE of 10% and an equity ratio of 55%. CMP's general rate case filing included a proposal to enhance the resiliency of the energy grid by expanding vegetation management and pursuing additional reliability measures such as pole replacements and addition of tree wire in selected areas. Such investments are designed to strengthen CMP's power grid so it can better stand up to severe weather. CMP planned to use savings from the Tax Act to pay for the costs of resiliency programs, other investments in infrastructure and certain cost increases since 2014. On December 20, 2018, the MPUC released the findings of the forensic audit of CMP's customer billing system and customer communication practices.

On January 14, 2019, the MPUC issued an Order and Notice of Investigation initiating an investigation of CMP's metering and billing practices and initiating a separate investigation of the audit of CMP's customer service and communication practices and incorporating such investigation into the general rate case. The Maine Office of Public Advocate, or OPA, for utility issues

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filed a motion to delay CMP's rate order decision to allow incorporation of the results of the separate metering and billing investigation. CMP did not oppose this motion.

In an order issued on February 19, 2020, the MPUC authorized an increase in CMP's distribution revenue requirement of $17 million, or approximately 7%, based on an allowed ROE of 9.25% and a 50% equity ratio. The rate increase is effective March 1, 2020. The MPUC also imposed a 1.00% ROE reduction (to 8.25%) for management efficiency associated with CMP's customer service performance following the implementation of its new billing system in 2017. The management efficiency adjustment will remain in effect until CMP has demonstrated satisfactory customer service performance on four specified service quality measures for a period of 18 consecutive months with measurement commencing on March 1, 2020. The order provides additional funding for staffing increases, vegetation management programs and storm restoration costs, while retaining the basic tiered structure for storm cost recovery implemented in the 2014 stipulation. The MPUC order also retains the revenue decoupling mechanism implemented in 2014. The order denies CMP's request to increase rates for higher costs associated with services provided by its affiliates and will instead initiate a management audit to assess the quality of these services as well as the impacts of the AVANGRID management structure on the quality of CMP's customer service.

On March 5, 2015, MNG filed a rate case in order to further recover future investments and provide safe and adequate service. On May 3, 2016, all active parties to the case filed a stipulation which settled all matters at issue in the case and reflected a ten-year rate plan through April 30, 2026. The MPUC approved the stipulation on May 17, 2016, for new rates effective June 1, 2016. The settlement structure for non-Augusta customers includes a 34.6% delivery revenue increase over five years with an allowed 9.55% ROE and 50% common equity ratio. The settlement structure for Augusta customers includes a ten-year rate plan with existing Augusta customers being charged rates equal to non-Augusta customers plus a surcharge which increases annually for five years. New Augusta customers will have rates set based on an alternate fuel market model. In year seven of the rate plan MNG will submit a cost of service filing for the Augusta area to determine if the rate plan should continue. This cost of service filing will exclude $15 million of initial 2012/2013 gross plant investment, however the stipulation allows for accelerated depreciation of these assets. If the Augusta area's cost of service filing illustrates results above a 14.55% ROE then the rate plan may cease, otherwise the rate plan would continue. A disallowance for the initial 2012/2013 gross plant investment is not part of the approved stipulation.

CMP's and UI's electric transmission rates are determined by a tariff regulated by the FERC and administered by ISO-NE. Transmission rates are set annually pursuant to a FERC authorized formula that allows for recovery of direct and allocated transmission operating and maintenance expenses, including return of and on investment in assets. The FERC currently provides an initial base ROE of 10.57% and additional incentive adders applicable to assets based upon vintage, voltage, and other factors.

In September 2011, several New England governmental entities, including PURA, the Connecticut Attorney General and the Connecticut Office of Consumer Counsel, or OCC, filed a joint complaint with the FERC against ISO-NE and several New England Transmission Owners, or NETOs, (including CMP and UI) claiming that the current approved base ROE used in calculating formula rates for transmission service under the ISO-NE Open Access Transmission Tariff, or OATT, by the NETOs of 11.14% was not just and reasonable and seeking a reduction of the base ROE with refunds to customers for the 15-month refund periods beginning October 1, 2011 (Complaint I), December 27, 2012 (Complaint II), July 31, 2014 (Complaint III) and April 29, 2016 (Complaint IV).

Following various intermediate hearings, orders, and appellate decisions, on October 16, 2018, the FERC issued an order directing briefs and proposing a new methodology to calculate the NETOs ROE that is contained in NETOs' transmission formula rate on file at the FERC, or the October 2018 Order. The FERC proposed to use this new methodology to resolve Complaints I, II, III and IV filed by the New England state consumer advocates.

The proposed ROE methodology set forth in the October 2018 Order considers more than just the two-step discounted cash flow, or DCF, analysis adopted in the FERC order on Complaint I vacated by the Court. It uses four financial analyses (i.e., DCF, the capital-asset pricing model, expected earnings analysis and risk premium analysis) to produce a range of returns to narrow the zone of reasonableness when assessing whether a complainant has met its initial burden of demonstrating that the utility's existing ROE is unjust and unreasonable. The proposed ROE methodology establishes a range of just and reasonable ROEs of 9.60% to 10.99% and proposes a just and reasonable base ROE of 10.41% with a new ROE cap of 13.08%. Pursuant to the October 2018 Order, the NETOs filed initial briefs on the proposed methodology in all four Complaints on January 11, 2019 and replied to the initial briefs on March 8, 2019. On November 21, 2019, the FERC issued rulings on two complaints challenging the base return on equity for Midcontinent Independent System Operator, or MISO transmission owners. These rulings established a new zone of reasonableness based on equal weighting of the DCF and capital-asset pricing model for establishing the base return on equity. This resulted in a base return on equity of 9.88% as the midpoint of the zone of reasonableness. Various parties have requested rehearing on this decision. We cannot predict the outcome of this proceeding, and the potential impact it may have in establishing a precedent for our pending four Complaints.

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Merger Settlement Agreement – Connecticut and Massachusetts

As part of the process of seeking and obtaining regulatory approval of the acquisition of UIL by AVANGRID in Connecticut and Massachusetts, AVANGRID and UIL reached settlement agreements with the OCC in Connecticut and with the Attorney General of the Commonwealth of Massachusetts and the Department of Energy Resources in Massachusetts, which settlement agreements included commitments of actions to be taken after the transaction closed.

Various commitments were made in Connecticut. Those commitments with continuing impacts are outlined below:

- Rate credits of $1.25 million/year for ten years (2018-2027) to CNG customers.
- Rate credits of $0.75 million/year for ten years (2018-2027) to SCG customers.
- Maintaining charitable contribution at historical contribution levels (between $500,000 and $800,000) for at least four years.

In connection with the acquisition proceeding, UI signed the partial consent order related to the investigation and remediation of the English Station site. To the extent that the investigation and remediation is less than $30 million, UI is required to remit to the State of Connecticut the difference between such costs and $30 million, to be applied to a public purpose as determined at the discretion of the Governor, the Attorney General of Connecticut and the Commissioner of DEEP. However, UI is obligated to comply with the consent order even if the cost of such compliance exceeds $30 million. The state may discuss options with UI on recovering or funding any cost above $30 million, such as through public funding or recovery from third parties, however it is not bound to agree to or support any means of recovery or funding.

Various commitments were made in Massachusetts, all of which have now been fulfilled.

New England Clean Energy Connect

On February 14, 2018, the New England Clean Energy Connect, or NECEC, transmission project, proposed in a joint bid by CMP and Hydro-Québec, was selected by the Massachusetts electric utilities and the Massachusetts Department of Energy Resources, or DOER, in the Commonwealth of Massachusetts's 83D clean energy Request for Proposal, or RFP, to move forward as the alternative to the Northern Pass Transmission project which failed to win approval from the New Hampshire Site Evaluation Committee by March 27, 2018. On March 28, 2018, the DOER informed CMP that the conditional selection of Northern Pass Transmission project had been terminated, making the NECEC transmission project the lone winning bid in the RFP. The proposed NECEC transmission project includes a 145-mile transmission line linking the electrical grids in Québec, Canada and New England. The project, which has an estimated cost of approximately $950 million, would add 1,200 MW of transmission capacity to supply New England with power from reliable hydroelectric generation.

On June 13, 2018, CMP entered into transmission service agreements, or TSAs, with the purchasing Massachusetts electric distribution companies, or the EDCs, and H.Q. Energy Services (U.S.) Inc., or HQUS, an affiliate of Hydro-Québec, which govern the terms of service and revenue recovery for the NECEC transmission project. Simultaneous with the execution of the TSAs with CMP, the EDCs have executed certain PPAs with HQUS for sales of electricity and environmental attributes to the EDCs. The EDCs submitted the TSAs and PPAs to the DPU for approval on July 23, 2018, and CMP filed the TSAs for approval by the FERC on August 20, 2018. On October 19, 2018, FERC issued an order accepting the TSAs for filing as CMP rate schedules effective as of October 20, 2018. On June 25, 2019, the Massachusetts DPU issued an Order approving the NECEC project long term power purchase agreements and the cost recovery by the EDCs of the TSA charges. This Order was subsequently appealed by NextEra Energy Resources, and CMP is coordinating its participation in the processing of the appeal with the MA EDCs; a judicial decision is expected by end of the second quarter of 2020. CMP also continues to negotiate with the EDCs the terms of assignment of the TSAs from CMP to NECEC Transmission LLC upon the project's transfer. On December 10, 2019, CMP submitted a petition to the FERC, seeking the FERC's authorization to transfer the TSAs (FERC rate schedules) from CMP to NECEC Transmission LLC upon the project's transfer. The MPUC and FERC project's transfer proceedings are ongoing with a decision from the agencies expected at the end of the first quarter of 2020.

The NECEC project requires a Certificate of Public Convenience and Necessity, or CPCN, from the MPUC in order to proceed to construction. CMP filed its petition for a certificate on September 27, 2017. On February 21, 2019, CMP, along with the Maine Office of the Public Advocate, the Governor's Energy Office, Industrial Energy Consumer Group, Conservation Law Foundation, Acadia Center, Western Mountains & Rivers Corporation, City of Lewiston, Maine State Chamber of Commerce and International Brotherhood of Electrical Workers, filed a settlement stipulation agreeing that the MPUC should grant a CPCN for the NECEC transmission project, subject to certain agreed-upon conditions. The settlement conditions provide for the transfer of the NECEC transmission project from CMP to NECEC Transmission LLC, a new subsidiary of Networks.; the funding by NECEC Transmission LLC, CMP and HQUS of certain funds to provide benefits to the State of Maine totaling approximately $250 million over the 40-year useful life of the NECEC transmission project; and other commitments. NECEC Transmission LLC is required to put in place and maintain a guaranty by AVANGRID or its successor in the amount of approximately $81 million to guarantee certain of the payment obligations of NECEC Transmission LLC under the settlement stipulation. The settlement stipulation also

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requires CMP, NECEC Transmission LLC and HQUS to enter into a support agreement reflecting, among other things, that HQUS will (i) pay NECEC Transmission LLC $3.5 million per year for 40 years beginning upon the commercial operation date of the NECEC transmission project, or the NECEC COD, which funds are to be used to fund a portion of NECEC Transmission LLC's share of the benefit commitments agreed in the settlement stipulation, (ii) contribute an additional $30 million over the first five years after the NECEC COD to fund HQUS's share of the benefit commitments, and (iii) the granting of a guaranty by Hydro-Québec or other appropriate credit support to guarantee HQUS's payment obligations under the support agreement.

On May 3, 2019, the NECEC Project received the CPCN from the MPUC. In August 2019, CMP and NECEC Transmission LLC commenced the required "follow-on" proceeding before the MPUC to obtain approval of the various affiliate transactions involved in the transfer of the NECEC from CMP to NECEC Transmission LLC. In accordance with the Stipulation approved by the Commission's CPCN Order, the transfer must occur before construction may commence. CMP anticipates closing on the transfer after receipt of the U.S. Army Corps of Engineers permit in the second quarter of 2020. The NECEC project also requires certain permits, including environmental, from multiple state and federal agencies and a presidential permit from the U.S. Department of Energy authorizing the construction, operation, maintenance and connection of facilities for the transmission of electric energy at the international border between the United States and Canada. On January 8, 2020, the Maine Land Use Planning Commission (LUPC) deliberated and granted the LUPC Certification to NECEC. The Maine Department of Environmental Protection's decision is expected to follow within the next several weeks. Other permitting activities are ongoing. CMP expects to obtain the applicable state and federal permits by the end of the third quarter of 2020.

New England Clean Energy Request for Proposals

On May 25, 2017, UI entered into six 20-year PPAs, totaling approximately 32 MW with developers of wind and solar generation. These PPAs originated from a three-state Clean Energy RFP, and were entered into pursuant PA 13-303, which provides that the net costs of the PPAs are recoverable through electric rates. The PPAs were approved by PURA on September 13, 2017.

On June 20, 2017, UI entered into twenty-two 20-year PPAs totaling approximately 72 MW with developers of wind and solar generation. These PPAs originated from an RFP issued by the DEEP under PA 15-107 1(b) which provides that the net costs of the PPAs are recoverable through electric rates. The PPAs were approved by PURA on September 7, 2017. One contract was terminated on October 24, 2017, resulting in UI having twenty-one remaining contracts from this solicitation totaling approximately 70 MW.

In October of 2018, UI entered into five PPAs totaling approximately 50 MW from developers of offshore wind and fuel cell generation. These PPAs originated from an RFP issued by DEEP, under PA 17-144 which provides that the net costs of the PPAs are recoverable through electric rates. The PPAs were filed for PURA approval on October 25, 2018. On December 19, 2018, PURA issued its final decision approving the five PPAs and approved UI's use of the non by-passable federally mandated congestion charges for all customers to recover the net costs of the PPAs.

On December 28, 2018, DEEP issued a directive to UI to negotiate and enter into PPAs with twelve projects, totaling approximately 12 million MWh, which were selected as a result of the Zero Carbon RFP issued by DEEP pursuant to PA 17-3, which provides that the net costs of the PPAs are recoverable through electric rates. One of the selected projects is the Millstone nuclear facility located in Waterford, Connecticut and owned by Dominion Energy, Inc. DEEP's directive provides that UI should file these PPAs for PURA by March 31, 2019. UI has not yet entered into any of these PPAs. The PPA with Dominion was executed and approved by PURA in September 2019. Of the eleven other projects, one dropped out and PPAs with nine other projects were executed and approved by PURA in November 2019. The remaining PPA has been executed and submitted for approval to PURA.

Pursuant to Connecticut Act Concerning the Procurement of Energy Derived From Offshore Wind, DEEP solicited proposals from providers of energy derived from offshore wind facilities that are Class I renewable energy sources for up to 2,000 MW in the aggregate. On December 5, 2019, DEEP announced that it had selected Vineyard Wind ("Vineyard"), an affiliate of UI, to provide 804 MW of offshore wind through the development of its Park City Wind Project. DEEP also ordered Eversource and UI to negotiate PPAs with Vineyard. Similar to the case with the zero carbon PPAs discussed above, the net costs of the PPAs are recoverable through electric rates.

Reforming the Energy Vision

In April 2014, the NYPSC instituted its REV proceeding, the goals of which are to improve electric system efficiency and reliability, encourage renewable energy resources, support distributed energy resources, or DER, and empower customer choice. In this proceeding, the NYPSC is examining the establishment of a Distributed System Platform, or DSP, to manage and coordinate DER, and provide customers with market data and tools to manage their energy use. The NYPSC is also examining how its regulatory practices should be modified to incentivize utility practices to promote REV objectives. REV has been divided into two tracks, Track 1 for market design and technology, and Track 2 for regulatory reform. REV proposes regulatory changes that are intended to promote more efficient use of energy, deeper penetration of renewable energy resources such as wind and solar,

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and wider deployment of DER, such as micro grids, on-site power supplies and storage. The NYPSC order on Track 1 affirmed that utilities would serve as the DSP and required utilities to file implementation plans before the end of 2015. Track 2 is undertaken in parallel with Track 1, and examines changes in current regulatory, tariff, market design and incentive structures to better align utility interests with achieving NYPSC's policy objectives. New York utilities will also be addressing related regulatory issues in their individual rate cases. A Track 2 order was issued in May 2016, and includes guidance related to the potential for earnings adjustment mechanisms, or EAMs, platform service revenues, innovative rate designs, and data utilization and security. The companies, in December 2016, filed a proposal for the implementation of EAMs in the areas of system efficiency, energy efficiency, interconnections and clean air. A collaborative process to review the companies' petition was suspended in 2017 and the companies renewed their EAM requests in their May 2019 rate case filings.

All electric utilities were ordered to file an initial Distributed System Implementation Plan, or DSIP, by June 30, 2016. An initial DSIP was filed by NYSEG and RG&E and included information regarding the potential deployment of Automated Metering Infrastructure, or AMI. A separate petition for the cost recovery associated with full deployment of AMI was filed by NYSEG and RG&E in December 2016. In March 2017, the NYPSC issued three separate REV-related orders. These orders created a series of filing requirements for NYSEG and RG&E beginning in March 2017 and extending through the end of 2018. The three orders involve: (1) modifications to the electric utilities' proposed interconnection earnings adjustment mechanism framework; (2) further DSIP requirements, including filing of an updated DSIP plan by mid-2018 and implementing two energy storage projects at each company by the end of 2018; and (3) Net Energy Metering Transition including implementation of Phase One of the Value of DER. In September 2017, the NYPSC issued another order related to the Value of DER, requiring tariff filings, changes to standard interconnection requirements and planning for the implementation of automated consolidated billing. In July 2018, NYSEG and RG&E submitted an updated DSIP plan consistent with guidance received from the NY Department of Public Service. As of the end of 2018, both NYSEG and RG&E had deployed two energy storage projects each, consistent with the March 2017 NYPSC order requirements. In December 2018, the NYPSC staff submitted whitepapers on standby and buyback service rate design, future value stack compensation and capacity value compensation. The NYPSC ruled on the proposals set forth in the whitepapers on May 16, 2019. NYSEG and RG&E filed proposed standby and buyback rates with the NYPSC on September 24, 2019. The NYPSC also issued an order on value stack compensation for high-capacity-factor resources on December 12, 2019.

New York State Department of Public Service Investigation of the Preparation for and Response to the March 2017 Windstorm

On May 18, 2018, NYSEG and RG&E filed a settlement joint proposal and investment joint proposal before the NYPSC to settle potential penalties and avoid litigation related to the March 2017 windstorm, pursuant to which, among other things, NYSEG and RG&E have agreed to make $4 million in investments designed to increase resiliency and improve emergency response in the areas impacted by the storm. The investments will not be reflected in rate base or operating expenses in establishing future delivery rates. On April 18, 2019, the NYPSC approved the joint proposals.

New York State Department of Public Service Investigation of the Preparation for and Response to the March 2018 Winter Storms

In March 2018, following two severe winter storms that impacted over more than a million electric utility customers in New York, including 520,000 NYSEG and RG&E customers, the NYDPS commenced a comprehensive investigation of the preparation and response to those events by New York's major electric utility companies. The investigation was expanded in the spring of 2018 to include other 2018 New York spring storm events.

On April 18, 2019, the NYDPS staff issued a report or the 2018 Staff Report, of the findings from their investigation. The 2018 Staff Report identified 94 recommendations for corrective actions to be implemented in the utilities Emergency Response Plans, or ERPs. The report also identified potential violations by several of the utilities, including NYSEG and RG&E.

Also on April 18, 2019, the NYPSC issued an Order Instituting Proceeding and to Show Cause directed to all major electric utilities in New York, including NYSEG and RG&E. The order directs the utilities, including NYSEG and RG&E, to show cause why the NYPSC should not pursue civil and/or administrative penalties for the apparent failure to follow their respective ERPs as approved and mandated by the NYPSC. The NYPSC also directed the utilities, within 30 days, to address whether the NYPSC should mandate, reject or modify in whole or in part, the 94 recommendations contained in the 2018 Staff Report. On May 20, 2019, NYSEG and RG&E responded to the portion of the Order to Show Cause with respect to the recommendations contained in the 2018 Staff Report. A petition requesting Commission approval of a joint settlement agreement was filed with the Commission on December 17, 2019. On February 6, 2020, the Commission approved the joint settlement agreement, which allows the companies to avoid litigation and provides for payment by the companies of penalty of $10.5 million.

NYPSC directs Counsel to commence Judicial Enforcement Proceeding against NYSEG

On April 18, 2019, the NYPSC issued an Order Directing Counsel to the Commission to commence a special proceeding or an action in New York State Supreme Court to stop and prevent ongoing future violations by NYSEG of NYPSC regulations and orders. On December 24, 2019, the Commission filed a verified petition to commence the action against NYSEG. At the same time, NYSEG and the Commission settled the causes of action asserted in the verified petition and entered into a consent

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and stipulation and also submitted a joint motion to the court requesting that the court approve and enter a consent order and judgment reflecting the settlement. The consent order and judgment was issued by the court on January 24, 2020.

CMP Customer Billing System Investigation and Class Action

On March 1, 2018, the MPUC issued a Notice of Investigation initiating a summary investigation into CMP's metering, billing, and customer communications practices. Due to the highly technical nature of CMP's customer billing system, on March 22, 2018 the MPUC issued an Order Initiating Audit commencing a forensic audit of CMP's customer billing system to identify any errors that have, or continue to be resulting in billing inaccuracies. On July 10, 2018, the MPUC issued an Order Modifying Scope of Audit, which expanded the scope of the audit to include CMP's customer communication practices. On December 20, 2018, the MPUC released the findings of the forensic audit of CMP's customer billing system and customer communication practices. On January 14, 2019, the MPUC issued an Order and Notice of Investigation initiating an investigation of CMP's metering and billing practices. On September 3, 2019, the MPUC issued its Bench Analysis in the Metering and Billing Investigation and supported the findings of the independent audit. On September 7, the OPA issued testimony and findings from a separate audit firm which agreed with certain portions of the independent audit and also stated that continuing problems still persist in CMP's billing system. CMP provided rebuttal testimony on October 16, 2019, and hearings were held in November 2019. On January 30, 2020, the MPUC Commissioners deliberated and based on the verbal discussion, the Commissioners indicated that CMP's Metering and Billing system is accurately reporting data; there is no systemic root cause for high usage complaints and errors related to CMP's metering and billing system are localized and random, not systemic. The Commissioners were critical of CMP finding that CMP failed to implement proper testing of the SmartCare system prior to go-live; CMP's implementation of SmartCare was imprudent; CMP's SmartCare implementation experienced an unacceptable number of billing errors, delayed or estimated bills, bill presentment issues and unreasonable time required to address these issues; and the implementation issues were compounded by inadequate staffing, resulting in the inability of customers to contact a CMP representative. In its February 19, 2020 order in the CMP's distribution rate case proceeding discussed above the MPUC imposed a reduction of 100 basis points in ROE, as a management efficiency adjustment, to address concerns with CMP's customer service performance following the implementation of its new billing system in 2017. The management efficiency adjustment will remain in effect until CMP has demonstrated satisfactory customer service performance on four specified service quality measures for a period of 18 consecutive months with measurement commencing on March 1, 2020.

On August 16, 2018, an amended class action lawsuit was filed against CMP and the Company in the Cumberland County Superior Court on behalf of all CMP customers alleging that CMP's new billing software and metering system improperly overcharged customers. The plaintiff asserts this claim under the common law of unjust enrichment, breach of contract and fraudulent and intentional misrepresentation and seeks damages, punitive damages, attorney fees and costs. On September 21, 2018, we filed a Motion to Dismiss all of the claims that was opposed by the plaintiffs. On November 14, 2018, the plaintiff filed a motion for a preliminary and permanent injunction enjoining CMP from sending putative class members disconnection notices and/or disconnecting their power until this litigation is resolved. On February 22, 2019, the Cumberland County Superior Court ordered that the proceedings be stayed until November 1, 2019 to allow resolution of the MPUC's formal investigation of CMP's billing practices and denied the plaintiff's motion for a temporary restraining order. On July 30, 2019, Douglas Herling, chief executive officer of CMP, and Iberdrola, S.A. were added as defendants and additional claims alleging violations of the Racketeer Influenced and Corrupt Organizations Act were added to the case. CMP and the Company removed the case to federal court and filed a Motion to Dismiss on September 30, 2019. On November 22, 2019, upon agreement of the parties, CMP and the Company withdrew its motion to dismiss without prejudice and the plaintiffs were granted leave to file an amended complaint on or before January 31, 2020 to allow for the conclusion of the MPUC investigation into CMP's metering, billing, and customer communications practices. On January 30, 2020, the MPUC deliberated the metering, billing and customer communications investigation. The MPUC did find that with exception of certain localized and random errors, CMP's billing system is working as designed and there were no systemic errors in billing. The decision also included an administrative process to address unresolved customer complaints of high bills. The written order documenting these decisions will be issued by the MPUC. On January 31, 2020, the plaintiffs filed their third amended complaint. On February 28, 2020, CMP and the Company filed a Motion to Dismiss Plaintiff's Third Amended Complaint Without Prejudice or to Stay Proceedings Pending Plaintiffs' Exhaustion of Administrative Remedies. We cannot predict the outcome of this class action lawsuit.

Tax Act Proceedings

The Tax Act significantly changed the federal taxation of business entities including, among other things, implementing a federal corporate tax rate decrease from 35% to 21% for tax years beginning after December 31, 2017. Reductions in accumulated deferred income tax balances due to the reduction in the corporate income tax rates will result in amounts previously and currently collected from utility customers for these deferred taxes to be refundable to such customers, generally through reductions in future rates. The NYPSC, MPUC, PURA, DPU and the FERC have instituted separate proceedings in New York, Maine, Connecticut, Massachusetts and the FERC, respectively, to review and address the implications of the Tax Act on the utilities.

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In New York, the NYPSC staff issued a proposal on March 29, 2018, whereby the staff recommended that Tax Act benefits be returned to customers beginning October 1, 2018. On August 9, 2018, the NYPSC issued an Order requiring sur-credits effective October 1, 2018. The sur-credits for NYSEG and RG&E reflected the lower effective tax rate of 21%. For NYSEG Gas, RG&E Electric and RG&E Gas the NYPSC also required the sur-credit to include the return to customers of the January - September 2018 Tax Act savings over three years. The NYPSC allowed NYSEG Electric to continue to defer the January - September 2018 Tax Act savings as well as to continue to preserve the protected and unprotected Tax Act savings until the companies' next rate cases. In Connecticut, UI and SCG expect Tax Act savings to be deferred until they are reflected in tariffs in a future rate case, unless PURA determines otherwise. CNG and BGC included Tax Act savings in rate cases that were filed with PURA and the DPU, respectively, in the second quarter of 2018. In Maine, CMP adjusted rates beginning July 1, 2018 to pass back to customers the Tax Act savings after offsetting for recovery of deferred 2017 storm costs and in the general rate case filing with the MPUC is proposing to use savings arising out of the Tax Act to minimize rate increases while making its electric system more reliable. In its February 19, 2020 order in the CMP's distribution rate case proceeding discussed above, the MPUC approved CMP's distribution related accumulated deferred income tax balances associated with the Tax Act as well as the authorized amortization periods for the return of regulatory liabilities and the recovery regulatory assets. At the FERC, CMP transmission and UI transmission adjusted their tariffs in June 2018 to reflect the income statement value of Tax Act savings.

Power Tax Audits

Previously, CMP, NYSEG and RG&E implemented Power Tax software to track and measure their respective deferred tax amounts. In connection with this change, we identified historical updates needed with deferred taxes recognized by CMP, NYSEG and RG&E and increased our deferred tax liabilities, with a corresponding increase to regulatory assets, to reflect the updated amounts calculated by the Power Tax software. Since 2015, the NYPSC and MPUC accepted certain adjustments to deferred taxes and associated regulatory assets for this item in recent distribution rate cases, resulting in regulatory asset balances of approximately $154 million and $157 million, respectively, for this item at December 31, 2019 and December 31, 2018.

In 2017, audits of the power tax regulatory assets were commenced by the NYPSC and MPUC. On January 11, 2018, the NYPSC issued an order opening an operations audit on NYSEG and RG&E and certain other New York utilities regarding tax accounting. The NYPSC audit report is expected to be completed during 2020. In January 2018, the MPUC published the Power Tax audit report with respect to CMP, which indicated the auditor was unable to verify the asset "acquisition value" used to calculate the Power Tax regulatory asset. CMP responded to the audit report in its rate case filing by providing additional acquisition value support and, therefore, requested full recovery of the Power Tax regulatory asset. The MPUC had an outside firm conduct an audit of CMP's filing and acquisition values, and the auditor found CMP's information was reasonable. In September 2019, CMP filed a report in response to the audit report and addressed MPUC staff concerns. On December 17, 2019, CMP filed a stipulation with the MPUC providing for recovery of the Power Tax regulatory asset and adjusting the carrying costs values for the period of July 1, 2017 through June 30, 2019. The MPUC approved the stipulation on January 21, 2020 and CMP will begin collecting the Power Tax Regulatory asset beginning in July 2020 over 32.5 years.

Ginna Reliability Support Service Agreement

Ginna Nuclear Power Plant, LLC, or GNPP, which is a subsidiary of Constellation Energy Nuclear Group, LLC, or CENG, owns and operates the R.E. Ginna Nuclear Power Plant, or Ginna Facility, and together with GNPP, Ginna, a 581 MW single-unit pressurized water reactor located in Ontario, New York. In May 2014, the NYISO and then the NYPSC ruled that the Ginna Facility was required to maintain system reliability and ordered RG&E and GNPP to negotiate a Reliability Support Service Agreement, or RSSA.

On October 21, 2015, RG&E, GNPP, New York Department of Public Service, Utility Intervention Unit and Multiple Intervenors filed a joint proposal with the NYPSC for approval of the RSSA, as modified. On February 23, 2016, the NYPSC unanimously adopted the joint proposal, which provided for a term of the RSSA from April 1, 2015, through March 31, 2017 and RG&E monthly payments to Ginna in the amount of $15.4 million. In addition, RG&E was entitled to 70% of revenues from Ginna's sales into the NYISO energy and capacity markets, while Ginna was entitled to 30% of such revenues. The NYPSC also authorized RG&E to implement a rate surcharge effective January 1, 2016, to recover amounts paid to Ginna pursuant to the RSSA. The FERC issued an order authorizing the FERC settlement agreement in the Settlement Docket on March 1, 2016 at which point the rate surcharge went into effect. RG&E used deferred rate credit amounts (regulatory liabilities) to offset the full amount of the deferred collection amount (including carrying costs), plus credit amounts to offset all RSSA costs that exceed $2.3 million per month, not to exceed a total use of credits in the amount of $110 million, applicable through June 30, 2017. The available credits were insufficient to satisfy the final payment amount from RG&E to Ginna, and consistent with the agreement with the NYPSC, the RSSA surcharge continued past March 31, 2017, to recover up to $2.3 million per month until the final payment amount has been recovered by RG&E from customers which. RG&E has met all payment obligations associated with the RSSA and the surcharge is no longer in effect beginning August 1, 2019.

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New York TransCo

Networks holds an approximate 20% ownership interest in New York TransCo, LLC. New York TransCo was established by the New York transmission utilities to develop, own, and operate electric transmission in New York.

Weather Impact

The demand for electric power and natural gas is affected by seasonal differences in the weather. Statewide demand for electricity in New York, Connecticut and Maine tends to increase during the summer months to meet cooling load or in winter months for heating load while statewide demand for natural gas tends to increase during the winter to meet heating load. Market prices for both electricity and natural gas reflect the demand for these products and their availability at that time. Overall operating results of Networks do not fluctuate due to commodity costs as the regulated utilities generally recover those costs coincident with their expense or defer any differences for future recovery. Networks has historically sold less power when weather conditions are milder and may also be affected by severe weather, such as ice and snow storms, hurricanes and other natural disasters which may result in additional cost or loss of revenues that may not be recoverable from customers. However, Networks' regulated utilities, other than MNG, have approved RDMs as part of the NYPSC, PURA and MPUC rate plans in place for the period ended December 31, 2019. The RDM allows the regulated utilities to defer for future recovery and shortfall from projected revenues whether due to weather, economic conditions, conservation or other factors.

New Renewable Source Generation

Under Connecticut Public Act 11-80, or PA, Connecticut electric utilities are required to enter into long-term contracts to purchase Connecticut Class I Renewable Energy Certificates, or RECs, from renewable generators located on customer premises. Under this program, UI is required to enter into contracts totaling approximately $200 million in commitments over approximately 21 years. The obligations were initially expected to phase in over a six-year solicitation period and to peak at an annual commitment level of about $13.6 million per year after all selected projects are online. PA 17-144, PA 18-50, and PA 19-35 extended the original six-year solicitation period of the program by adding seventh, eighth, ninth, and tenth years, and increased the original funding level of this program by adding up to $64 million in additional commitments by UI. UI expects to partially mitigate the cost of these contracts through the resale of the RECs. PA 11-80 provides that the remaining costs (and any benefits) of these contracts, including any gain or loss resulting from the resale of the RECs, are fully recoverable from (or credited to) customers through electric rates.

Pursuant to Connecticut statute, in January 2017, UI entered into a master agreement with the Connecticut Green Bank to procure Connecticut Class I RECs produced by residential solar installations in 15-year tranches, with a final tranche to commence no later than 2022. UI's contractual obligation is to procure 20% of RECs produced by about 255 MW of residential solar installations. Connecticut statutes provides that the net costs (and any benefits) of these contracts, including any gain or loss resulting from the resale of the RECs, are fully recoverable from (or credited to) customers through electric rates

Under Maine law 35-A M.R.S.A §§ 3210-C, 3210-D, the MPUC is authorized to conduct periodic requests for proposals seeking long-term supplies of energy, capacity or RECs, from qualifying resources. The MPUC is further authorized to order Maine transmission and distribution utilities to enter into contracts with sellers selected from the MPUC's competitive solicitation process. Pursuant to a MPUC Order dated October 8, 2009, CMP entered into a 20-year agreement with Evergreen Wind Power III, LLC, on March 31, 2010, to purchase capacity and energy from Evergreen's 60 Megawatt (MW) Rollins wind farm in Penobscot County, Maine. CMP's purchase obligations under the Rollins contract are approximately $7 million per year. Pursuant to a MPUC Order dated December 18, 2017, CMP entered into a 20-year agreement with Dirigo Solar, LLC on September 10, 2018, to purchase capacity and energy from multiple Dirigo solar facilities throughout CMP's service territory. CMP's purchase obligations under the Dirigo contract will increase as additional solar facilities are brought on line, eventually reaching a level of approximately $4 million per year. Pursuant to a MPUC Order dated November 6, 2019, CMP entered into a 20-year agreement with Maine Aqua Ventus I GP LLC on December 9, 2019, to purchase capacity and energy from an off-shore wind under development near Monhegan Island, Maine. CMP's purchase obligations under the Maine Aqua Ventus contract will be approximately $12 million per year once the facility begins commercial operation. In accordance with MPUC orders, CMP either sells the purchased energy from these facilities in the ISO New England markets or periodically auctions the purchased output to wholesale buyers in the New England regional market. Under applicable law, CMP is assured recovery of any differences between power purchase costs and achieved market revenues through a reconcilable component of its retail distribution rates. Although the MPUC has conducted multiple requests for proposals under M.R.S.A §3210-C and has tentatively accepted long-term proposals from other sellers, these selections have not yet resulted in additional currently effective contracts with CMP.

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Renewables

Renewable Energy Incentives

Renewables relies, in part, upon government policies that support utility-scale renewable energy and enhance the economic feasibility of development and operating wind energy projects in regions in which Renewables operates or plans to develop and operate renewable energy facilities. The Consolidated Appropriations Act, Public Law 114-113 entitles wind energy generating facilities to a production tax credit or investment tax credit in lieu of the production tax credit. Production tax credits began a phase-down in eligibility to 80% for facilities that commenced construction in 2017, 60% for facilities that commenced construction in 2018, and 40% for facilities that commenced construction in 2019. On December 20, 2019, the Setting Every Community up for Retirement Enhancement Act of 2019, or the Secure Act, was signed into law that extended the production tax credit and investment tax credit options for wind facilities to 60% of the full credit for facilities commencing construction in 2020, leaving in place the phased down credits for projects commencing in years prior to 2020.

Investment tax credits are 30% for solar projects that commenced construction in 2019 or prior, 26% for solar projects commencing construction in 2020, 22% for project commencing construction in 2021, and 10% for projects commencing construction in 2022 and thereafter. Solar projects must complete construction within four years or demonstrate continuous construction to qualify for the stated investment tax credits.

Additionally, the federal government and many states and local jurisdictions have policies or other mechanisms, such as tax incentives or RPS that support the sale of energy from utility-scale renewable energy facilities, such as wind and solar energy facilities. As a result of budgetary constraints, political factors or otherwise, U.S., state or local governments from time to time may review their policies and other mechanisms that support renewable energy and consider actions that would make them less conducive to the development and operation of renewable energy facilities. Any reductions to, or the elimination of, governmental policies or other mechanisms that support renewable energy or the imposition of additional taxes or other assessments on renewable energy, could result in, among other items, the lack of a satisfactory market for the development of new renewable energy projects, Renewables abandoning the development of new renewable energy projects, a loss of Renewables' investments in the projects and reduced project returns, any of which could have a material adverse effect on Renewables' business, financial condition, results of operations and prospects.

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Results of Operations

The following table sets forth financial information by segment for each of the periods indicated.

	Year Ended December 31, 2019			
	Total	Networks	Renewables	Other(1)
		(in millions)		
Operating Revenues	**$ 6,338**	**$ 5,164**	**$ 1,186**	**$ (12)**
Operating Expenses				
Purchased power, natural gas and fuel used	1,509	1,249	260	—
Operations and maintenance	2,301	1,928	392	(19)
Loss from assets held for sale	—	—	—	—
Depreciation and amortization	934	550	383	1
Taxes other than income taxes	591	544	56	(9)
Total Operating Expenses	**5,335**	**4,271**	**1,091**	**(27)**
Operating Income	**1,003**	**893**	**95**	**15**
Other Income (Expense)				
Other income (expense)	119	(17)	155	(19)
Earnings (losses) from equity method investments	3	11	(8)	—
Interest expense, net of capitalization	(306)	(269)	(10)	(27)
Income Before Income Tax	**819**	**618**	**232**	**(31)**
Income tax (benefit) expense	143	153	4	(14)
Net Income (Loss)	**676**	**465**	**228**	**(17)**
Net loss (income) attributable to noncontrolling interests	24	(2)	26	—
Net Income (loss) Attributable to Avangrid, Inc.	**$ 700**	**$ 463**	**$ 254**	**$ (17)**

	Year Ended December 31, 2018			
	Total	Networks	Renewables	Other(1)
		(in millions)		
Operating Revenues	**$ 6,478**	**$ 5,310**	**$ 1,139**	**$ 29**
Operating Expenses				
Purchased power, natural gas and fuel used	1,653	1,423	228	2
Operations and maintenance	2,248	1,880	366	2
Loss from assets held for sale	16	—	—	16
Depreciation and amortization	855	503	352	—
Taxes other than income taxes	579	529	57	(7)
Total Operating Expenses	**5,351**	**4,335**	**1,003**	**13**
Operating Income	**1,127**	**975**	**136**	**16**
Other Income (Expense)				
Other income (expense)	(66)	(79)	18	(5)
Earnings (losses) from equity method investments	10	13	(3)	—
Interest expense, net of capitalization	(303)	(260)	(33)	(10)
Income Before Income Tax	**768**	**649**	**118**	**1**
Income tax expense (benefit)	170	169	(31)	32
Net Income (Loss)	**598**	**480**	**149**	**(31)**
Net income attributable to noncontrolling interests	(3)	(2)	(1)	—
Net Income (loss) Attributable to Avangrid, Inc.	**$ 595**	**$ 478**	**$ 148**	**$ (31)**

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	Year Ended December 31, 2017			
	Total	Networks	Renewables	Other(1)
		(in millions)		
Operating Revenues	**$ 5,963**	**$ 4,961**	**$ 1,047**	**$ (45)**
Operating Expenses				
Purchased power, natural gas and fuel used	1,338	1,153	225	(40)
Operations and maintenance	2,091	1,721	354	16
Loss from assets held for sale	642	—	—	642
Depreciation and amortization	824	474	325	25
Taxes other than income taxes	563	499	51	13
Total Operating Expenses	**5,458**	**3,847**	**955**	**656**
Operating Income (Loss)	**505**	**1,114**	**92**	**(701)**
Other Income (Expense)				
Other income (expense)	(62)	(72)	4	6
Earnings (losses) from equity method investments	(40)	15	(55)	—
Interest expense, net of capitalization	(280)	(244)	(28)	(8)
Income Before Income Tax	**123**	**813**	**13**	**(703)**
Income tax expense (benefit)	(259)	316	(320)	(255)
Net Income (Loss)	**382**	**497**	**333**	**(448)**
Net income attributable to noncontrolling interests	(1)	(1)	—	—
Net Income (loss) Attributable to Avangrid, Inc.	**$ 381**	**$ 496**	**$ 333**	**$ (448)**

(1)Other amounts represent Corporate, Gas and intersegment eliminations.

Comparison of Period to Period Results of Operations

Our operating revenues decreased by 2%, from $6,478 million for the year ended December 31, 2018, to $6,338 million for the year ended December 31, 2019.

Our purchased power, natural gas and fuel used decreased by 9%, from $1,653 million for the year ended December 31, 2018, to $1,509 million for the year ended December 31, 2019.

Our operations and maintenance increased by 2%, from $2,248 million for the year ended December 31, 2018, to $2,301 million for the year ended December 31, 2019.

Details of the period to period comparison are described below at the segment level.

Year Ended December 31, 2019 Compared to the Year Ended December 31, 2018

Networks

Operating revenues for the year ended December 31, 2019 decreased by $146 million, or 3%, from $5,310 million for the year ended December 31, 2018, to $5,164 million. Operating revenues changed due to the following items that have offsets within the income statement: decrease of $174 million in purchased power and purchased gas in the same period (offset in purchased power), $43 million decrease in recoverable pension expense (offset in other expenses), $11 million increase in property taxes (offset in taxes other than income taxes) and a $19 million increase in pass-through components, which are offset in operating expenses. Electricity and gas revenues increased by $48 million, primarily due to the impact of increased customer rates for the year ended December 31, 2019 compared to the same period of 2018. Electric and gas revenues decreased by $12 million due to higher earnings sharing during 2019 compared to the same period of 2018 and $5 million increase in other.

Purchased power, natural gas and fuel used for the year ended December 31, 2019 decreased by $174 million, or 12%, from $1,423 million for the year ended December 31, 2018, to $1,249 million. The decrease is primarily driven by a $164 million decrease in average commodity prices and an overall decrease in electricity and gas units procured due to a decline in degree days combined with a $10 million decrease in other power supply purchases in the period, offset within operating revenues.

Operations and maintenance during the year ended December 31, 2019 increased by $48 million, or 3%, from $1,880 million for the year ended December 31, 2018, to $1,928 million. Operations and maintenance expense changed due to a $19

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million increase in pass through components (offset in revenue), $12 million increase in non-deferrable outage restoration costs, and an $18 million increase in personnel costs (net of capitalized staff costs) driven by headcount and overtime increases.

Renewables

Operating revenues for the year ended December 31, 2019 increased by $47 million, or 4% from $1,139 million for the year ended December 31, 2018, to $1,186 million. Operating revenues increased due to favorable MtM changes of $99 million on energy derivative transactions entered into for economic hedging purposes, an increase in wind production of $22 million from new capacity, an increase in thermal revenues of $28 million driven by higher average prices in the period and increased sales from Klamath (28% volume increase). These items were offset by an $68 million decrease due to prices decreasing 14% through a combination of lower merchant pricing, an adverse PPA mix, expired PPA contracts; a gain of $30 million from the sale of claims from a bankruptcy proceeding with a customer recorded in 2018; and a $4 million decrease in other revenues.

Purchased power, natural gas and fuel used for the year ended December 31, 2019 increased by $32 million, or 14%, from $228 million for the year ended December 31, 2018, to $260 million. The increase is primarily driven by an increase of $28 million and $6 million in power and thermal purchases, respectively, driven by the increase in volume and unit cost in the period, offset by favorable MtM changes on derivatives of $2 million due to market price changes in the current period.

Operations and maintenance for the year ended December 31, 2019 increased by $26 million, or 7%, from $366 million for the year ended December 31, 2018, to $392 million. The increase is primarily due to $37 million of increased costs resulting from headcount increases and higher maintenance costs, which are primarily attributed to growth and enhanced maintenance to increase availability. Additionally, operations and maintenance expense decreased by $11 million driven by an asset retirement obligation adjustment in 2019.

Depreciation, Amortization and Impairment

Depreciation, amortization and impairment expenses for the year ended December 31, 2019 increased by $63 million, or 7%, from $871 million for the year ended December 31, 2018, to $934 million. The increase is primarily due to increases of $47 million as a result of plant additions in Networks and Renewables in the period, increase of $31 million driven by accelerated depreciation from the repowering of wind farms in Renewables, offset by a loss of $16 million from remeasurement of assets held for sale driven by final purchase price negotiations and certain related working capital adjustments of Gas business recorded in 2018.

Other Income and (Expense) and Equity Earnings

Other income and (expense) and equity earnings for the year ended December 31, 2019 increased by $178 million, or 318%, from $(56) million for the year ended December 31, 2018, to $122 million, primarily due to a $30 million favorable change in allowance for funds used during construction, $43 million of favorable pension and other post-retirement expense in the period in Networks driven by lower actuarial loss amortization (offset in Networks revenue) and a $134 million gain from the sale of assets during the period in Renewables, offset by a decrease of $7 million in equity earnings, $11 million settlement penalty with the NYDPS in Networks and a decrease of $10 million driven by the write-off of certain development projects in Renewables in the current period.

Interest Expense, Net of Capitalization

Interest expense for the year ended December 31, 2019 increased by $3 million or 1% from $303 million for the year ended December 31, 2018, to $306 million. Networks had a $9 million increase in interest expense due to a higher average outstanding balance of debt in the period, partially offset by an $8 million decrease in carrying costs on regulatory deferrals. Corporate and Other added $26 million of interest expense from new debt issued in 2019. This is offset by an interest expense decrease in Renewables of $23 million due to lower average debt balances in the current period.

Income Tax Expense

The effective tax rate, inclusive of federal and state income tax, for the year ended December 31, 2019 was 17.5%, which is below the federal statutory tax rate of 21%, primarily due to the recognition of production tax credits associated with wind production and favorable discrete tax adjustments. The effective tax rate, inclusive of federal and state income tax, for the year ended December 31, 2018, was 22.1%, which is higher than the 21% statutory federal income tax rate, predominantly due to $20.7 million of tax expense recorded in connection with the disposal of the Gas business and discrete adjustments recorded during the period, offset by the recognition of production tax credits associated with wind production.

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Year Ended December 31, 2018 Compared to the Year Ended December 31, 2017

Networks

Operating revenues for the year ended December 31, 2018 increased by $349 million, or 7%, from $4,961 million for the year ended December 31, 2017, to $5,310 million. Electricity and gas revenues increased by $82 million and $27 million, primarily due to the impact, respectively, of increased electric and gas customer rates in the year ended December 31, 2018 compared to the same period in 2017. Electricity and gas revenues for the year ended December 31, 2018 compared to the same period in 2017, increased by $87 million and $94 million due to increased commodity prices and higher volumes largely driven by an increase in degree days. Wholesale electricity and capacity revenues increased by $59 million for the year ended December 31, 2018 compared to the same period of 2017 due to an increase in average prices. Revenue related regulatory activities in the period increased primarily due to a $65 million increase in pass through components and $31 million increase in appliance revenue, both offset in operations and maintenance, and an increase of $13 million due to lower earnings sharing. These are primarily offset by an adjustment of $14 million to unfunded future income tax to reflect the change from a flow through to normalization method, which was recorded in 2017 as an increase to revenue with an offsetting and equal increase to income tax expense; a decrease of $78 million from deferrals of excess deferred income taxes due to changes in federal tax rates as a result of the Tax Act and $16 million in non-bypassable charges in the period.

Purchased power, natural gas and fuel used for the year ended December 31, 2018 increased by $270 million, or 23%, from $1,153 million for the year ended December 31, 2017, to $1,423 million. The increase is primarily driven by $175 million and $86 million increases in average commodity prices and overall increase in the units of electricity and gas, respectively, procured due to an increase in degree days combined with an $8 million increase in other power supply purchases.

Operations and maintenance during the year ended December 31, 2018 increased by $159 million, or 9%, from $1,721 million for the year ended December 31, 2017, to $1,880 million. The increase is primarily due to a $65 million increase in operations pass through costs and $31 million of costs related to appliance revenue, both offset in revenue, a $20 million increase due to non-deferrable outage restoration costs, a $13 million increase in uncollectible expenses and lower capitalized labor costs of $37 million in the period, offset by a $6 million decrease in personnel costs driven by lower termination settlements compared to the same period of 2017.

Renewables

Operating revenues for the year ended December 31, 2018 increased by $92 million, or 9% from $1,047 million for the year ended December 31, 2017, to $1,139 million. The increase in operating revenues was primarily due to an increase of $88 million with wind generation output increasing 1,730 GWh, an increase in thermal revenue of $12 million driven by higher prices, an increase of $25 million resulting from the sale of a claim from a bankruptcy proceeding with a customer, and an increase of $6 million resulting from the settlement of a lawsuit in the period, offset by an $8 million decrease driven by cancellation of First Energy PPAs combined with unfavorable mark-to-market, or MtM, changes of $32 million on energy derivative transactions entered into for economic hedging purposes.

Purchased power, natural gas and fuel used for the year ended December 31, 2018 increased by $3 million, or 1%, from $225 million for the year ended December 31, 2017, to $228 million. The increase is primarily driven by an increase of $25 million in power purchases and transmission costs due to the addition of new capacity, offset by MtM changes on derivatives of $22 million that were favorable due to market price changes in the current period.

Operations and maintenance for the year ended December 31, 2018 increased by $12 million or 3% from $354 million for the year ended December 31, 2017, to $366 million, which is primarily due to a $9 million increase in wind farm operations costs driven by new capacity with the remaining increase attributable to higher intercompany charges in 2018.

Depreciation, Amortization and Impairment

Depreciation, amortization and impairment expenses for the year ended December 31, 2018 decreased by $595 million or 41% from $1,466 million for the year ended December 31, 2017, to $871 million. The decrease is driven by lower loss from assets held for sale of $626 million recorded in connection with management's decision in 2017 to sell the gas trading and storage businesses. Net plant additions in Networks increased depreciation expense by $27 million in the period. Renewables added $34 million to depreciation expense due to a new operating capacity and $2 million of accelerated depreciation driven by repowering, offset by $9 million lower depreciation expense due to an increase in asset lives recorded in 2017 and $24 million of lower depreciation expense in Other driven by the cessation of depreciation of assets held for sale.

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Other Income and (Expense) and Equity Earnings

Other income and (expense) and equity earnings for the year ended December 31, 2018 increased by $46 million, or 45%, from $(102) million for the year ended December 31, 2017, to $(56) million, primarily due to the impact of an other than temporary impairment, or OTTI, of $49 million on an equity method investment and a $3 million lower write-off of certain development projects in Renewables in 2017, a $10 million gain from the sale of our interest in Coyote Ridge in 2018, offset by an $8 million increase in non-service component of pension and other post-retirement cost and a decrease of $6 million in allowance for funds used during construction and other regulatory deferrals in Networks.

Interest Expense, Net of Capitalization

Interest expense for the year ended December 31, 2018 increased by $23 million or 8% from $280 million for the year ended December 31, 2017, to $303 million. Networks and Other added $13 million and $18 million of interest expense from new debt issued in 2018 and 2017. In addition, Renewables interest expense increased by $16 million due to an intercompany loan in the current period. This is offset by $24 million lower interest expense in Other driven by sale of the gas business in 2018.

Income Tax Expense

The effective tax rate, inclusive of federal and state income tax, for the year ended December 31, 2018 was 22.1%, which is higher than the 21% statutory federal income tax rate, predominantly due to $20.7 million of tax expense recorded in connection with the disposal of the Gas business and discrete adjustments recorded during the period, offset by the recognition of production tax credits associated with wind production. The effective tax rate, inclusive of federal and state income tax, for the year ended December 31, 2017, was (210.6)%, which is lower than the 35% statutory federal income tax rate applicable in 2017, predominately due to a $328 million tax benefit from measurement of deferred income tax balances as a result of the Tax Act. Additionally, a $14 million increase in income tax expense is due to unfunded future income tax to reflect the change from a flow through to normalization method, which was recorded as an increase to revenue, with an offsetting and equal increase to income tax expense during the year ended December 31, 2017. This increase was partially offset by other discrete tax adjustments and recognition of production tax credits associated with wind production during the same period.

Non-GAAP Financial Measures

To supplement our consolidated financial statements presented in accordance with U.S. GAAP, we consider adjusted net income and adjusted earnings per share as non-GAAP financial measures that are not prepared in accordance with U.S. GAAP. The non-GAAP financial measures we use are specific to AVANGRID and the non-GAAP financial measures of other companies may not be calculated in the same manner. We use these non-GAAP financial measures, in addition to U.S. GAAP measures, to establish operating budgets and operational goals to manage and monitor our business, evaluate our operating and financial performance and to compare such performance to prior periods and to the performance of our competitors. We believe that presenting such non-GAAP financial measures is useful because such measures can be used to analyze and compare profitability between companies and industries by eliminating the impact of certain non-cash charges. In addition, we present non-GAAP financial measures because we believe that they and other similar measures are widely used by certain investors, securities analysts and other interested parties as supplemental measures of performance.

We define adjusted net income as net income adjusted to exclude restructuring charges, mark-to-market earnings from changes in the fair value of derivative instruments used by AVANGRID to economically hedge market price fluctuations in related underlying physical transactions for the purchase and sale of electricity, loss from held for sale measurement, accelerated depreciation derived from repowering of wind farms, other than temporary impairment, or OTTI, impact of the Tax Act and adjustments for the non-core Gas storage business. We believe adjusted net income is more useful in understanding and evaluating actual and projected financial performance and contribution of AVANGRID core lines of business and to more fully compare and explain our results. The most directly comparable U.S. GAAP measure to adjusted net income is net income. We also define adjusted earnings per share, or adjusted EPS, as adjusted net income converted to an earnings per share amount.

The use of non-GAAP financial measures is not intended to be considered in isolation or as a substitute for, or superior to, AVANGRID's U.S. GAAP financial information, and investors are cautioned that the non-GAAP financial measures are limited in their usefulness, may be unique to AVANGRID and should be considered only as a supplement to AVANGRID's U.S. GAAP financial measures. The non-GAAP financial measures may not be comparable to other similarly titled measures of other companies and have limitations as analytical tools.

Non-GAAP financial measures are not primary measurements of our performance under U.S. GAAP and should not be considered as alternatives to operating income, net income or any other performance measures determined in accordance with U.S. GAAP.

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The following tables provide a reconciliation between Net Income attributable to AVANGRID and adjusted net income (non-GAAP) by segment for the years ended December 31, 2019, 2018 and 2017, respectively:

	Year Ended December 31, 2019			
	Total	Networks	Renewables	Corporate *
	(in millions)			
Net Income Attributable to Avangrid, Inc.	**$ 700**	**$ 463**	**$ 254**	**$ (17)**
Adjustments:				
Mark-to-market adjustments - Renewables	(76)	—	(76)	—
Restructuring charges	6	3	1	3
Accelerated depreciation from repowering	33	—	33	—
Income tax impact of adjustments (1)	10	(1)	11	(1)
Adjusted Net Income (2)	**$ 673**	**$ 466**	**$ 223**	**$ (15)**

	Year Ended December 31, 2018				
	Total	Networks	Renewables	Corporate *	Gas Storage
	(in millions)				
Net Income (Loss) Attributable to Avangrid, Inc.	**$ 595**	**$ 478**	**$ 148**	**$ (12)**	**$ (19)**
Adjustments:					
Mark-to-market adjustments - Renewables	25	—	25	—	—
Restructuring charges	4	4	—	—	—
Loss from held for sale measurement	16	—	—	—	16
Impact of the Tax Act	46	5	16	25	—
Accelerated depreciation from repowering	3	—	3	—	—
Income tax impact of adjustments (1)	6	(1)	(7)	—	14
Gas Storage, net of tax	(11)	—	—	—	(11)
Adjusted Net Income (2)	**$ 684**	**$ 486**	**$ 185**	**$ 13**	**$ —**

	Year Ended December 31, 2017				
	Total	Networks	Renewables	Corporate *	Gas Storage
	(in millions)				
Net Income (Loss) Attributable to Avangrid, Inc.	**$ 381**	**$ 496**	**$ 333**	**$ 60**	**$ (508)**
Adjustments:					
Mark-to-market adjustments - Renewables	15	—	15	—	—
Restructuring charges	20	20	—	—	—
Loss from held for sale measurement	642	—	—	—	642
Impact of the Tax Act	(328)	(2)	(301)	(5)	(20)
Impairment of equity method investment	49	—	49	—	—
Income tax impact of adjustments (1)	(162)	(8)	24	—	(179)
Gas Storage, net of tax	64	—	—	—	64
Adjusted Net Income (2)	**$ 682**	**$ 507**	**$ 120**	**$ 55**	**$ —**

(1) Income tax impact of adjustments: $20 million from MtM adjustment, $(9) million from accelerated depreciation, $(2) million from restructuring charges, for the year ended December 31, 2019. $(6) million from MtM adjustment, $(1) million from accelerated depreciation, $(1) million from restructuring charges, $14 million from loss from held for sale measurement for the year ended December 31, 2018. Income tax impact of $(5) million from MtM adjustment, $(8) million from restructuring charges, $(13) million from OTTI on an equity method investment, $(179) million from loss from held for sale measurement and $43 million from adjustment to unitary income taxes as a result of expected future sale of Gas for the year ended December 31, 2017.

(2) Adjusted Net Income is a non-GAAP financial measure and is presented after excluding restructuring charges, OTTI on equity method investment, loss from held for sale measurement, impact of the Tax Act, accelerated depreciation derived from repowering of a wind farm, MtM activities in Renewables and Gas storage businesses.

* Includes corporate and other non-regulated entities as well as intersegment eliminations.

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Comparison of Period to Period Results of Operations

Year Ended December 31, 2019 Compared to the Year Ended December 31, 2018

Adjusted net income

Our adjusted net income decreased by $11 million, or 2%, from $684 million for the year ended December 31, 2018 to $673 million for the year ended December 31, 2019. The decrease is primarily due to a $21 million decrease in Networks driven by increased non-deferrable outage restoration costs and an increase in personnel costs (net of capitalized staff costs) driven by headcount and overtime increases and a $28 million decrease in Corporate mainly driven by higher interest expense, offset by a $38 million increase in Renewables driven mainly by thermal revenue increase and a gain from the sale of assets and associated change in control during the period.

Year Ended December 31, 2018 Compared to the Year Ended December 31, 2017

Adjusted net income

Our adjusted net income increased by $2 million, or less than 1%, from $682 million for the year ended December 31, 2017 to $684 million for the year ended December 31, 2018. The increase is primarily due to a $65 million increase in Renewables due to increased wind generation in the period, offset by a $21 million decrease in Networks driven by increased non-deferrable outage restoration costs and the associated impacts including lower capitalized labor in the period, $42 million decrease in Corporate mainly driven by lower interest income on intercompany loans due to the sale of the gas business in 2018 and higher income tax expense due to decreased unitary benefit driven by sale of gas business.

The following tables reconcile Net Income attributable to AVANGRID to Adjusted Net Income (non-GAAP), and EPS attributable to AVANGRID to adjusted EPS (non-GAAP) for the years ended December 31, 2019, 2018 and 2017, respectively:

	Year Ended December 31,		
	2019	2018	2017
		(in millions)	
Networks	$ 463	$ 478	$ 496
Renewables	254	148	333
Corporate (1)	(17)	(12)	60
Gas Storage	—	(19)	(508)
Net Income	**$ 700**	**$ 595**	**$ 381**
Adjustments:			
Mark-to-market adjustments - Renewables (2)	(76)	25	15
Restructuring charges (3)	6	4	20
Loss from held for sale measurement (4)	—	16	642
Impact of the Tax Act (5)	—	46	(328)
Accelerated depreciation from repowering (6)	33	3	—
Impairment of equity method and other investment (7)	—	—	49
Income tax impact of adjustments	10	6	(162)
Gas Storage, net of tax	—	(11)	64
Adjusted Net Income (8)	**$ 673**	**$ 684**	**$ 682**

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	Year Ended December 31,		
	2019	2018	2017
Networks	$ 1.50	$ 1.54	$ 1.60
Renewables	0.82	0.48	1.08
Corporate (1)	(0.06)	(0.04)	0.19
Gas Storage	—	(0.06)	(1.64)
Earnings Per Share	**$ 2.26**	**$ 1.92**	**$ 1.23**
Adjustments:			
Mark-to-market adjustments - Renewables (2)	(0.25)	0.08	0.05
Restructuring charges (3)	0.02	0.01	0.07
Loss from held for sale measurement (4)	—	0.05	2.08
Impact of the Tax Act (5)	—	0.15	(1.06)
Accelerated depreciation from repowering (6)	0.11	0.01	—
Impairment of equity method and other investment (7)	—	—	0.16
Income tax impact of adjustments	0.03	0.02	(0.52)
Gas Storage, net of tax	—	(0.04)	0.21
Adjusted Earnings Per Share (8)	**$ 2.17**	**$ 2.21**	**$ 2.20**

(1) Includes corporate and other non-regulated entities as well as intersegment eliminations.
(2) Mark-to-market earnings relates to earnings impacts from changes in the fair value of Renewables' derivative instruments associated with electricity and natural gas.
(3) Restructuring and severance related charges relate to costs resulting from restructuring actions involving initial targeted voluntary workforce reductions and related costs in our plan to vacate a lease, predominantly within the Networks segment and costs to implement an initiative to mitigate costs and achieve sustainable growth.
(4) Represents loss from measurement of assets and liabilities held for sale in connection with the sale of the gas trading and storage businesses.
(5) Represents the impact from measurement of deferred income tax balances as a result of the Tax Act enacted by the U.S. federal government on December 22, 2017.
(6) Represents the amount of accelerated depreciation derived from the repowering of wind farms in Renewables.
(7) Includes OTTI on equity method investment recorded in 2017.
(8) Adjusted Net Income and Adjusted Earnings Per Share are non-GAAP financial measures and are presented after excluding restructuring charges, OTTI on equity method investment, loss from held for sale measurement, impact of the Tax Act, accelerated depreciation derived from the repowering wind farms, MtM activities in Renewables and Gas storage businesses.

Liquidity and Capital Resources

Our operations, capital investment and business development require significant short-term liquidity and long-term capital resources. Historically, we have used cash from operations, and borrowings under our credit facilities and commercial paper program as our primary sources of liquidity. Our long-term capital requirements have been met primarily through retention of earnings and borrowings in the investment grade debt capital markets. Continued access to these sources of liquidity and capital are critical to us. Risks may increase due to circumstances beyond our control, such as a general disruption of the financial markets and adverse economic conditions.

Liquidity Resources

At December 31, 2019, we had cash and cash equivalents of $178 million, as compared to $36 million at December 31, 2018. In addition to cash on hand, we have the capacity to borrow from third parties through a $2 billion commercial paper program, the $2.5 billion AVANGRID Credit Facility which backstops the commercial paper program and $500 million from an Iberdrola Group Credit Facility, both of which are described below.

We optimize our liquidity within the United States through a series of arms-length intercompany lending arrangements with our subsidiaries and among our regulated utilities to provide for lending of surplus cash to subsidiaries with liquidity needs, subject to the limitation that the regulated utilities may not lend to unregulated affiliates.

We manage our overall liquidity position as part of the group of companies controlled by Iberdrola, or the Iberdrola Group, and are a party to a liquidity agreement with Bank of America, N.A. along with certain members of the Iberdrola Group. The liquidity agreement aids the Iberdrola Group in efficient cash management and reduces the need for external borrowing by the pool participants. Parties to the agreement, including us, may deposit funds with or borrow from the financial institution, provided that the net balance of funds deposited or borrowed by all pool participants in the aggregate is not less than zero. As of December 31, 2019 and 2018, the balance was $150 million and zero, respectively. Any deposit amounts would be reflected in our consolidated balance sheets under cash and cash equivalents because our deposited surplus funds under the cash pooling agreement are highly-

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liquid short-term investments. We also have a bi-lateral demand note agreement with a Canadian affiliate of the Iberdrola Group under which we had notes payable balance outstanding of zero at both December 31, 2019 and December 31, 2018.

AVANGRID Commercial Paper Program

AVANGRID has a commercial paper program with a limit of $2 billion that is backstopped by the AVANGRID Credit Facility (described below). As of December 31, 2019 and February 28, 2020, there was $562 million and $859 million of commercial paper outstanding, respectively.

AVANGRID Credit Facility

AVANGRID and its subsidiaries, NYSEG, RG&E, CMP, UI, CNG, SCG and BGC have a revolving credit facility with a syndicate of banks, or the AVANGRID Credit Facility, that provides for maximum borrowings of up to $2.5 billion in the aggregate.

Under the terms of the AVANGRID Credit Facility, each joint borrower has a maximum borrowing entitlement, or sublimit, which can be periodically adjusted to address specific short-term capital funding needs, subject to the maximum limit contained in the agreement. AVANGRID's maximum sublimit is $2 billion, NYSEG, RG&E, CMP and UI have maximum sublimits of $400 million, CNG and SCG have maximum sublimits of $150 million and BGC has a maximum sublimit of $40 million. Under the AVANGRID Credit Facility, each of the borrowers will pay an annual facility fee that is dependent on their credit rating. As of December 31, 2019, the facility fees range from 10.0 to 17.5 basis points. During 2019, we extended the maturity date for the AVANGRID Credit Facility by one year to June 29, 2024.

Since the facility is a backstop to the AVANGRID commercial paper program, the amounts available under the facility as of December 31, 2019 and February 28, 2020, were $1,938 million and $1,641 million, respectively.

Iberdrola Group Credit Facility

AVANGRID has a credit facility with Iberdrola Financiacion, S.A.U., a company of the Iberdrola Group. The facility has a limit of $500 million and matures on June 18, 2023. AVANGRID pays a facility fee of 10.5 basis points annually on the facility. As of both December 31, 2019 and February 28, 2020, there was no outstanding amount under this credit facility.

Long-Term Capital Resources

We expect to meet our long-term capital requirements through the use of our cash balances, credit facilities, cash from operations and long-term borrowings. We have investment grade ratings from Standard and Poor's, Moody's and Fitch and we believe that we can raise capital on competitive terms in the investment grade debt capital and/or bank markets.

On January 15, 2019, UI, CNG, SCG and BGC issued $195 million aggregate amount of notes/bonds with maturity dates ranging from 2029 to 2049 and fixed interest rates ranging from 4.07% to 4.52%.

On April 1, 2019, NYSEG issued $12 million of Indiana County Industrial Development Authority Pollution Control Revenue Bonds in a private placement maturing in 2024 with a fixed interest rate of 2.65%.

On May 16, 2019, AVANGRID issued $750 million of senior unsecured notes maturing in 2029 at a fixed interest rate of 3.80%.

On June 3, 2019, CMP issued $240 million aggregate principal amount of first mortgage bonds with maturity dates ranging from 2026 to 2034 and fixed interest rates ranging from 3.87% to 4.20%.

On August 27, 2019, RG&E issued $150 million aggregate principal amount of first mortgage bonds maturing in 2027 at a fixed interest rate of 3.10%.

On September 5, 2019, NYSEG issued $300 million aggregate principal amount of senior unsecured notes maturing in 2049 at a fixed interest rate of 3.30%.

On December 31, 2019, AVANGRID entered into a $500 million term loan credit agreement with two financial institutions. The agreement expires on June 30, 2021 and has a variable interest rate, which was 2.40% as of December 31, 2019.

At December 31, 2019, we had $5,153 million of debt (including the current portion thereof) outstanding in the Networks segment consisting of first mortgage bonds, senior unsecured notes, tax-exempt bonds and various other forms of debt. Networks' regulated utilities are required by regulatory order to maintain a minimum ratio of common equity to total capital that is tied to the capital structure used in the establishment of their revenue requirements. Pursuant to these requirements, each of NYSEG, RG&E, CMP and MNG must maintain a minimum equity ratio equal to the ratio in its currently effective rate plan or decision measured using a trailing 13-month average. On a monthly basis, each utility must maintain a minimum equity ratio of no less

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than 300 basis points below the equity ratio used to set rates. UI, SCG, CNG and BGC are restricted from paying dividends if paying such dividend would result in their respective common equity ratio being lower than 300 basis points below the equity percentage used to set rates in the most recent distribution rate proceeding as measured using a trailing 13-month average calculated as of the most recent quarter end. The regulated utilities periodically pay dividends to, or receive capital contributions from, AVANGRID in order to maintain the minimum equity ratio requirement. They each independently incur indebtedness by issuing investment grade debt securities. Networks' regulated utilities were in compliance with these regulatory orders as of December 31, 2019.

At December 31, 2019, we had a $50 million finance lease liability outstanding in the Renewables segment relating to a sale-leaseback arrangement on a solar generation facility. Renewables has also sourced capital through tax equity financing arrangements associated with certain wind farm projects. The arrangements allocate substantially all of the projects' taxable income and production tax credits to the tax equity investor, along with a small percentage of cash generated by the projects, in exchange for an initial contribution. On June 28, 2019, Renewables closed on the sale of a tax equity interest in its Patriot wind project, which resulted in proceeds of $128 million.

At December 31, 2019, we had $2,293 million of long-term debt (including the current portion thereof) outstanding in corporate. Long-term debt in corporate consists mainly of $450 million of 4.625% notes due in 2020, $600 million of 3.150% notes due in 2024, $750 million of 3.80% notes due in 2029 issued in May 2019 and a $500 million term loan agreement entered into December 31, 2019.

In our credit facilities, long-term borrowings, financing leases and tax-equity partnerships, we and our affiliates that are parties to the agreements are subject to covenants that are standard for such agreements. Affirmative covenants impose certain obligations on the borrower and negative covenants limit certain activities by the borrower. The agreements also define certain events of default, including but not limited to non-compliance with the covenants that may automatically in some circumstances, or at the option of the lenders in other circumstances, trigger acceleration of the obligations. We and our affiliates were in compliance with all such covenants at December 31, 2019.

Capital Requirements

Funding Future Common Dividend Payments

We expect to fund any quarterly shareholder dividends primarily from the cash provided by operations of our businesses in the future. We have revolving credit facilities and a commercial paper program, as described above, to fund short-term liquidity needs and we believe that we will have access to the capital markets should additional, long-term growth capital be necessary.

Capital Expenditures

The regulated utilities' capital expenditures over the last three years have been as follows:

	2019	2018	2017
		(in millions)	
NYSEG	$ 574	$ 517	$ 364
RG&E	379	283	303
CMP	299	212	252
MNG	7	7	3
UI	192	153	176
SCG	83	57	53
CNG	60	55	70
BGC	19	17	18
Total	**$ 1,613**	**$ 1,301**	**$ 1,239**

Renewables' capital expenditures for the years set forth below were as follows:

	2019	2018	2017
		(in millions)	
Wind & solar	$ 1,281	$ 277	$ 902
Thermal	7	25	17
Corporate(1)	13	13	10
Total capital expenditures	**$ 1,301**	**$ 315**	**$ 929**

(1) Includes information technology and facilities and safety (security).

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Networks increased its capital expenditures during the period from 2017 to 2019 to upgrade and expand electricity and natural gas transmission and distribution infrastructure. In 2019, NYSEG and RG&E continued their capital investments in a number of programs, including the grid automation project, distribution line project, FERC compliance programs, Rochester Area Reliability Project, or RARP, and Gas Distribution Mains and Leak Prone Main replacement project. In 2019, CMP's projects were mainly in developing its new customer relationship management and billing system and transmission investments in the Maine Electric Power Corporation, or MEPCO. UIL's projects were mainly driven by new customer connections, system and corrective reliability, system resiliency, infrastructure replacement and system operations.

Renewables also made capital investments during this three-year period. In 2019, there were capital expenditures of $1.2 billion on construction of Otter Creek, Karankawa, Montague, Tatanka Ridge and other wind and solar assets as well as the acquisition of Patriot Wind, $7 million in capital expenditures on the Klamath gas-fired cogeneration facility, or the Klamath Plant, $15 million on improvements to operating wind assets and $31 million in development costs.

In 2018, there were capital expenditures of $232 million on construction of Otter Creek, Karankawa, Montague, Wy'East Solar and other wind and solar assets, $25 million in capital expenditures on the Klamath Plant, $17 million on improvements to operating wind assets and $28 million in development costs.

In 2017, there were capital expenditures of $856 million on construction of El Cabo, Tule, Twin Buttes II, Deerfield and other wind assets, $17 million in capital expenditures on the Klamath Plant, $11 million on improvements to operating wind assets and $35 million in development costs.

Capital Improvement Projects

An important part of our business strategy involves capital improvement projects. Through Networks we plan to invest a total of approximately $9.58 billion from 2020 to 2024 to upgrade and expand electricity and natural gas transmission and distribution infrastructure. In the next 12 months, Networks plans to invest $529 million in Maine, including the NECEC, Spectrum Project, Fleet Services, Physical and Cyber Security, Line Inspection and Waterville-Winslow Reliability Project. In addition, CMP plans to continue developing its new customer relationship management and billing system and new transmission investments in MEPCO, 388 rebuild. MEPCO plans to invest $23 million in the next 12 months. NYSEG plans to invest $659 million in the next 12 months, including: NYSEG Grid Automation, AMI Project, NY WAN Expansion Project, BES Program - FERC Compliance, NYSEG Breaker Program, NYSEG Distribution Line Project, Phelps South Gas Replacement Project, Gas Distribution Mains and Leak Prone Main replacement. RG&E plans to invest $428 million in the next 12 months, including: RARP, BES Program - FERC Compliance, Station 23 115kV Substation, Telcom NY WAN Buildout, Gas Distribution Mains and Leak Prone Main replacement. UIL plans to invest $323 million in the next 12 months, including a number of programs and projects related to new customer connections, replacement of aging infrastructure, and improvement of system operations, reliability and resiliency. For gas operations, the most notable investments include cast iron/bare steel pipe replacement, infrastructure expansion and the connection of new customers.

Through Renewables we plan to invest at least a total of approximately $3.5 billion from 2020 to 2024 and add at least approximately 2,100 MW of generation capacity.

Renewables, through its joint venture in Vineyard Wind, was awarded a second Massachusetts offshore easement. During 2019, contributions of $106 million were made to a new offshore development project, which is accounted for as an equity method investment, to enter into the easement contract.

We expect to fund these capital improvement projects through a combination of retained earnings, cash provided by operations and access to the capital markets, including debt borrowings at either the subsidiary or holding company level and equity issuances as needed. Additionally, we have a revolving credit facility, as described above, to fund short-term liquidity needs.

Cash Flows

Our cash flows depend on many factors, including general economic conditions, regulatory decisions, weather, commodity price movements and operating expense and capital spending control.

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The following is a summary of the cash flows by activity for the years ended December 31, 2019, 2018 and 2017, respectively:

	Year Ended December 31,		
	2019	2018	2017
		(in millions)	
Cash Flows			
Net cash provided by operating activities	$ 1,593	$ 1,791	$ 1,763
Net cash used in investing activities	(2,713)	(1,564)	(2,341)
Net cash provided by (used in) from financing activities	1,261	(230)	528
Net decrease in cash, cash equivalents and restricted cash	**$ 141**	**$ (3)**	**$ (50)**

Operating Activities

Our primary sources of operating cash inflows are proceeds from transmission and distribution of electricity and natural gas and sales of wholesale energy and energy related products and services. Our primary operating cash outflows are power and natural gas purchases and transmission operating and maintenance expenses, as well as personnel costs and other employee-related expenditures. As our business has expanded, our working capital requirements have grown. We expect our working capital to grow as we continue to grow our business.

The cash from operating activities for the year ended December 31, 2019 compared to the year ended December 31, 2018 decreased by $198 million, primarily attributable to higher operations and maintenance expenses and cash interest paid in the period.

The cash from operating activities for the year ended December 31, 2018 compared to the year ended December 31, 2017 increased by $28 million, primarily attributable to increased operating revenues in the period.

The cash from operating activities for the year ended December 31, 2017 compared to the year ended December 31, 2016 increased by $202 million, primarily attributable to increased operating revenues, excluding the impact of a non-cash adjustment of unfunded future income tax in 2016.

Investing Activities

Our investing activities have primarily focused on enhancing, automating and reinforcing the asset base to support safety, reliability and customer growth in accordance with the regulatory markets within which we operate, as well as constructing solar and wind assets and spending on gas generation assets.

In 2019, net cash used in investing activities was $2,713 million, which was comprised of $2,740 million of capital expenditures and $176 million of other investments and equity method investments, partially offset by $74 million of contributions in aid of construction and $126 million of proceeds from the sale of assets.

In 2018, net cash used in investing activities was $1,564 million, which was comprised of $1,787 million of capital expenditures, partially offset by $60 million of contributions in aid of construction, $4 million of cash distributions from equity method investments, and proceeds from sale of assets of $204 million primarily related to the sale of assets held for sale.

In 2017, net cash used in investing activities was $2,341 million, which was comprised of $2,416 million of capital expenditures, partially offset by $57 million of contributions in aid of construction, $4 million of cash distributions from equity method investments and proceeds of $12 million from the sale of assets.

Financing Activities

Our financing activities have primarily consisted of using our credit facilities and long-term debt issued or redeemed by AVANGRID and our regulated Networks subsidiaries.

In 2019, financing activities provided $1,261 million in cash reflecting primarily an issuance of non-current debt at Avangrid, Inc., and our regulated subsidiaries with the net proceeds of $2,137 million and tax equity financing contributions from non-controlling interests of $133 million, offset by a net decrease in non-current debt and current notes payable of $374 million, distributions to non-controlling interests of $63 million, payments on capital leases of $27 million and dividends of $545 million.

In 2018, financing activities used $230 million in cash reflecting primarily an issuance of non-current debt at NYSEG, RG&E, CMP and UI with the net proceeds of $597 million, tax equity financing contributions from non-controlling interests of $223 million, offset by a net decrease in non-current debt and current notes payable of $418 million, distributions to non-controlling interests of $76 million, payments on capital leases of $13 million and dividends of $537 million.

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In 2017, financing activities provided $528 million in cash reflecting primarily an issuance of non-current debt at RG&E with the net proceeds of $294 million and notes at Avangrid, Inc. with net proceeds of $594 million, after price discount and issuance-related expenses, a net increase in non-current debt and current notes payable of $320 million, payments on the tax equity financing arrangements of $113 million, payments on capital lease of $33 million and dividends of $535 million.

Contractual Obligations

As of December 31, 2019, our contractual obligations (excluding any tax reserves) were as follows:

	Total	2020	2021	2022	2023	2024	Thereafter
				(in millions)			
Leases(1)	$ 293	$ 24	$ 20	$ 13	$ 57	$ 6	$ 173
Easements (2)	877	24	25	25	25	25	753
Projected future pension benefit plan contributions(3)	294	83	56	73	63	19	—
Long-term debt (including current maturities)(4)	7,446	730	801	363	439	612	4,501
Interest payments(5)	3,009	291	257	237	221	210	1,793
Material purchase commitments(6)	1,725	1,372	152	62	43	19	77
Total Contractual Obligations	**$ 13,644**	**$ 2,524**	**$ 1,311**	**$ 773**	**$ 848**	**$ 891**	**$ 7,297**

(1) Represents lease contracts relating to operational facilities, office building leases, and vehicle and equipment leases. These amounts represent our expected unadjusted portion of the costs to pay as amounts related to contingent payments are predominantly linked to electricity generation at the respective facilities. The category now includes finance leases after the adoption of ASC 842 in 2019.
(2) Represents easement contracts which no longer qualify as leases under ASC 842 effective in 2019.
(3) The qualified pension plans' contributions are generally based on the estimated minimum pension contributions required under the Employee Retirement Income Sensitivity Act of 1974, as amended, and the Pension Protection Act of 2006, as well as contributions necessary to avoid benefit restrictions and at-risk status and agreements with state regulatory agencies. These amounts represent estimates that are based on assumptions that are subject to change. The minimum required contributions for years after 2023 are not included as projections beyond 2023 are not available.
(4) Includes sinking fund obligations and obligations under capital leases. See debt payment discussion in "Long-term Capital Resources."
(5) Interest payments are estimated based on final maturity dates of debt securities outstanding at December 31, 2019, and do not reflect anticipated future refinancing, early redemptions or debt issuances. Variable rate interest obligations are estimated based on rates as of December 31, 2019.
(6) Represents forward purchase commitments under power, gas and other arrangements and contractual obligations for material and services on order but not yet delivered at December 31, 2019.

Critical Accounting Policies and Estimates

The financial statements provided herein have been prepared in accordance with U.S. GAAP and include the accounts of AVANGRID and its consolidated subsidiaries. Significant accounting policies are described in Note 3 to the consolidated financial statements.

In preparing the accompanying financial statements, our management has made certain estimates and assumptions that affect the reported amounts of assets, liabilities, shareholder's equity, revenues and expenses and the disclosures thereof. The following accounting policies represent those that management believes are particularly important to the consolidated financial statements and that require the use of estimates, assumptions and judgments to determine matters that are inherently uncertain.

Accounting for Regulated Public Utilities

U.S. GAAP allows regulated entities to give accounting recognition to the actions of regulatory authorities. In order to apply such regulatory accounting treatment and record regulatory assets and liabilities, certain criteria must be met. In determining whether the criteria are met for our operations, our management makes significant judgments, which involve (i) determining whether rates for services provided to customers are subject to approval by an independent, third-party regulator, (ii) determining whether the regulated rates are designed to recover specific costs of providing the regulated service, (iii) considering relevant historical precedents and recent decisions of the regulatory authorities and (iv) considering the fact that decisions made by regulatory commissions or legislative changes at a later date could vary from earlier interpretations made by management and that the impact of such variations could be material. Our regulated subsidiaries have deferred recognition of costs (a regulatory asset) or have recognized obligations (a regulatory liability) if it is probable that such costs will be recovered or obligations relieved in the future through the ratemaking process. Management regularly reviews our regulatory assets and liabilities to determine whether adjustments to its previous conclusions are necessary based on the current regulatory environment as well as recent rate orders. If our regulated subsidiaries, or a portion of their assets or operations, were to cease meeting the criteria for application of these accounting rules, accounting standards for unregulated businesses in general would become applicable and immediate recognition of any previously deferred costs would be required in the year in which such criteria are no longer met.

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Accounting for Pensions and Other Post-Retirement Benefits

We provide pensions and other post-retirement benefits for a significant number of employees, former employees and retirees. We account for these benefits in accordance with the accounting rules for retirement benefits. In accounting for our pension and other post-retirement benefit plans, or the AVANGRID plans, assumptions are made regarding the valuation of benefit obligations and the performance of plan assets. The primary assumptions include the discount rate, the expected long-term return on plan assets, health care cost trend rates, mortality assumptions, demographic assumptions and other factors. We apply consistent estimation techniques regarding our actuarial assumptions, where appropriate, across the AVANGRID plans of our operating subsidiaries. The estimation technique utilized to develop the discount rate for the AVANGRID plans is based upon the settlement of such liabilities as of December 31, 2019, utilizing a hypothetical portfolio of actual, high quality bonds, which would generate cash flows required to settle the liabilities. We believe such an estimate of the discount rate accurately reflects the settlement value for plan obligations and results in cash flows that closely match the expected payments to participants. The estimation technique utilized to develop the long-term rate of return on plan assets is based on a projection of the long-term rates of return on plan assets that will be earned over the life of the plan, including considerations of investment strategy, historical experience, and expectations for long-term rates of return.

We reflect all unrecognized prior service costs and credits and unrecognized actuarial gains and losses for the regulated utilities of Networks as regulatory assets or liabilities as it is probable that such items will be recovered through the ratemaking process in future periods.

Business Combinations and Assets Acquisitions

We apply the acquisition method of accounting to account for business combinations. The consideration transferred for an acquisition is the fair value of the assets transferred, the liabilities incurred by the acquirer to former owners of the acquiree and the equity interests issued by the acquirer. Acquisition related costs are expensed as incurred. Identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are measured initially at their fair values at the acquisition date. The excess of the consideration transferred over the fair value of the identifiable net assets acquired is recorded as goodwill. We recognize adjustments to provisional amounts relating to a business combination that are identified during the measurement period in the reporting period in which the adjustment amounts are determined.

In contrast to a business combination, we classify a transaction as an asset acquisition when substantially all of the fair value of the gross assets acquired is concentrated in a single identifiable asset or group of similar identifiable assets or otherwise does not meet the definition of a business.

Goodwill

Goodwill is not amortized, but is subject to an assessment for impairment performed in the fourth quarter or more frequently if events occur or circumstances change that will more likely than not reduce the fair value of the reporting unit below its carrying amount. A reporting unit is an operating segment or one level below an operating segment and is the level at which we test goodwill for impairment.

In assessing goodwill for impairment, we have the option of first performing a qualitative assessment to determine whether a quantitative assessment is necessary, or step zero. If we determine, on the basis of qualitative factors, that the fair value of the reporting unit is more likely than not greater than the carrying amount, no further testing is required. If we bypass step zero or perform the qualitative assessment but determine that it is more likely than not that its fair value is less than its carrying amount, we perform a quantitative two step, fair value based test. Step one compares the fair value of the reporting unit to its carrying amount, including goodwill. If the carrying amount of the reporting unit exceeds its fair value, step two is performed. Step two requires an allocation of fair value to the individual assets and liabilities using business combination accounting guidance to determine the implied fair value of goodwill. If the implied fair value of goodwill is less than its carrying amount, we record an impairment loss as a reduction to goodwill and a charge to operating expense.

Our step zero qualitative assessment involves evaluating key events and circumstances that could affect the fair value of our reporting units, as well as other factors. Events and circumstances evaluated include macroeconomic conditions, industry, regulatory and market considerations, cost factors and their effect on earnings and cash flows, overall financial performance as compared with projected results and actual results of relevant prior periods, other relevant entity specific events, and events affecting a reporting unit.

Our step one impairment testing, and step two if required, includes various assumptions, primarily the discount rate, which is based on an estimate of a market participant's marginal, weighted average cost of capital, and forecasted cash flows. We test the reasonableness of the conclusions of our step one impairment testing using a range of discount rates and a range of assumptions for long term cash flows.

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Impairment of Long-Lived Assets

We evaluate property, plant and equipment and other long-lived assets for impairment when events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment evaluation is based on undiscounted cash flow analysis at the lowest level to which cash flows of the long-lived assets or asset groups are largely independent of the cash flows of other assets and liabilities. An impairment loss is required to be recognized if the carrying amount of the asset exceeds the undiscounted future net cash flows associated with that asset. The impairment loss to be recognized is the amount by which the carrying value of the long-lived asset exceeds the asset's fair value.

We determine the fair value of a long-lived asset by applying the income approach prescribed under the fair value measurement accounting framework. We develop the underlying assumptions consistent with a market participant's view of the exit price of our assets. We use an internal discounted cash flow valuation model, or the DCF model, based on the principles of present value techniques to estimate the fair value of our long-lived assets under the income approach. The DCF model estimates fair value by discounting AVANGRID's cash flow forecasts at an appropriate market discount rate. Management applies a considerable amount of judgment in the estimation of the discount rate used in the DCF model and in selecting several input assumptions during the development of our cash flow forecasts. Examples of the input assumptions that our forecasts are sensitive to include macroeconomic factors such as growth rates, industry demand, inflation, power prices and commodity prices. Many of these input assumptions are dependent on other economic assumptions, which are often derived from statistical economic models with inherent limitations such as estimation differences. Further, several input assumptions are based on historical trends which often do not recur. The input assumptions that include significant unobservable inputs most significant to our cash flows are based on expectations of macroeconomic factors, which may be volatile. The use of a different set of input assumptions could produce significantly different cash flow forecasts.

The fair value of a long-lived asset is sensitive to both input assumptions related to our cash flow forecasts and the market discount rate. Further, estimates of long-term growth and terminal value are often critical to the fair value determination. As part of the impairment evaluation process, management analyzes the sensitivity of fair value to various underlying assumptions. The level of scrutiny increases as the gap between fair value and carrying amount decreases. Changes in any of these assumptions could result in management reaching a different conclusion regarding the potential impairment, which could be material. Our impairment evaluations inherently involve uncertainties from uncontrollable events that could positively or negatively impact the anticipated future economic and operating conditions.

Income Taxes

AVANGRID files a consolidated federal income tax return and various state income tax returns, some of which are unitary as required or permitted.

We use the asset and liability method of accounting for income taxes. Deferred tax assets and liabilities reflect the expected future tax consequences based on enacted tax laws of temporary differences between the tax basis of assets and liabilities and their financial reporting amounts. In accordance with U.S. GAAP for regulated industries, certain of our regulated subsidiaries have established a regulatory asset for the net revenue requirements to be recovered from customers for the related future tax expense associated with certain of these temporary differences. We defer the investment tax credits when earned and amortize them over the estimated lives of the related assets.

Deferred tax assets and liabilities are measured at the expected tax rate for the period in which the asset or liability will be realized or settled, based on legislation enacted as of the balance sheet date. Changes in deferred income tax assets and liabilities that are associated with components of other comprehensive income, or OCI, are charged or credited directly to OCI. Significant judgment is required in determining income tax provisions and evaluating tax positions. Our tax positions are evaluated under a more-likely-than-not recognition threshold before they are recognized for financial reporting purposes. We record valuation allowances to reduce deferred tax assets when it is more likely than not that we will not realize all or a portion of a tax benefit.

Positions taken or expected to be taken on tax returns, including the decision to exclude certain income or transactions from a return, are recognized in the financial statements when it is more likely than not the tax position can be sustained based solely on the technical merits of the position. The amount of a tax return position that is not recognized in the financial statements is disclosed as an unrecognized tax benefit. Changes in assumptions on tax benefits may also impact interest expense or interest income and may result in the recognition of tax penalties. Interest and penalties related to unrecognized tax benefits are recorded within "Interest expense, net of capitalization" and "Other income and (expense)" of the consolidated statements of income.

Uncertain tax positions have been classified as noncurrent unless expected to be paid within one year. In 2019, we netted our liability for uncertain tax positions against all same jurisdiction deferred tax assets, net operating losses and tax credit carryforwards. Our policy is to recognize interest and penalties on uncertain tax positions as a component of interest expense in the consolidated statements of income.

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Federal production tax credits applicable to our renewable energy facilities, that are not part of a tax equity financing arrangement, are recognized as a reduction in income tax expense with a corresponding reduction in deferred income tax liabilities due to our inability to immediately monetize the tax credits.

Our income tax expense, deferred tax assets and liabilities and liabilities for unrecognized tax benefits reflect management's best assessment of estimated current and future taxes to be paid. Significant judgments and estimates are required in determining the consolidated income tax components of the financial statements.

Off-Balance Sheet Arrangements

At December 31, 2019, we had approximately $3.5 billion of standby letters of credit, surety bonds, guarantees and indemnifications outstanding, which includes guarantees of our own performance. These instruments provide financial assurance to the business and trading partners of AVANGRID and its subsidiaries in their normal course of business. The instruments only represent liabilities if AVANGRID or its subsidiaries fail to deliver on contractual obligations. We therefore believe it is unlikely that any material liabilities associated with these instruments will be incurred and, accordingly, as of December 31, 2019, neither we nor our subsidiaries have any liabilities recorded for these instruments.

New Accounting Standards

For discussion of new accounting pronouncements that affect AVANGRID, refer to Note 3 to our consolidated financial statements contained in this Annual Report on Form 10-K.

Item 7A. *Quantitative and Qualitative Disclosures About Market Risk.*

We are exposed to risks associated with adverse changes in commodity prices, interest rates and equity prices. Financial instruments and positions affecting our financial statements described below are held primarily for purposes other than trading. Market risk is measured as the potential loss in fair value resulting from hypothetical reasonably possible changes in commodity prices, interest rates or equity prices over the next year. Management has established risk management policies to monitor and manage such market risks, as well as credit risks.

Commodity Price Risk

Renewables faces a number of energy market risk exposures, including fixed price, basis (both location and time) and heat rate risk.

Long-term supply contracts reduce our exposure to market fluctuations. We have electricity commodity purchases and sales contracts for energy (physical contracts) that have been designated and qualify for the normal purchase normal sale exemption in accordance with the accounting requirements concerning derivative instruments and hedging activities.

Renewables merchant wind facilities are subject to fixed price power risk, which is hedged with fixed price power trades. Its combined cycle power plant is subject to heat rate risk, which is hedged with fixed price power and fixed price gas and basis positions. Those measures mitigate our commodity price exposure, but do not completely eliminate it. Some long-term hedges do not qualify for hedge accounting. This introduces some MtM volatility into yearly profit and loss accounts.

Renewables uses a Monte Carlo simulation value-at-risk, or VaR, technique to measure and control the level of risk it undertakes. VaR is a statistical technique used to measure and quantify the level of risk within a portfolio over a given timeframe and within a specified level of confidence. VaR is primarily composed of three variables: the measured amount of potential loss, the probability of not exceeding the amount of potential loss and the portfolio holding period.

Renewables uses a 99% probability level over a five-day holding period, indicating that it can be 99% confident that losses over five days would not exceed that value. The average VaR for 2019 was $20.6 million compared to a 2018 average of $18.7 million.

As noted above, VaR is a statistical technique and is not intended to be a guarantee of the maximum loss Renewables may incur.

Networks also experiences commodity price risk, due to volatility in the wholesale energy markets. Networks manages that risk through a combination of regulatory mechanisms, such as the pass-through of the market price of electricity and natural gas to customers, and through comprehensive risk management processes. Those measures mitigate our commodity price exposure, but do not completely eliminate it. Networks also uses electricity contracts as deemed appropriate, both physical and financial, to manage fluctuations in electricity commodity prices in order to provide price stability to customers. It also uses natural gas futures and forwards to manage fluctuations in natural gas commodity prices in order to provide price stability to customers. It includes

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the cost or benefit of those contracts in the amount expensed for electricity or natural gas purchased when the related electricity is sold.

Because all gains or losses on Networks' commodity contracts will ultimately be passed on to retail customers, no sensitivity analysis is performed for Networks. Further information regarding the derivative financial instruments and sensitivity analysis is provided in Notes 11 and 12 of our consolidated financial statements contained in this Annual Report on Form 10-K.

Interest Rate Risk

Total debt outstanding, including commercial paper of $562 million, was $8.0 billion at December 31, 2019, of which $1.1 billion had a floating interest rate; a change of 25 basis points in this interest rate would result in an interest expense fluctuation of approximately $3 million annually. The estimated fair value of our long-term debt at December 31, 2019 was $8.2 billion, in comparison to a book value of $7.4 billion.

AVANGRID uses financial derivative instruments from time to time to alter its fixed and floating rate debt balances or to hedge fixed rates in anticipation of future fixed rate issuances. In 2019 and 2018, AVANGRID entered into three forward interest rate swaps to hedge the issuance of the $750 million of fixed rate debt issued in 2019. The forward interest rate swaps were designated and qualified as cash flow hedges and were settled upon the forecasted debt issuance. The losses on the interest rate swap derivatives are reported as a component of accumulated OCI and are reclassified into earnings during the periods in which the related interest expense is incurred. Further information regarding the interest rate derivative financial instruments is provided in Note 12 of our consolidated financial statements contained in this Annual Report on Form 10-K. There were no interest rate derivative contracts outstanding at December 31, 2019.

Pension and Post-Retirement Plans

We provide pensions and other post-retirement benefits for a significant number of employees, former employees and retirees. In applying relevant accounting policies, we have made critical estimates related to actuarial assumptions, including assumptions of expected returns on plan assets, discount rates, health care cost trends and future compensation. The cost of pension and other post-retirement benefits in future periods will depend on actual returns on plan assets, assumptions for future periods, contributions and benefit experience. In 2019, we contributed $65 million to our pension plans. Our contribution to the pension plans in 2020 is expected to be approximately $83 million.

The discount rates used in accounting for pension and other benefit obligations in 2019 ranged from 2.93% to 4.09%. The expected rate of return on plan assets for qualified pension benefits in 2019 ranged from 5.50% to 7.40%. The following tables reflect the estimated sensitivity associated with a change in certain significant actuarial assumptions (each assumption change is presented mutually exclusive of other assumption changes):

		Impact on 2019 Pension Expense Increase (Decrease)	
	Change in Assumption	Pension Benefits	Post Retirement
		(in millions)	
Increase in discount rate	50 basis points	$ (17)	$ (2)
Decrease in discount rate	50 basis points	$ 17	$ 2
Increase in return on plan assets	50 basis points	$ (13)	$ (1)
Decrease in return on plan assets	50 basis points	$ 13	$ 1

Credit Risk

This risk is defined as the risk that a third party will not fulfill its contractual obligations and, therefore, generate losses for AVANGRID. Networks is exposed to nonpayment of customer bills. Standard debt recovery procedures are in place, in accordance with best practices and in compliance with applicable state regulations and embedded tariff mechanisms to manage uncollectable expense. Our credit department, based on guidelines approved by our board, establishes and manages its counterparty credit limits. We have developed a matrix of unsecured credit thresholds that are dependent on a counterparty's or the counterparty guarantor's applicable credit rating. Credit risk is mitigated by contracting with multiple counterparties and limiting exposure to individual counterparties or counterparty families to clearly defined limits based upon the risk of counterparty default. At the counterparty level, we employ specific eligibility criteria in determining appropriate limits for each prospective counterparty and supplement this with netting and collateral agreements, including margining, guarantees, letters of credit and cash deposits, where appropriate.

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Renewables is also exposed to credit risk through its energy management operations. We manage counterparty credit risk for our subsidiaries with energy management through established policies, including counterparty credit limits, and in some cases credit enhancements, such as cash prepayments, letters of credit, cash and other collateral and guarantees.

Some relevant considerations when assessing the credit risk exposure of the energy management operations are as follows:

- Operations are primarily concentrated in the energy industry.
- Trade receivables and other financial instruments are predominately with energy, utility and financial services-related companies, as well as municipalities, cooperatives and other trading companies in the U.S., although there is a growing segment of long-term power sales (PPAs) signed with commercial and industrial customers of high credit quality.
- Overall credit risk is managed through established credit policies by a Credit Risk Management group that is independent of the energy management function.
- Prospective and existing customers are reviewed for creditworthiness based upon established standards, with customers not meeting minimum standards providing various credit enhancements or secured payment terms, such as guarantees, letters of credit or the posting of margin cash collateral.
- Master netting agreements are used, where appropriate, to offset cash and non-cash gains and losses arising from derivative instruments with the same counterparty.

Based on our policies and risk exposures related to credit risk from its management in Renewables, we do not anticipate a material adverse effect on our financial statements as a result of counterparty nonperformance. As of December 31, 2019, approximately 98% of our energy management counterparty credit risk exposure is associated with companies that have investment grade credit ratings.

Treasury Management (including Liquidity Risk)

We manage our overall liquidity position as part of the group of companies controlled by the Iberdrola Group, and are a party to a liquidity agreement with a financial institution, along with certain members of the Iberdrola Group. We optimize our liquidity within the United States through a series of arms-length intercompany lending arrangements with our subsidiaries and among the regulated utilities to provide for lending of surplus cash to subsidiaries with liquidity needs, subject to the limitation that the regulated utilities may not lend to unregulated affiliates. These arrangements minimize overall short-term funding costs and maximize returns on the temporary cash investments of the subsidiaries. We also have a bi-lateral demand note agreement with a Canadian affiliate of the Iberdrola Group. We have the capacity to borrow from third parties through a $2 billion commercial paper program, the $2.5 billion AVANGRID Credit Facility which backstops the commercial paper program and $500 million from an Iberdrola Group Credit Facility. For more information, see the section entitled "—Liquidity and Capital Resources—Liquidity Resources" of this Annual Report on Form 10-K.

Networks

Networks' regulated utilities fund their operations independently, except to the extent that they borrow on a short-term basis from unregulated affiliates and from each other when circumstances warrant in order to minimize short-term funding costs and maximize returns on temporary cash investments. The regulated utilities are prohibited by regulatory order from lending to unregulated affiliates. Networks' regulated utilities each independently accesses the investment grade debt capital markets for long-term funding and each are borrowers under the AVANGRID Credit Facility described in "—Liquidity and Capital Resources —Liquidity Resources" of this Annual Report on Form 10-K.

Networks' regulated utilities are subjected by regulatory order to certain credit quality maintenance measures, including minimum equity ratios, that are linked to the level of equity assumed in the establishment of revenue requirements. The companies maintain their equity ratios at or above the minimum through dividend declarations or, when necessary, capital contributions from AVANGRID.

Renewables

Renewables historically has been financed through equity contributions, intercompany loans during construction, tax equity partnerships and, to a lesser extent, sale-leaseback arrangements. The outstanding balance of its financing lease was $50 million at December 31, 2019.

Renewables is a party to a cash pooling arrangement with Avangrid, Inc. All Renewables revenues are concentrated in and all Renewables disbursements are made from Avangrid, Inc. Net cash surpluses or deficits at Renewables are recorded as intercompany receivables or payables and these balances are periodically reduced to zero through dividends or capital contributions. In April 2019, Renewables recorded a net non-cash dividend of $309 million to Avangrid, Inc. to zero out account balances that had principally accumulated prior to January 2019.

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Item 8. Financial Statements and Supplementary Data

Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors

Avangrid, Inc.:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Avangrid, Inc. and subsidiaries (the Company) as of December 31, 2019 and 2018, the related consolidated statements of income, comprehensive income, changes in equity, and cash flows for each of the years in the three-year period ended December 31, 2019, and the related notes and financial statement schedule I (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2019, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2019, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated March 2, 2020 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the consolidated financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Evaluation of the impairment of the carrying value of goodwill in the Renewables reporting unit

As discussed in Notes 3(g) and 7 to the consolidated financial statements, the goodwill balance as of December 31, 2019 was $3,119 million, of which $372 million related to the Renewables reporting unit. The Company performs goodwill impairment testing on an annual basis or more frequently if events occur or circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying amount.

We identified the evaluation of the impairment of the carrying value of goodwill for the Renewables reporting unit as a critical audit matter due to certain estimates and assumptions the Company made to determine the fair value of the

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Renewables reporting unit. As a result, a higher degree of auditor judgment was required to evaluate certain assumptions used in the Company's estimate of the fair value of the Renewables reporting unit. Specifically, the Company's determination of the forecasted power production and forecasted market prices, which are used to develop the revenue forecast, and the determination of the discount rates, required subjective and challenging auditor judgment.

The primary procedures we performed to address this critical audit matter included the following. We tested certain internal controls over the Company's goodwill impairment assessment process, including controls related to the determination of the forecasted power production, forecasted market prices and discount rates used to estimate the fair value of the Renewables reporting unit. To assess the Company's ability to forecast revenues, we compared the reporting unit's historical revenue forecasts to actual revenues. We compared the reporting unit's forecasted power production and forecasted market prices to historical power production and market prices. We also evaluated the forecasted market prices by comparing them to third-party published reports by industry analysts. In addition, we involved valuation professionals with specialized skills and knowledge, who assisted in testing the selected discount rates by independently developing discount rates using publicly available market data for comparable entities, and comparing the results of our independently developed discount rates to the Company's discount rates.

Evaluation of regulatory assets and liabilities

As discussed in Notes 3(c) and 6 to the consolidated financial statements, the Company accounts for their regulated operations in accordance with Financial Accounting Standards Board Accounting Standard Codification Topic 980, Regulated Operations (ASC Topic 980). Pursuant to the requirements of ASC Topic 980, the financial statements of a rate-regulated enterprise reflects the actions of regulators. These actions may result in the recognition of revenue and expenses in time periods that are different than non-rate-regulated enterprises. The Company capitalizes, as regulatory assets, incurred and accrued costs that are probable of recovery in future electric and natural gas rates. In addition, obligations to refund previously collected revenue or to spend revenue collected from customers on future costs are recorded as regulatory liabilities. The Company's regulated utilities are subject to complex and comprehensive federal, state and local regulation and legislation, including regulations promulgated by state utility commissions and the Federal Energy Regulatory Commission.

We have identified the evaluation of regulatory assets and liabilities as a critical audit matter. This was due to the extent of audit effort required in the evaluation of regulatory assets and liabilities in each of the relevant jurisdictions.

The primary procedures we performed to address this critical audit matter included the following. We tested certain internal controls over the Company's regulatory accounting process, including controls related to the Company's application of ASC Topic 980 in each jurisdiction and the Company's calculation and review of regulatory assets and liabilities. We selected regulatory assets and liabilities and assessed the Company's application of ASC Topic 980 in the relevant jurisdiction by evaluating the underlying orders, statutes, rulings, memorandums, filings or publications issued by the respective regulators. We selected a sample of the regulatory assets and liabilities activity and using the methodologies approved by the relevant regulatory commissions, recalculated the activity and agreed the data used in the calculations to the Company's underlying books and records. We compared the amounts calculated by the Company to the amounts recorded in the consolidated financial statements.

Evaluation of tax equity financing arrangements

As discussed in Notes 3 and 20 to the consolidated financial statements, the Company participates in certain tax equity financing arrangements (TEFs) that qualify as variable interest entities (VIEs). For TEFs where the economic allocations of income are not based on pro rata ownership percentages, a balance sheet-oriented hypothetical liquidation at book value (HLBV) method is used to reflect the substantive profit sharing arrangement. Under the HLBV method, the amounts reported as noncontrolling interests and net income (loss) attributable to noncontrolling interests in the consolidated balance sheets and consolidated statements of income are based on the amounts the noncontrolling interest would hypothetically receive at each balance sheet date under the liquidation provisions of each partnership's ownership agreement assuming the net assets of the projects were liquidated at recorded amounts and distributed to the equity holders. Noncontrolling interests and net loss attributable to noncontrolling interests as of and for the year ended December 31, 2019 were $349 million and $24 million, respectively.

We identified the evaluation of tax equity financing arrangements as a critical audit matter. This was due to the nature and extent of audit effort required, which included specialized skills and knowledge to evaluate that the HLBV methodology used was consistent with the liquidation provisions of the underlying operating and partnership agreements, which can be based on income tax rules and regulations.

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The primary procedures we performed to address this critical audit matter included the following. We tested certain internal controls over the Company's review of the HLBV model, including controls related to review of the setup and accounting of the partnership liquidation model in relation to the operating and partnership agreement provisions, as well as the applicable tax regulations. We involved tax professionals with specialized skills and knowledge, who assisted in:

- analyzing the tax status of the entities and the requirements of the operating and partnership agreement provisions, as well as the partnership tax regulations, and

- evaluating the Company's methodology for calculating the hypothetical liquidation amounts for a partnership in accordance with the operating and partnership agreement provisions, as well as the partnership tax regulations.

/s/ KPMG LLP

We have served as the Company's auditor since 2017.

New York, New York
March 2, 2020

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Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors

Avangrid, Inc.:

Opinion on Internal Control Over Financial Reporting

We have audited Avangrid, Inc. and subsidiaries' (the Company) internal control over financial reporting as of December 31, 2019, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2019, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2019 and 2018, the related consolidated statements of income, comprehensive income, changes in equity, and cash flows for each of the years in the three-year period ended December 31, 2019, and the related notes and financial statement schedule I (collectively, the consolidated financial statements), and our report dated March 2, 2020 expressed an unqualified opinion on those consolidated financial statements.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Report of Management on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ KPMG LLP

New York, New York
March 2, 2020

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Avangrid, Inc. and Subsidiaries
Consolidated Statements of Income

Years Ended December 31,	2019	2018	2017
(Millions, except for number of shares and per share data)			
Operating Revenues	**$ 6,338**	**$ 6,478**	**$ 5,963**
Operating Expenses			
Purchased power, natural gas and fuel used	1,509	1,653	1,338
Operations and maintenance	2,301	2,248	2,091
Loss from assets held for sale	—	16	642
Depreciation and amortization	934	855	824
Taxes other than income taxes, net	591	579	563
Total Operating Expenses	**5,335**	**5,351**	**5,458**
Operating Income	**1,003**	**1,127**	**505**
Other Income and (Expense)			
Other income (expense)	119	(66)	(62)
Earnings (losses) from equity method investments	3	10	(40)
Interest expense, net of capitalization	(306)	(303)	(280)
Income Before Income Tax	**819**	**768**	**123**
Income tax expense (benefit)	143	170	(259)
Net Income	**676**	**598**	**382**
Net loss (income) attributable to noncontrolling interests	24	(3)	(1)
Net Income Attributable to Avangrid, Inc.	**$ 700**	**$ 595**	**$ 381**
Earnings Per Common Share, Basic:	**$ 2.26**	**$ 1.92**	**$ 1.23**
Earnings Per Common Share, Diluted:	**$ 2.26**	**$ 1.92**	**$ 1.23**
Weighted-average Number of Common Shares Outstanding:			
Basic	309,491,082	309,503,319	309,502,861
Diluted	309,514,910	309,712,628	309,661,883

The accompanying notes are an integral part of our consolidated financial statements.

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Avangrid, Inc. and Subsidiaries
Consolidated Statements of Comprehensive Income

Years Ended December 31,	2019	2018	2017
(Millions)			
Net Income	**$ 676**	**$ 598**	**$ 382**
Other Comprehensive Income			
Gain on defined benefit plans, net of income taxes of $(0.3) and $1.1, respectively	1	3	—
Amortization of pension cost for nonqualified plans, net of income taxes of $(1.0), $0.3 and $0.2, respectively	(1)	1	1
Unrealized (loss) gain during the year on derivatives qualifying as cash flow hedges, net of income taxes of $(8.6), $(6.6) and $15.2, respectively	(22)	(21)	25
Reclassification to net income of losses (gains) on cash flow hedges, net of income taxes of $2.7, $(6.5) and $9.3, respectively	11	(8)	14
Other Comprehensive (Loss) Income	**(11)**	**(25)**	**40**
Comprehensive Income	665	573	422
Net loss (income) attributable to noncontrolling interests	24	(3)	(1)
Comprehensive Income Attributable to Avangrid, Inc.	**$ 689**	**$ 570**	**$ 421**

The accompanying notes are an integral part of our consolidated financial statements.

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Avangrid, Inc. and Subsidiaries
Consolidated Balance Sheets

As of December 31,	2019	2018
(Millions)		
Assets		
Current Assets		
Cash and cash equivalents	$ 178	$ 36
Accounts receivable and unbilled revenues, net	1,082	1,142
Accounts receivable from affiliates	10	6
Derivative assets	11	16
Fuel and gas in storage	110	109
Materials and supplies	141	126
Prepayments and other current assets	199	229
Regulatory assets	294	299
Total Current Assets	**2,025**	**1,963**
Total Property, Plant and Equipment ($787 and $726 related to VIEs, respectively)	**25,218**	**23,459**
Operating lease right-of-use assets	70	—
Equity method investments	645	366
Other investments	63	58
Regulatory assets	2,567	2,640
Deferred income taxes regulatory	—	6
Other Assets		
Goodwill	3,119	3,127
Intangible assets	314	323
Derivative assets	84	63
Other	311	162
Total Other Assets	**3,828**	**3,675**
Total Assets	**$ 34,416**	**$ 32,167**

The accompanying notes are an integral part of our consolidated financial statements.

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Avangrid, Inc. and Subsidiaries
Consolidated Balance Sheets

As of December 31,	2019	2018
(Millions, except share information)		
Liabilities		
Current Liabilities		
Current portion of debt	$ 730	$ 394
Notes payable	560	587
Interest accrued	72	62
Accounts payable and accrued liabilities	1,361	1,132
Accounts payable to affiliates	64	58
Dividends payable	136	136
Taxes accrued	56	59
Operating lease liabilities	12	—
Derivative liabilities	20	44
Other current liabilities	334	327
Regulatory liabilities	242	205
Total Current Liabilities	**3,587**	**3,004**
Regulatory liabilities	3,281	3,223
Other Non-current Liabilities		
Deferred income taxes	1,814	1,530
Deferred income	1,274	1,385
Pension and other postretirement	1,100	1,102
Operating lease liabilities	65	—
Derivative liabilities	85	97
Asset retirement obligations	190	217
Environmental remediation costs	338	339
Other	380	499
Total Other Non-current Liabilities	**5,246**	**5,169**
Non-current debt	6,716	5,368
Total Non-current Liabilities	**15,243**	**13,760**
Total Liabilities	**18,830**	**16,764**
Commitments and Contingencies	—	—
Equity		
Stockholders' Equity:		
Common stock, $.01 par value, 500,000,000 shares authorized, 309,752,140 shares issued; 309,005,272 shares outstanding	3	3
Additional paid-in capital	13,660	13,657
Treasury Stock	(12)	(12)
Retained earnings	1,681	1,528
Accumulated other comprehensive loss	(95)	(72)
Total Stockholders' Equity	**15,237**	**15,104**
Noncontrolling interests	349	299
Total Equity	**15,586**	**15,403**
Total Liabilities and Equity	**$ 34,416**	**$ 32,167**

The accompanying notes are an integral part of our consolidated financial statements.

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Consolidated Statements of Cash Flows
Avangrid, Inc. and Subsidiaries
Consolidated Statements of Cash Flows

Years Ended December 31,	2019	2018	2017
(Millions)			
Cash Flow from Operating Activities			
Net income	**$ 676**	**$ 598**	**$ 382**
Adjustments to reconcile net income to net cash provided by operating activities			
Depreciation and amortization	934	855	824
Loss from assets held for sale	—	16	642
Accretion expenses	12	12	10
Regulatory assets/liabilities amortization and carrying cost	64	73	62
Pension cost	91	123	112
Earnings from equity method investments	(3)	(10)	40
Distribution of earnings from equity method investments	12	14	16
Unrealized (gains) losses on marked to market derivative contracts	(76)	22	17
Gain from divestment and disposal of property	(135)	(10)	(2)
Deferred taxes	138	151	(251)
Other non-cash items	(51)	(27)	(73)
Changes in operating assets and liabilities:			
Current assets	126	(117)	(89)
Noncurrent assets	(152)	(87)	218
Current liabilities	(5)	98	116
Noncurrent liabilities	(38)	80	(261)
Net Cash Provided by Operating Activities	**1,593**	**1,791**	**1,763**
Cash Flow from Investing Activities			
Capital expenditures	(2,740)	(1,787)	(2,416)
Contributions in aid of construction	74	60	57
Proceeds from sale of equity method and other investment	108	186	—
Proceeds from sale of property, plant and equipment	18	18	12
Payments to affiliates	(2)	—	—
Cash distribution from equity method investments	5	4	4
Other investments and equity method investments, net	(176)	(45)	2
Net Cash Used in Investing Activities	**(2,713)**	**(1,564)**	**(2,341)**
Cash Flow from Financing Activities			
Non-current debt issuances	2,137	597	888
Repayments of non-current debt	(346)	(217)	(305)
(Repayments) receipts of other short-term debt, net	(28)	(201)	625
Repayments of financing leases	(27)	(13)	(33)
Payments on tax equity financing arrangements	—	—	(113)
Repurchase of common stock	—	(4)	(3)
Issuance of common stock	—	(2)	(1)
Distributions to noncontrolling interests	(63)	(76)	—
Contributions from noncontrolling interests	133	223	5
Dividends paid	(545)	(537)	(535)
Net Cash Provided by (Used in) Financing Activities	**1,261**	**(230)**	**528**
Net Increase (Decrease) in Cash, Cash Equivalents and Restricted Cash	**141**	**(3)**	**(50)**
Cash, Cash Equivalents and Restricted Cash, Beginning of Year	**43**	**46**	**96**
Cash, Cash Equivalents and Restricted Cash, End of Year	**$ 184**	**$ 43**	**$ 46**
Supplemental Cash Flow Information			
Cash paid for interest, net of amounts capitalized	$ 266	$ 224	$ 202
Cash paid (refunded) for income taxes	$ 2	$ (13)	$ 13

The accompanying notes are an integral part of our consolidated financial statements.

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Avangrid, Inc. and Subsidiaries
Consolidated Statements of Changes in Equity

	Avangrid, Inc. Stockholders								
(Millions, except for number of shares)	Number of shares (*)	Common Stock	Additional paid-in capital	Treasury Stock	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total Stockholders' Equity	Non-controlling Interests	Total Equity
Balances, December 31, 2016	**308,993,149**	**$ 3**	**$ 13,653**	**$ (5)**	**$ 1,630**	**$ (86)**	**$ 15,195**	**$ 13**	**$ 15,208**
Net income	—	—	—	—	381	—	381	1	382
Other comprehensive income, net of tax of $24.7	—	—	—	—	—	40	40	—	40
Comprehensive income									422
Dividends declared, $1.728/share	—	—	—	—	(535)	—	(535)	—	(535)
Release of common stock held in trust	5,649	—	—	—	—	—	—	—	—
Issuance of common stock	70,493	—	(1)	—	—	—	(1)	—	(1)
Repurchase of common stock	(64,019)	—	—	(3)	—	—	(3)	—	(3)
Stock-based compensation	—	—	1	—		—	1		1
Transaction with noncontrolling interests	—	—	—	—	(1)	—	(1)	5	4
Balances, December 31, 2017	**309,005,272**	**3**	**13,653**	**(8)**	**1,475**	**(46)**	**15,077**	**19**	**15,096**
Adoption of accounting standards	—	—	—	—	(3)	(1)	(4)	140	136
Net income	—	—	—	—	595	—	595	3	598
Other comprehensive income, net of tax of $(11.7)	—	—	—	—	—	(25)	(25)	—	(25)
Comprehensive income									573
Dividends declared, $1.744/share	—	—	—	—	(540)	—	(540)	—	(540)
Issuance of common stock	81,208	—	1	—	(3)	—	(2)	—	(2)
Repurchase of common stock	(81,208)	—	—	(4)	—	—	(4)	—	(4)
Stock-based compensation	—	—	3	—	—	—	3	—	3
Distributions to noncontrolling interests	—	—	—	—	—	—	—	(76)	(76)
Contributions from noncontrolling interests	—	—	—	—	4	—	4	213	217
Balances, December 31, 2018	**309,005,272**	**3**	**13,657**	**(12)**	**1,528**	**(72)**	**15,104**	**299**	**15,403**
Adoption of accounting standards	—	—	—	—	11	(12)	(1)	—	(1)
Net income	—	—	—	—	700	—	700	(24)	676
Other comprehensive income, net of tax of $(7.2)	—	—	—	—	—	(11)	(11)	—	(11)
Comprehensive income									665
Dividends declared, $1.76/share	—	—	—	—	(545)	—	(545)	—	(545)
Stock-based compensation	—	—	3	—	—	—	3	—	3
Distributions to noncontrolling interests	—	—	—	—	(4)	—	(4)	(59)	(63)
Contributions from noncontrolling interests	—	—	—	—	(9)	—	(9)	133	124
Balances, December 31, 2019	**309,005,272**	**$ 3**	**$ 13,660**	**$ (12)**	**$ 1,681**	**$ (95)**	**$ 15,237**	**$ 349**	**$ 15,586**

(*) Par value of share amounts is $.01

The accompanying notes are an integral part of our consolidated financial statements.

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Note 1. Background and Nature of Operations

Avangrid, Inc., formerly Iberdrola USA, Inc. (AVANGRID, we or the Company), is an energy services holding company engaged in the regulated energy transmission and distribution business through its principal subsidiary Avangrid Networks, Inc. (Networks), and in the renewable energy generation business through its principal subsidiary, Avangrid Renewables Holding, Inc. (ARHI). ARHI in turn holds subsidiaries including Avangrid Renewables, LLC (Renewables). Iberdrola, S.A. (Iberdrola), a corporation organized under the laws of the Kingdom of Spain, owns 81.5% of the outstanding common stock of AVANGRID. The remaining outstanding shares are publicly traded on the New York Stock Exchange and owned by various shareholders. AVANGRID was organized in 1997 as NGE Resources, Inc. under the laws of New York as the holding company for its principal operating utility companies.

In December 2017, management committed to a plan to sell the gas storage and trading businesses because they represented non-core businesses that were not aligned with our strategic objectives. On March 1, 2018, the Company closed a transaction to sell Enstor Energy Services, LLC, which operated AVANGRID's gas trading business, to CCI U.S. Asset Holdings LLC, a subsidiary of Castleton Commodities International, LLC (CCI). On May 1, 2018, the Company closed a transaction to sell Enstor Gas, LLC (Gas), which operated AVANGRID's gas storage business, to Amphora Gas Storage USA, LLC.

Note 2. Basis of Presentation

The accompanying consolidated financial statements have been prepared in accordance with U.S. GAAP and are presented on a consolidated basis, and therefore include the accounts of AVANGRID and its consolidated subsidiaries, Networks and ARHI. All intercompany transactions and accounts have been eliminated in all periods presented.

Note 3. Summary of Significant Accounting Policies, New Accounting Pronouncements and Use of Estimates

Significant Accounting Policies

We consider the following policies to be the most significant in understanding the judgments that are involved in preparing our consolidated financial statements:

(a) Principles of consolidation

We consolidate the entities in which we have a controlling financial interest, after the elimination of intercompany transactions. We account for investments in common stock where we have the ability to exercise significant influence, but not control, using the equity method of accounting.

(b) Revenue recognition

We recognize revenues when we transfer control of promised goods or services to our customers in an amount that reflects the consideration we expect to be entitled to in exchange for those goods or services. Refer to Note 4 for further details.

(c) Regulatory accounting

We account for our regulated utilities' operations in accordance with the authoritative guidance applicable to entities with regulated operations that meet the following criteria: (i) rates are established or approved by a third-party regulator; (ii) rates are designed to recover the entity's cost of providing regulated services or products and; (iii) there is a reasonable expectation that rates are set at levels that will recover the entity's costs and be collected from customers. Regulatory assets represent incurred costs that have been deferred because of their probable future recovery from customers through regulated rates. Regulatory liabilities represent: (i) the excess recovery of costs or accrued credits that have been deferred because it is probable such amounts will be returned to customers through future regulated rates; or (ii) billings in advance of expenditures for approved regulatory programs.

Regulatory assets and liabilities are amortized and the related expense or revenue is recognized in the consolidated statements of income consistent with the recovery or refund included in customer rates. We believe that it is probable that our currently recorded regulatory assets and liabilities will be recovered or settled in future rates.

(d) Business combinations and assets acquisitions

We apply the acquisition method of accounting to account for business combinations. The consideration transferred for an acquisition is the fair value of the assets transferred, the liabilities incurred by the acquirer to former owners of the acquiree and the equity interests issued by the acquirer. Acquisition related costs are expensed as incurred. Identifiable assets acquired and

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liabilities and contingent liabilities assumed in a business combination are measured initially at their fair values at the acquisition date. The excess of the consideration transferred over the fair value of the identifiable net assets acquired is recorded as goodwill. We recognize adjustments to provisional amounts relating to a business combination that are identified during the measurement period in the reporting period in which the adjustment amounts are determined.

In contrast to a business combination, we classify a transaction as an asset acquisition when substantially all of the fair value of the gross assets acquired is concentrated in a single identifiable asset or group of similar identifiable assets or otherwise does not meet the definition of a business.

(e) Noncontrolling interests

Noncontrolling interests represent the portion of our net income (loss), comprehensive income (loss) and net assets that is not allocable to us and is calculated based on our ownership percentage. For holdings where the economic allocations are not based pro rata on ownership percentages, we use the balance sheet-oriented hypothetical liquidation at book value (HLBV) method, to reflect the substantive profit sharing arrangement.

Under the HLBV method, the amounts reported as "Noncontrolling interests" and "Net income (loss) attributable to noncontrolling interests" in our consolidated balance sheets and consolidated statements of income represent the amounts the noncontrolling interest would hypothetically receive at each balance sheet reporting date under the liquidation provisions of each holding's ownership agreement assuming the net assets of the projects were liquidated at recorded amounts determined in accordance with U.S. GAAP and distributed to the investors. The noncontrolling interest in our statements of income and comprehensive income is determined as the difference in noncontrolling interests on our consolidated balance sheets at the start, or at inception of the noncontrolling interest if applicable, and end of each reporting period, after taking into account any capital transactions between the holdings and the third party. The noncontrolling interest balances in the holdings are reported as a component of equity on our consolidated balance sheets.

(f) Equity method investments

We account for joint ventures that do not meet consolidation criteria using the equity method. We reflect earnings (losses) recognized under the equity method in the consolidated statements of income as "Earnings (losses) from equity method investments." We recognize dividends received from joint ventures as a reduction in the carrying amount of the investment and not as dividend income. We assess and record an impairment of our equity method investments in earnings for a decline in value that is determined to be other than temporary (OTTI).

(g) Goodwill and other intangible assets

Goodwill represents future economic benefits arising from other assets acquired in a business combination that are not individually identified and separately recognized. Goodwill is initially measured at cost, being the excess of the aggregate of the consideration transferred, the fair value of any noncontrolling interest and the acquisition date fair value of any previously held equity interest in the acquiree over the fair value of the net identifiable assets acquired and liabilities assumed.

Goodwill is not amortized, but is subject to an assessment for impairment performed in the fourth quarter or more frequently if events occur or circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying amount. A reporting unit is an operating segment or one level below an operating segment and is the level at which we test goodwill for impairment. In assessing goodwill for impairment, we have the option of first performing a qualitative assessment to determine whether a quantitative assessment is necessary (step zero). If we determine, on the basis of qualitative factors, that the fair value of the reporting unit is more likely than not greater than the carrying amount, no further testing is required. If we bypass step zero or perform the qualitative assessment, but determine that it is more likely than not that its fair value is less than its carrying amount, we perform a quantitative two step fair value based test. Step one compares the fair value of the reporting unit to its carrying amount, including goodwill. If the carrying amount of the reporting unit exceeds its fair value, step two is performed. Step two requires an allocation of fair value to the individual assets and liabilities using business combination accounting guidance to determine the implied fair value of goodwill. If the implied fair value of goodwill is less than its carrying amount, we record an impairment loss as a reduction to goodwill and a charge to operating expenses.

Intangible assets acquired separately are measured on initial recognition at cost. The cost of intangible assets acquired in a business combination is their fair value at the date of acquisition. Following initial recognition, intangible assets are carried at cost less any accumulated amortization and impairment losses. The useful lives of intangible assets are assessed as either finite or indefinite.

Intangible assets with finite lives are amortized on a straight-line basis over the useful economic life, which ranges from four to forty years, and assessed for impairment whenever there is an indication that the intangible asset may be impaired. The amortization expense on intangible assets with finite lives is recognized in our consolidated statements of income within the expense category that is consistent with the function of the intangible assets.

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(h) Property, plant and equipment

Property, plant and equipment are accounted for at historical cost. In cases where we are required to dismantle installations or to recondition the site on which they are located, we record the estimated cost of removal or reconditioning as an asset retirement obligation (ARO) and an equal amount is added to the carrying amount of the asset.

Development and construction of our various facilities are carried out in stages. Project costs are expensed during early stage development activities. Once certain development milestones are achieved and it is probable that we can obtain future economic benefits from a project, we capitalize salaries and wages for persons directly involved in the project, and engineering, permits, licenses, wind measurement and insurance costs. Development projects in construction are reviewed periodically for any indications of impairment.

Assets are transferred from "Construction work in progress" to "Property, plant and equipment" when they are available for service.

Wind turbine and related equipment costs, other project construction costs and interest costs related to the project are capitalized during the construction period through substantial completion. AROs are recorded at the date projects achieve commercial operation.

The cost of plant and equipment in use is depreciated on a straight-line basis, less any estimated residual value. The main asset categories are depreciated over the following estimated useful lives:

Major class	Asset Category	Estimated Useful Life (years)
	Combined cycle plants	35-75
	Hydroelectric power stations	45-90
Plant	Wind power stations	25-40
	Transport facilities	40-75
	Distribution facilities	5-82
Equipment	Conventional meters and measuring devices	7-41
	Computer software	4-25
Other	Buildings	30-82
	Operations offices	5-75

Networks determines depreciation expense using the straight-line method, based on the average service lives of groups of depreciable property, which include estimated cost of removal, in service at each operating company. Consistent with FERC accounting requirements, Networks charges the original cost of utility plant retired or otherwise disposed to accumulated depreciation. The Networks composite rates for depreciation were 2.9% of average depreciable property for 2019 and 2.8% for 2018.

We charge repairs and minor replacements to operating expenses, and capitalize renewals and betterments, including certain indirect costs.

Allowance for funds used during construction (AFUDC), applicable to Networks' entities applying regulatory accounting, is a noncash item that represents the allowed cost of capital, including a return on equity (ROE), used to finance construction projects. The portion of AFUDC attributable to borrowed funds is recorded as a reduction of interest expense and the remainder is recorded as other income.

(i) Leases

We determine if an arrangement is a lease at inception. We classify a lease as a finance lease if it meets any one of specified criteria that in essence transfers ownership of the underlying asset to us by the end of the lease term. If a lease does not meet any of those criteria, we classify it as an operating lease. On our consolidated balance sheets, we include, for operating leases: "Operating lease right-of-use (ROU) assets" and "Operating lease liabilities (current and non-current)"; and for finance leases: finance lease ROU assets in "Other assets" and liabilities in "Other current liabilities" and "Other liabilities."

ROU assets represent our right to use an underlying asset for the lease term and lease liabilities represent our obligation to make lease payments arising from the lease. We recognize lease ROU assets and liabilities at commencement of an arrangement based on the present value of lease payments over the lease term. Most of our leases do not provide an implicit rate, so we use our incremental borrowing rate based on information available at the lease commencement date to determine the present value of future payments. A lease ROU asset also includes any lease payments made at or before commencement date, minus any lease incentives received, and includes initial direct costs incurred. We do not record leases with an initial term of 12 months or less on the balance sheet for all classes of underlying assets, and we recognize lease expense for those leases on a straight-line basis over

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the lease term. We include variable lease payments that depend on an index or a rate in the ROU asset and lease liability measurement based on the index or rate at the commencement date, or upon a modification. We do not include variable lease payments that do not depend on an index or a rate in the ROU asset and lease liability measurement. A lease term includes options to extend or terminate the lease when it is reasonably certain that we will exercise that option. We recognize lease (rent) expense for operating lease payments on a straight-line basis over the lease term, or for our regulated companies we recognize the amount eligible for recovery under their rate plans, such as actual amounts paid. We amortize finance lease ROU assets on a straight-line basis over the lease term and recognize interest expense based on the outstanding lease liability.

We have lease agreements with lease and non-lease components, and account for lease components and associated non-lease components together as a single lease component, for all classes of underlying assets.

(j) Impairment of long-lived assets

We evaluate property, plant and equipment and other long-lived assets for impairment when events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment evaluation is based on undiscounted cash flow analysis at the lowest level to which cash flows of the long-lived assets or asset groups are largely independent of the cash flows of other assets and liabilities. An impairment loss is required to be recognized if the carrying amount of the asset exceeds the undiscounted future net cash flows associated with that asset.

The impairment loss to be recognized is the amount by which the carrying amount of the long-lived asset exceeds the asset's fair value. Depending on the asset, fair value may be determined by use of a discounted cash flow model (DCF), with assumptions consistent with a market participant's view of the exit price of the asset.

(k) Fair value measurement

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants as of the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place in either the principal market for the asset or liability, or, in the absence of a principal market, in the most advantageous market for the asset or liability.

The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest. A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset according to its highest and best use, or by selling it to another market participant that would use the asset according to its highest and best use.

We use valuation techniques that are appropriate in the circumstances and for which sufficient data is available to measure fair value, maximizing the use of relevant observable inputs and minimizing the use of unobservable inputs. All assets and liabilities for which fair value is measured or disclosed in the consolidated financial statements are categorized within the fair value hierarchy based on the transparency of input to the valuation of an asset or liability as of the measurement date.

The three input levels of the fair value hierarchy are as follows:

- Level 1 - inputs to the valuation methodology are quoted prices (unadjusted) for identical assets or liabilities in active markets.
- Level 2 - inputs to the valuation methodology include quoted prices for similar assets and liabilities in active markets, and inputs that are observable for the asset or liability either directly or indirectly, for substantially the full term of the contract.
- Level 3 - one or more inputs to the valuation methodology are unobservable or cannot be corroborated with market data.

Categorization within the fair value hierarchy is based on the lowest level of input that is significant to the fair value measurement. Certain investments are not categorized within the fair value hierarchy. These investments are measured based on the fair value of the underlying investments but may not be readily redeemable at that fair value.

(l) Equity investments with readily determinable fair values

We measure equity investments with readily determinable fair values at fair value, with changes in fair value reported in net income.

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(m) Derivatives and hedge accounting

Derivatives are recognized on our consolidated balance sheets at their fair value, except for certain electricity commodity purchases and sales contracts for both capacity and energy (physical contracts) that qualify for, and are elected under, the normal purchases and normal sales exception. To be a derivative under the accounting standards for derivatives and hedging, an agreement would need to have a notional and an underlying, require little or no initial net investment and could be net settled. We recognize changes in the fair value of a derivative contract in earnings unless specific hedge accounting criteria are met.

Derivatives that qualify and are designated for hedge accounting are classified as cash flow hedges. We report the gain or loss on the derivative instrument as a component of Other Comprehensive Income (OCI) and later reclassify amounts into earnings when the underlying transaction occurs, which we present in the same income statement line item as the earnings effect of the hedged item. For all designated and qualifying hedges, we maintain formal documentation of the hedge and effectiveness testing in accordance with the accounting standards for derivatives and hedging. If we determine that the derivative is no longer highly effective as a hedge, we will discontinue hedge accounting prospectively. For cash flow hedges of forecasted transactions, we estimate the future cash flows of the forecasted transactions and evaluate the probability of the occurrence and timing of such transactions. If we determine it is probable that the forecasted transaction will not occur, we immediately recognize in earnings hedge gains and losses previously recorded in OCI.

Changes in conditions or the occurrence of unforeseen events could require discontinuance of the hedge accounting or could affect the timing of the reclassification of gains or losses on cash flow hedges from OCI into earnings. For our regulated operations, we record changes in the fair value of electric and natural gas hedge contracts derivative assets or liabilities with an offset to regulatory assets or regulatory liabilities.

We offset fair value amounts recognized for derivative instruments and fair value amounts recognized for the right to reclaim cash collateral or the obligation to return cash collateral arising from derivative instruments executed with the same counterparty under a master netting arrangement.

(n) Cash and cash equivalents

Cash and cash equivalents include cash, bank accounts, and other highly-liquid short-term investments. We consider all highly liquid investments with a maturity date of three months or less when acquired to be cash equivalents and include those investments in “Cash and cash equivalents.” Restricted cash represents cash legally set aside for a specified purpose or as part of an agreement with a third party. Restricted cash is included in “Other non-current assets” on our consolidated balance sheets. Book overdrafts representing outstanding checks in excess of funds on deposit are classified as “Accounts payable and accrued liabilities” on our consolidated balance sheets. Changes in book overdrafts are reported in the operating activities section of our consolidated statements of cash flows.

(o) Accounts receivable and unbilled revenue, net

We record accounts receivable at amounts billed to customers. Certain accounts receivable and payable related to our wholesale activities associated with generation and delivery of electric energy and associated environmental attributes, origination and marketing, natural gas storage, hub services, and energy management, are subject to master netting agreements with counterparties, whereby we have the legal right to offset the balances and are settled on a net basis. Receivables and payables subject to such agreements are presented on our consolidated balance sheets on a net basis.

Accounts receivable include amounts due under Deferred Payment Arrangements (DPA). A DPA allows the account balance to be paid in installments over an extended period of time without interest, which generally exceeds one year, by negotiating mutually acceptable payment terms. The utility companies generally must continue to serve a customer who cannot pay an account balance in full if the customer (i) pays a reasonable portion of the balance; (ii) agrees to pay the balance in installments; and (iii) agrees to pay future bills within thirty days until the DPA is paid in full. Failure to make payments on a DPA results in the full amount of a receivable under a DPA being due. These accounts are part of the regular operating cycle and are classified as short term.

The allowance for doubtful accounts is established by using both historical average loss percentages to project future losses, and a specific allowance is established for known credit issues or for specific items not considered in the historical average calculation. Amounts are written off when we believe that a receivable will not be recovered.

(p) Variable interest entities

An entity is considered to be a variable interest entity (VIE) when its total equity investment at risk is not sufficient to permit the entity to finance its activities without additional subordinated financial support, or its equity investors, as a group, lack the characteristics of having a controlling financial interest. A reporting company is required to consolidate a VIE as its primary beneficiary when it has both the power to direct the activities of the VIE that most significantly impact the VIE's economic performance, and the obligation to absorb losses or the right to receive benefits from the VIE that could potentially be significant

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to the VIE. We evaluate whether an entity is a VIE whenever reconsideration events as defined by the accounting guidance occur (See Note 20).

We have undertaken several structured institutional partnership investment transactions that bring in external investors in certain of our wind farms in exchange for cash. Following an analysis of the economic substance of these transactions, we classify the consideration received at the inception of the arrangement as noncontrolling interests on our consolidated balance sheets. Subsequently, the HLBV method allocates earnings to the noncontrolling interest, which considers the cash and tax benefits provided to the tax equity investors.

(q) Debentures, bonds and bank borrowings

Bonds, debentures and bank borrowings are recorded as a liability equal to the proceeds of the borrowings. The difference between the proceeds and the face amount of the issued liability is treated as discount or premium and is accreted as interest expense or income over the life of the instrument. Incremental costs associated with issuance of the debt instruments are deferred and amortized over the same period as debt discount or premium. Bonds, debentures and bank borrowings are presented net of unamortized discount, premium and debt issuance costs on our consolidated balance sheets.

(r) Inventory

Inventory comprises fuel and gas in storage and materials and supplies. This gas is recorded as inventory. Injections of inventory into storage are priced at the market purchase cost at the time of injection, and withdrawals of working gas from storage are priced at the weighted-average cost in storage. We continuously monitor the weighted-average cost of gas value to ensure it remains at the lower of cost and net realizable value. Inventories to support gas operations are reported on our consolidated balance sheets within “Fuel and gas in storage.”

We also have materials and supplies inventories that are used for construction of new facilities and repairs of existing facilities. These inventories are carried and withdrawn at the lower of cost and net realizable value and reported on our consolidated balance sheets within “Materials and supplies.”

(s) Government grants

Our unregulated subsidiaries record government grants related to depreciable assets within deferred income and subsequently amortize them to earnings as an offset to depreciation and amortization expense over the useful life of the related asset. Our regulated subsidiaries record government grants as a reduction to utility plant to be recovered through rate base, in accordance with the prescribed FERC accounting.

In accounting for government grants related to operating and maintenance costs, amounts receivable are recognized as an offset to expenses in our consolidated statements of income in the period in which the expenses are incurred.

(t) Deferred income

Apart from government grants, we occasionally receive revenues from transactions in advance of the resulting performance obligations arising from the transaction. It is our policy to defer such revenues on our consolidated balance sheets and amortize them into earnings when revenue recognition criteria are met.

(u) Asset retirement obligations

We record the fair value of the liability for an ARO and a conditional ARO in the period in which it is incurred, capitalizing the cost by increasing the carrying amount of the related long-lived asset. The ARO is associated with our long-lived assets and primarily consists of obligations related to removal or retirement of asbestos, polychlorinated biphenyl-contaminated equipment, gas pipeline, cast iron gas mains and electricity generation facilities. The liability is adjusted periodically to reflect revisions to either the timing or amount of the original estimated undiscounted cash flows over time. The liability is accreted to its present value each period and the capitalized cost is depreciated over the useful life of the related asset. Upon settlement, we will either settle the obligation at its recorded amount or incur a gain or a loss. Our regulated utilities defer any timing differences between rate recovery and depreciation expense and accretion as either a regulatory asset or a regulatory liability.

The term conditional ARO refers to an entity’s legal obligation to perform an asset retirement activity in which the timing or method of settlement are conditional on a future event that may or may not be within the entity’s control. If an entity has sufficient information to reasonably estimate the fair value of the liability for a conditional ARO, it must recognize that liability at the time the liability is incurred.

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Our regulated utilities meet the requirements concerning accounting for regulated operations and we recognize a regulatory liability for the difference between removal costs collected in rates and actual costs incurred. These are classified as accrued removal obligations.

(v) Environmental remediation liability

In recording our liabilities for environmental remediation costs the amount of liability for a site is the best estimate, when determinable; otherwise it is based on the minimum liability or the lower end of the range when there is a range of estimated losses. Our environmental liabilities are recorded on an undiscounted basis. Our environmental liability accruals are expected to be paid through the year 2057.

(w) Post-employment and other employee benefits

We sponsor defined benefit pension plans that cover the majority of our employees. We also provide health care and life insurance benefits through various postretirement plans for eligible retirees.

We evaluate our actuarial assumptions on an annual basis and consider changes based on market conditions and other factors. All of our qualified defined benefit plans are funded in amounts calculated by independent actuaries, based on actuarial assumptions proposed by management.

We account for defined benefit pension or other postretirement plans, recognizing an asset or liability for the overfunded or underfunded plan status. For a pension plan, the asset or liability is the difference between the fair value of the plan's assets and the projected benefit obligation. For any other postretirement benefit plan, the asset or liability is the difference between the fair value of the plan's assets and the accumulated postretirement benefit obligation. Our utility operations reflect all unrecognized prior service costs and credits and unrecognized actuarial gains and losses as regulatory assets rather than in other comprehensive income, as management believes it is probable that such items will be recoverable through the ratemaking process. We use a December 31st measurement date for our benefits plans.

We amortize prior service costs for both the pension and other postretirement benefits plans on a straight-line basis over the average remaining service period of participants expected to receive benefits. Unrecognized actuarial gains and losses related to the pension and other postretirement benefits plans are amortized over the average remaining service period or 10 years, considering any requirement by the regulators for our Networks subsidiaries. Our policy is to calculate the expected return on plan assets using the market related value of assets. That value is determined by recognizing the difference between actual returns and expected returns over a five-year period.

(x) Income taxes

We use the asset and liability method of accounting for income taxes. Deferred tax assets and liabilities reflect the expected future tax consequences, based on enacted tax laws, of temporary differences between the tax basis of assets and liabilities and their financial reporting amounts. In accordance with U.S. GAAP for regulated industries, certain of our regulated subsidiaries have established a regulatory asset for the net revenue requirements to be recovered from customers for the related future tax expense associated with certain of these temporary differences. We defer the investment tax credits when earned and amortize them over the estimated lives of the related assets. We also recognize the income tax consequences of intra-entity transfers of assets other than inventory when the transfer occurs.

Deferred tax assets and liabilities are measured at the expected tax rate for the period in which the asset or liability will be realized or settled, based on legislation enacted as of the balance sheet date. Changes in deferred income tax assets and liabilities that are associated with components of OCI are charged or credited directly to OCI. Significant judgment is required in determining income tax provisions and evaluating tax positions. Our tax positions are evaluated under a more-likely-than-not recognition threshold before they are recognized for financial reporting purposes. We record valuation allowances to reduce deferred tax assets when it is more likely than not that we will not realize all or a portion of a tax benefit. Deferred tax assets and liabilities are netted and classified as non-current on our consolidated balance sheets.

We record the excess of state franchise tax computed as the higher of a tax based on income or a tax based on capital in "Taxes other than income taxes" and "Taxes accrued" in our consolidated financial statements.

Positions taken or expected to be taken on tax returns, including the decision to exclude certain income or transactions from a return, are recognized in the financial statements when it is more likely than not the tax position can be sustained based solely on the technical merits of the position. The amount of a tax return position that is not recognized in the financial statements is disclosed as an unrecognized tax benefit. Changes in assumptions on tax benefits may also impact interest expense or interest income and may result in the recognition of tax penalties. Interest and penalties related to unrecognized tax benefits are recorded within "Interest expense, net of capitalization" and "Other income and (expense)" in our consolidated statements of income.

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Uncertain tax positions have been classified as non-current unless expected to be paid within one year. In 2019, we netted our liability for uncertain tax positions against all same jurisdiction deferred tax assets, net operating losses and tax credit carryforwards. Our policy is to recognize interest and penalties on uncertain tax positions as a component of interest expense in the consolidated statements of income.

Federal production tax credits applicable to our renewable energy facilities, that are not part of a tax equity financing arrangement, are recognized as a reduction in income tax expense with a corresponding reduction in deferred income tax liabilities.

Our income tax expense, deferred tax assets and liabilities, and liabilities for unrecognized tax benefits reflect management's best assessment of estimated current and future taxes to be paid. Significant judgments and estimates are required in determining the consolidated income tax components of the financial statements.

(y) Stock-based compensation

Stock-based compensation represents costs related to stock-based awards granted to employees. We account for stock-based payment transactions based on the estimated fair value of awards reflecting forfeitures when they occur. The recognition period for these costs begins at either the applicable service inception date or grant date and continues throughout the requisite service period, or until the employee becomes retirement eligible, if earlier.

Adoption of New Accounting Pronouncements

(a) Leases

In February 2016, the Financial Accounting Standards Board (FASB) issued Accounting Standards Codification (ASC) Topic 842, *Leases*, with subsequent amendments issued in 2018. The new lease guidance affects all companies and organizations that lease assets, and requires them to record on their balance sheet ROU assets and lease liabilities for the rights and obligations created by those leases. Under ASC 842, a lease is an arrangement that conveys the right to control the use of an identified asset for a period of time in exchange for consideration. The new guidance retains a distinction between finance leases and operating leases, while requiring companies to recognize both types of leases on their balance sheet. The classification criteria for distinguishing between finance leases and operating leases are substantially similar to the criteria for distinguishing between capital leases and operating leases in legacy U.S. GAAP - ASC 840. Lessor accounting remains substantially the same as ASC 840, but with some targeted improvements to align lessor accounting with the lessee accounting model and with the revised revenue recognition guidance under ASC 606. The new standard and amendments require new qualitative and quantitative disclosures for both lessees and lessors.

We adopted ASC 842 effective January 1, 2019, and elected the optional transition method under which we initially applied the standard on that date without adjusting amounts for prior periods, which we continue to present in accordance with ASC 840, including related disclosures. We recorded the cumulative effect of applying the new leases guidance as an adjustment to beginning retained earnings. In connection with our adoption, we:

- did not elect the package of three practical expedients available under the transition provisions which would have allowed us to not reassess: (i) whether expired or existing contracts were or contained leases, (ii) the lease classification for expired or existing leases, and (iii) whether previously capitalized initial direct costs for existing leases would qualify for capitalization under ASC 842.
- elected the land easement practical expedient and did not reassess land easements that did not meet the definition of a lease prior to adoption.
- used hindsight for determining the lease term and assessing the likelihood that a lease purchase option will be exercised in applying the new leases guidance.
- did not separate lease and associated non-lease components for transitioned leases, but instead are accounting for them together as a single lease component.

In March 2019, the FASB issued additional amendments to ASC 842 for minor codification improvements, which we early applied effective January 1, 2019, with no material effect to our consolidated results of operations, financial position and cash flows.

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The cumulative effects of the changes to our consolidated balance sheet as of January 1, 2019, were as follows:

(Millions)	Balance at December 31, 2018	Adjustments Due to ASC 842	Balance at January 1, 2019
Assets			
Total Property, Plant and Equipment	$ 23,459	$ (147)	$ 23,312
Operating lease right-of-use assets	—	82	82
Other assets	162	146	308
Liabilities			
Current portion of debt	$ 394	$ (28)	$ 366
Operating lease liabilities, current	—	8	8
Other current liabilities	327	28	355
Operating lease liabilities, long-term	—	74	74
Other non-current liabilities	499	61	560
Non-current debt	5,368	(61)	5,307
Equity			
Retained earnings	$ 1,528	$ (1)	$ 1,527

Our adoption did not change the classification of lease-related expenses in our consolidated statements of income, and we do not expect significant changes to our pattern of expense recognition. Certain contracts previously classified as lessor leases, consisting mainly of Renewables' power purchase agreements, no longer meet the definition of a lease under ASC 842. As such, these contracts are accounted for under other U.S. GAAP, but there were no changes to our pattern of revenue recognition. As a result, our adoption will not materially affect our cash flows.

In comparison to our operating leases obligations disclosed as of December 31, 2018, certain land easement contracts that previously met the definition of a lease do not meet the ASC 842 definition of a lease, and therefore we excluded them from the transition adjustment. Our accounting for finance (formerly capital) leases is substantially unchanged. Refer to Note 13 for further details.

(b) Targeted improvements to accounting for hedging activities

In August 2017, the FASB issued targeted amendments with the objective to better align hedge accounting with an entity's risk management activities in the financial statements and to simplify the application of hedge accounting. The amendments address concerns of financial statement preparers over difficulties with applying hedge accounting and limitations for hedging both nonfinancial and financial risks and concerns of financial statement users over how hedging activities are reported in financial statements. The amended presentation and disclosure guidance is required only prospectively. Changes to the hedge accounting guidance to address those concerns: 1) expand hedge accounting for nonfinancial and financial risk components and amend measurement methodologies to more closely align hedge accounting with an entity's risk management activities; 2) eliminate the separate measurement and reporting of hedge ineffectiveness to reduce the complexity of preparing and understanding hedge results; 3) enhance disclosures and change the presentation of hedge results to align the effects of the hedging instrument and the hedged item in order to enhance transparency, comparability and understandability of hedge results; and 4) simplify the way assessments of hedge effectiveness may be performed to reduce the cost and complexity of applying hedge accounting. The amendments ease the administrative burden of hedge documentation requirements and assessing hedge effectiveness going forward. We adopted the hedge accounting amendments on January 1, 2019, and had no cumulative-effect adjustment to retained earnings because there were no amounts of ineffectiveness recorded for any existing hedges as of that date. Concurrently with the above targeted improvements, we adopted the additional amendments the FASB issued in October 2018 that permit use of the Overnight Index Swap rate based on the Secured Overnight Financing Rate as a U.S. benchmark interest rate for hedge accounting purposes. Use of that rate is in addition to the already eligible benchmark interest rates, which are: interest rates on direct Treasury obligations of the U.S. government, the London Interbank Offered Rate swap rate, the OIS Rate based on the Fed Funds Effective Rate and the Securities Industry and Financial Markets Association Municipal Swap Rate.

(c) Reclassification of certain tax effects from accumulated other comprehensive income

In February 2018, the FASB issued amendments to address a financial reporting issue that arose as a consequence of the Tax Cuts and Jobs Act of 2017 (the Tax Act) that the U.S. federal government enacted on December 22, 2017. Under previous guidance, an entity was required to include the adjustment of deferred taxes for the effect of a change in tax laws or rates in income from continuing operations, thus the associated tax effects of items within AOCI (referred to as stranded tax effects) did not reflect the appropriate tax rate. The amendments allow a reclassification from AOCI to retained earnings to eliminate the stranded tax effects

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resulting from the Tax Act. The amendments only relate to the reclassification of the income tax effects of the Tax Act, and do not affect the underlying guidance that requires the effect of a change in tax laws or rates to be included in income from continuing operations. We adopted the amendments effective January 1, 2019, and elected to reclassify the stranded tax effects of the Tax Act from AOCI to retained earnings at the beginning of the period of adoption. As a result, we reclassified approximately $12 million from AOCI to retained earnings within our consolidated statements of changes in equity.

Accounting Pronouncements Issued But Not Yet Adopted

The following are new accounting pronouncements not yet adopted that we have evaluated or are evaluating to determine their effect on our consolidated financial statements.

(a) Measurement of credit losses on financial instruments, amendments and updates

The FASB issued an accounting standards update in June 2016 that requires more timely recording of credit losses on loans and other financial instruments. The amendments affect entities that hold financial assets and net investment in leases that are not accounted for at fair value through net income (loans, debt securities, trade receivables, net investments in leases, off-balance-sheet credit exposures, etc.). They require an entity to present a financial asset (or group of financial assets) that is measured at amortized cost basis at the net amount expected to be collected. The allowance for credit losses is a valuation account that is deducted from the amortized cost basis of the financial asset(s) to present the net carrying value at the amount expected to be collected on the financial asset. The income statement reflects the measurement of credit losses for newly recognized financial assets, as well as the expected increases or decreases of expected credit losses that have taken place during the period. The measurement of expected credit losses is based on relevant information about past events, including historical experience, current conditions, and reasonable and supportable forecasts that affect the collectability of the reported amount. An entity must use judgment in determining the relevant information and estimation methods appropriate in its circumstances. The FASB subsequently issued various updates to this new guidance to clarify transition and scope requirements, make narrow-scope codification improvements and corrections and provide targeted transition relief. The new guidance, including the subsequent amendments, is effective for public entities that are SEC filers for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years. Entities are to apply the amendments on a modified retrospective basis for most instruments. Early adoption is allowed.

Our implementation plan and steps included: evaluating financial assets within scope; documenting related technical accounting issues, policy considerations and financial reporting implications; and identifying changes to processes and controls to ensure all aspects of the new guidance were effectively addressed. Our adoption of the guidance on January 1, 2020, including our transition adjustment, will not materially affect our consolidated results of operations, financial position and cash flows.

(b) Simplifying the test for goodwill impairment

In January 2017, the FASB issued amendments to simplify the test for goodwill impairment, which are required for public entities and certain other entities that have goodwill reported in their financial statements. The amendments simplify the subsequent measurement of goodwill by eliminating Step 2 from the goodwill impairment test, which requires the valuation of assets acquired and liabilities assumed using business combination accounting guidance. Under the new guidance, an entity should perform its annual, or interim, goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount. An entity should recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit's fair value; but the loss recognized should not exceed the total amount of goodwill allocated to that reporting unit. Also, an entity should consider income tax effects from any tax deductible goodwill on the carrying amount of the reporting unit when measuring the goodwill impairment loss, if applicable. Certain requirements are eliminated for any reporting unit with a zero or negative carrying amount; therefore the same impairment assessment applies to all reporting units. An entity still has the option to perform the qualitative assessment for a reporting unit to determine if the quantitative impairment test is necessary. The amendments are effective for public entities for annual and interim periods in fiscal years beginning after December 15, 2019, with the amendments applied on a prospective basis. Early adoption is allowed. Our adoption of the amendments on January 1, 2020, will not materially affect our results of operations, financial position, cash flows and disclosures.

(c) Changes to the disclosure requirements for fair value measurement and defined benefit plans

In August 2018, the FASB issued amendments related to disclosure requirements for both fair value measurement and defined benefit plans. The amendments concerning fair value measurement remove, modify and add certain disclosure requirements in order to improve the overall usefulness of the disclosures and reduce unnecessary costs to companies to prepare the disclosures. The amendments to fair value measurement disclosures are effective for all entities for fiscal years beginning after December 15, 2019, and interim periods within those fiscal years. Early adoption is permitted as specified. Certain amendments are to be applied prospectively, and all others are to be applied retrospectively. Our adoption of the amendments on January 1, 2020, will not materially affect our disclosures.

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The amendments concerning disclosure requirements for defined benefit plans are narrow in scope and apply to all employers that sponsor defined benefit pension or other postretirement plans. They remove disclosures that are no longer considered cost beneficial, add certain new relevant disclosures and clarify specific requirements of disclosures concerning information for defined benefit pension plans. The amendments to defined benefit plan disclosures are effective for fiscal years ending after December 15, 2020. Early adoption is permitted and application is to be on a retrospective basis. Our adoption of the amendments on January 1, 2020, will not materially affect our disclosures.

(d) Targeted improvements to related party guidance for VIEs

In October 2018, the FASB issued amendments that affect reporting entities that are required to determine whether they should consolidate a legal entity under the consolidation guidance applicable to VIEs. The targeted improvements specifically applicable to public business entities clarify that indirect interests held through related parties in common control arrangements should be considered on a proportional basis for determining whether fees paid to decision makers and service providers are variable interests. The amendments are effective for public business entities for fiscal years beginning after December 15, 2019, and interim periods within those fiscal years. Early adoption is permitted. Our adoption of the amendments on January 1, 2020, will not materially affect our consolidated results of operations, financial position, cash flows and disclosures.

(e) Clarifying guidance for certain collaborative arrangements with respect to revenue recognition

The FASB issued amendments in November 2018 to clarify the interaction between the guidance for certain collaborative arrangements and the guidance applicable to ASC 606. A collaborative arrangement is a contractual arrangement under which two or more parties actively participate in a joint operating activity and are exposed to significant risks and rewards that depend on the activity's commercial success. The targeted improvements clarify that certain transactions between collaborative arrangement participants are within the scope of ASC 606 and thus subject to all of its guidance. The amendments are effective for public business entities for fiscal years beginning after December 15, 2019, and interim periods within those fiscal years. Early adoption is permitted, including adoption in any interim period for which financial statements have not been issued. Retrospective application to the date of initial application of ASC 606 is required. Our adoption of the amendments on January 1, 2020, will not materially affect our consolidated results of operations, financial position, cash flows and disclosures.

(f) Simplifying the accounting for income taxes

In December 2019, the FASB issued an accounting standards update that is intended to reduce complexity in accounting for income taxes. The amendments remove specific exceptions to the general principles in ASC 740, *Income Taxes*, eliminating the need for an entity to analyze whether the following apply in a given period: (1) exception to the incremental approach for intra-period tax allocation, (2) exceptions to accounting for basis differences when there are ownership changes in foreign investments and (3) exception in interim period income tax accounting for year-to-date losses that exceed anticipated losses. The amendments also improve financial statement preparers' application of income-tax related guidance and simplify U. S. GAAP for (1) franchise taxes that are partially based on income, (2) transactions with a government that result in a step up in the tax basis of goodwill, (3) separate financial statements of legal entities that are not subject to tax and (4) enacted changes in tax laws in interim periods. The amendments are effective for public business entities for fiscal years beginning after December 15, 2020, and interim periods within those fiscal years. Early adoption is permitted, including adoption in any interim period for which financial statements have not been issued, with adoption of all amendments in the same period. Application is on a retrospective and/or modified retrospective basis, or a prospective basis, depending on the amendment aspect. We expect our adoption will not materially affect our consolidated results of operations, financial position and cash flows.

Use of Estimates and Assumptions

The preparation of our consolidated financial statements in conformity with U.S. GAAP requires the use of estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the consolidated financial statements, and the reported amounts of revenues and expenses during the reporting periods. Significant estimates and assumptions are used for, but not limited to: (1) allowance for doubtful accounts and unbilled revenues; (2) asset impairments, including goodwill; (3) investments in equity instruments; (4) depreciable lives of assets; (5) income tax valuation allowances; (6) uncertain tax positions; (7) reserves for professional, workers' compensation and comprehensive general insurance liability risks; (8) contingency and litigation reserves; (9) fair value measurements; (10) earnings sharing mechanisms; (11) environmental remediation liabilities; (12) AROs; (13) pension and other postretirement employee benefits and (14) noncontrolling interest balances. Future events and their effects cannot be predicted with certainty; accordingly, our accounting estimates require the exercise of judgment. The accounting estimates used in the preparation of our consolidated financial statements will change as new events occur, as more experience is acquired, as additional information is obtained and as our operating environment changes. We evaluate and update our assumptions and estimates on an ongoing basis and may employ outside specialists to assist in our evaluations, as necessary. Actual results could differ from those estimates.

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Union collective bargaining agreements

We have approximately 49.0% of the employees covered by a collective bargaining agreement. Agreements which will expire within the coming year apply to approximately 25.5% of our employees.

Note 4. Revenue

We recognize revenue when we have satisfied our obligations under the terms of a contract with a customer, which generally occurs when the control of promised goods or services transfers to the customer. We measure revenue as the amount of consideration we expect to receive in exchange for providing those goods or services. Contracts with customers may include multiple performance obligations. For such contracts, we allocate revenue to each performance obligation based on its relative standalone selling price. We generally determine standalone selling prices based on the prices charged to customers. Certain revenues are not within the scope of ASC 606, such as revenues from leasing, derivatives, other revenues that are not from contracts with customers and other contractual rights or obligations, and we account for such revenues in accordance with the applicable accounting standards. We exclude from revenue amounts collected on behalf of third parties, including any such taxes collected from customers and remitted to governmental authorities. We do not have any significant payment terms that are material because we receive payment at or shortly after the point of sale.

The following describes the principal activities, by reportable segment, from which we generate revenue. For more detailed information about reportable segments, refer to Note 24.

Networks Segment

Networks derives its revenue primarily from tariff-based sales of electricity and natural gas service to customers in New York, Connecticut, Maine and Massachusetts with no defined contractual term. For such revenues, we recognize revenues in an amount derived from the commodities delivered to customers. Other major sources of revenue are electricity transmission and wholesale sales of electricity and natural gas.

Tariff-based sales are subject to the corresponding state regulatory authorities, which determine prices and other terms of service through the ratemaking process. Maine state law prohibits the utility from providing the electricity commodity to customers. In New York, Connecticut and Massachusetts, customers have the option to obtain the electricity or natural gas commodity directly from the utility or from another supplier. For customers that receive their commodity from another supplier, the utility acts as an agent and delivers the electricity or natural gas provided by that supplier. Revenue in those cases is only for providing the service of delivery of the commodity. Networks entities calculate revenue earned but not yet billed based on the number of days not billed in the month, the estimated amount of energy delivered during those days and the estimated average price per customer class for that month. Differences between actual and estimated unbilled revenue are immaterial.

Transmission revenue results from others' use of the utility's transmission system to transmit electricity and is subject to Federal Energy Regulatory Commission (FERC) regulation, which establishes the prices and other terms of service. Long-term wholesale sales of electricity are based on individual bilateral contracts. Short-term wholesale sales of electricity are generally on a daily basis based on market prices and are administered by the Independent System Operator-New England (ISO-NE) and the New York Independent System Operator (NYISO), or PJM Interconnection, L.L.C. (PJM), as applicable. Wholesale sales of natural gas are generally short-term based on market prices through contracts with the specific customer.

The performance obligation in all arrangements is satisfied over time because the customer simultaneously receives and consumes the benefits as Networks delivers or sells the electricity or natural gas or provides the transmission service. We record revenue for all of those sales based upon the regulatory-approved tariff and the volume delivered or transmitted, which corresponds to the amount that we have a right to invoice. There are no material initial incremental costs of obtaining a contract in any of the arrangements. Networks does not adjust the promised consideration for the effects of a significant financing component if it expects, at contract inception, that the time between the delivery of promised goods or service and customer payment will be one year or less. Networks does not have any material significant payment terms because it receives payment at or shortly after the point of sale. For its New York utilities, Networks assesses its deferred payment arrangements at each balance sheet date for the existence of significant financing components, but has had no material adjustments as a result.

Certain Networks entities record revenue from Alternative Revenue Programs (ARPs), which is not ASC 606 revenue. Such programs represent contracts between the utilities and their regulators. The Networks ARPs include revenue decoupling mechanisms, other ratemaking mechanisms, annual revenue requirement reconciliations and other demand side management programs. The Networks entities recognize and record only the initial recognition of "originating" ARP revenues (when the regulatory-specified conditions for recognition have been met). When they subsequently include those amounts in the price of utility service billed to customers, they record such amounts as a recovery of the associated regulatory asset or liability. When

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they owe amounts to customers in connection with ARPs, they evaluate those amounts on a quarterly basis and include them in the price of utility service billed to customers and do not reduce ARP revenues.

Networks also has various other sources of revenue including billing, collection, other administrative charges, sundry billings, rent of utility property and miscellaneous revenue. It classifies such revenues as other ASC 606 revenues to the extent they are not related to revenue generating activities from leasing, derivatives or ARPs.

Renewables Segment

Renewables derives its revenue primarily from the sale of energy, transmission, capacity and other related charges from its renewable wind, solar and thermal energy generating sources. For such revenues, we will recognize revenues in an amount derived from the commodities delivered and from services as they are made available. Renewables has bundled power purchase agreements consisting of electric energy, transmission, capacity and/or renewable energy credits (RECs). The related contracts are generally long-term with no stated contract amount, that is, the customer is entitled to all of the unit's output. Renewables also has unbundled sales of electric energy and capacity, RECs and natural gas, which are generally for periods of less than a year. The performance obligations in substantially all of both bundled and unbundled arrangements for electricity and natural gas are satisfied over time, for which we record revenue based on the amount invoiced to the customer for the actual energy delivered. The performance obligation for stand-alone RECs is satisfied at a point in time, for which we record revenue when the performance obligation is satisfied upon delivery of the REC. There are no material initial incremental costs of obtaining a contract or significant financing elements in any of the arrangements.

Renewables classifies certain contracts for the sale of electricity as derivatives, in accordance with the applicable accounting standards. Renewables also has revenue from its energy trading operations, which it generally classifies as derivative revenue. However, trading contracts not classified as derivatives are within the scope of ASC 606, with the performance obligation of the delivery of energy (electricity, natural gas) and settlement of the contracts satisfied at a point in time at which time we recognize the revenue. Renewables also has other ASC 606 revenue, which we recognize based on the amount invoiced to the customer.

Certain customers may receive cash credits, which we account for as variable consideration. Renewables estimates those amounts based on the expected amount to be provided to customers and reduces revenues recognized. We believe that there will not be significant changes to our estimates of variable consideration.

Other

Other, which does not represent a segment, derives its revenues primarily from providing natural gas storage services to customers, gas trading operations generally classified as derivative revenue in accordance with the applicable accounting standards, gas trading contracts not classified as derivatives, and other miscellaneous revenues including intersegment eliminations.

Contract Costs, Contract Liabilities and Practical Expedient

We recognize an asset for incremental costs of obtaining a contract with a customer when we expect the benefit of those costs to be longer than one year. We have contract assets for costs from development success fees, which we paid during the solar asset development period in 2018, and will amortize ratably into expense over the 15-year life of the power purchase agreement (PPA), expected to commence in December 2021 upon commercial operation. We also have a contract asset for costs incurred to cancel a PPA, which we will amortize over the 10-year contract period of the replacement PPA that will commence upon completion of the project. Contract assets totaled $12 million and $9 million at December 31, 2019 and December 31, 2018, respectively, and are presented in "Other non-current assets" on our consolidated balance sheets.

We have contract liabilities for revenue from transmission congestion contract (TCC) auctions, for which we receive payment at the beginning of an auction period and amortize ratably each month into revenue over the applicable auction period. The auction periods range from six months to two years. TCC contract liabilities totaled $10 million and $9 million at December 31, 2019 and December 31, 2018, respectively, and are presented in "Other current liabilities" on our consolidated balance sheets. We recognized $21 million and $13 million as revenue during the years ended December 31, 2019 and December 31, 2018, respectively.

We apply a practical expedient to expense as incurred costs to obtain a contract when the amortization period is one year or less. We record costs incurred to obtain a contract within operating expenses, including amortization of capitalized costs.

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Revenues disaggregated by major source for our reportable segments for the years ended December 31, 2019 and December 31, 2018 are as follows:

	Year Ended December 31, 2019			
	Networks	Renewables	Other (b)	Total
(Millions)				
Regulated operations – electricity	$ 3,485	$ —	$ —	$ 3,485
Regulated operations – natural gas	1,479	—	—	1,479
Nonregulated operations – wind	—	805	—	805
Nonregulated operations – solar	—	26	—	26
Nonregulated operations – thermal	—	29	—	29
Nonregulated operations – gas storage	—	—	—	—
Other(a)	91	62	(12)	141
Revenue from contracts with customers	**5,055**	**922**	**(12)**	**5,965**
Leasing revenue	6	—	—	6
Derivative revenue	—	244	—	244
Alternative revenue programs	75	—	—	75
Other revenue	28	20	—	48
Total operating revenues	**$ 5,164**	**$ 1,186**	**$ (12)**	**$ 6,338**

	Year Ended December 31, 2018			
	Networks	Renewables	Other (b)	Total
(Millions)				
Regulated operations – electricity	$ 3,641	$ —	$ —	$ 3,641
Regulated operations – natural gas	1,473	—	—	1,473
Nonregulated operations – wind	—	637	—	637
Nonregulated operations – solar	—	17	—	17
Nonregulated operations – thermal	—	47	—	47
Nonregulated operations – gas storage	—	—	10	10
Other(a)	58	(68)	9	(1)
Revenue from contracts with customers	**5,172**	**633**	**19**	**5,824**
Leasing revenue	38	346	—	384
Derivative revenue	—	124	10	134
Alternative revenue programs	80	—	—	80
Other revenue	20	36	—	56
Total operating revenues	**$ 5,310**	**$ 1,139**	**$ 29**	**$ 6,478**

(a) Primarily includes certain intra-month trading activities, billing, collection, and administrative charges, sundry billings and other miscellaneous revenue.
(b) Does not represent a segment. Includes Corporate, Gas and intersegment eliminations.

As of December 31, 2019 and December 31, 2018, accounts receivable balances related to contracts with customers were approximately $1,050 million and $1,118 million, respectively, including $345 million and $374 million of unbilled revenue, which are included in “Accounts receivable and unbilled revenues, net” on our consolidated balance sheets.

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As of December 31, 2019, the aggregate amount of the transaction price allocated to performance obligations that are unsatisfied (or partially unsatisfied) were as follows:

As of December 31, 2019	2020	2021	2022	2023	2024	Thereafter	Total
(Millions)							
Revenue expected to be recognized on multiyear retail energy sales contracts in place	$ 1	$ 1	$ 1	$ 1	$ 1	$ —	$ 5
Revenue expected to be recognized on multiyear capacity and carbon-free energy sale contracts	35	27	19	11	8	25	126
Revenue expected to be recognized on multiyear renewable energy credit sale contracts	22	16	8	5	4	8	63
Total operating revenues	**$ 58**	**$ 44**	**$ 28**	**$ 17**	**$ 13**	**$ 33**	**$ 194**

We do not disclose information about remaining performance obligations for contracts for which we recognize revenue in the amount to which we have the right to invoice (e.g., usage-based pricing terms).

Note 5. Industry Regulation

Electricity and Natural Gas Distribution – Maine, New York, Connecticut and Massachusetts

The NYSEG and RG&E rate cases, the Maine distribution rate case and associated proceedings, the Federal Energy Regulatory Commission (FERC) Transmission Return on Equity (ROE) case, the Connecticut rate plans, Reforming Energy Vision (REV), the storm proceedings in New York and the Tax Act are some of the most important specific regulatory processes that currently affect Networks.

The revenues of Networks companies are essentially regulated, being based on tariffs established in accordance with administrative procedures set by the various regulatory bodies. The tariffs applied to the Networks companies are approved by the regulatory commissions of the different states and are based on the cost of providing service. The revenues of each of the Networks companies are set to be sufficient to cover its operating costs, including energy costs, finance costs and the costs of equity, the last of which reflects our capital ratio and a reasonable ROE.

Energy costs that are incurred in the New York and New England wholesale markets are passed on to consumers. The difference between energy costs that are budgeted and those that are actually incurred by the utilities is offset by applying compensation procedures that result in either immediate or deferred tariff adjustments. These procedures apply to other costs, which are in most cases exceptional, such as the effects of extreme weather conditions, environmental factors, regulatory and accounting changes, and treatment of vulnerable customers, that are offset in the tariff process. Any New York and Connecticut revenues that allow a utility to exceed target returns, usually the result of better than expected cost efficiency, are generally shared between the utility and its customers, resulting in future tariff reductions.

Each of Networks' eight utility companies must comply with regulatory procedures that differ in form but in all cases conform to the basic framework outlined above. Generally, tariff reviews cover various years and provide for a reasonable ROE, protection from, and automatic adjustments for, exceptional costs incurred and efficiency incentives. The distribution rates and allowed ROEs for Networks' regulated utilities in New York are subject to regulation by the New York Public Service Commission (NYPSC), in Maine by the Maine Public Utilities Commission (MPUC), in Connecticut by the Connecticut Public Utilities Regulatory Authority (PURA) and in Massachusetts by the Department of Public Utilities (DPU).

CMP Distribution Rate Case

On May 1, 2013, CMP submitted its required distribution rate request with the MPUC. On July 3, 2014, after a fourteen-month review process, CMP filed a rate stipulation agreement on the majority of the financial matters with the MPUC. The stipulation agreement was approved by the MPUC on August 25, 2014. The stipulation agreement also noted that certain rate design matters would be litigated, which the MPUC ruled on October 14, 2014.

The rate stipulation agreement provided for an annual CMP distribution tariff increase of 10.7% or $24.3 million. The rate increase was based on a 9.45% ROE and 50% equity capital. CMP was authorized to implement a Rate Decoupling Mechanism (RDM) which reduces distribution revenue variations associated with energy efficiency and weather impacts on sales volumes. CMP also adjusted its storm costs recovery mechanism whereby it is allowed to collect in rates a storm allowance and to defer actual storm costs when such storm event costs exceed $3.5 million. CMP and customers share storm costs that exceed a certain balance on a fifty-fifty basis, with CMP's exposure limited to $3 million annually.

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CMP made a separate regulatory filing for a new customer billing system. In accordance with the stipulation agreement, a new billing system was needed and CMP made its filing on February 27, 2015 to request a separate rate recovery mechanism. On October 20, 2015, the MPUC issued an order approving a stipulation agreement authorizing CMP to proceed with the customer billing system investment. The approved stipulation allows CMP to recover the system costs effective July 1, 2017.

The rate stipulation does not have a predetermined rate term. CMP had the option to file for new distribution rates at its own discretion. The rate stipulation does not contain service quality targets or penalties. The rate stipulation also does not contain any earnings sharing requirements.

On May 29, 2018, a ten-person complaint was filed with the MPUC against CMP, Networks and AVANGRID. The complaint requested that the MPUC open a rate case to determine if CMP is making excessive returns on investment and, therefore, whether CMP's retail rates should be lower. The complaint also requested the MPUC deny certain costs associated with the October 2017 windstorm. On July 24, 2018, the MPUC issued an order dismissing the complaint and its associated request to deny the recovery of costs associated with the October 2017 windstorm. The order initiated an investigation into CMP's rates and revenue requirement and directed CMP to make a filing consistent with the requirements for a general rate case no later than October 15, 2018. Consistent with the order in the ten-person complaint proceeding, on August 7, 2018, the MPUC issued a Notice of Investigation, opening the proceeding in which CMP would make its rate case filing and through which the MPUC will examine the rates and revenue requirements of CMP.

On October 15, 2018, CMP filed a general rate case as directed by the MPUC requesting a ROE of 10% and an equity ratio of 55%. The company proposed to use savings arising out of changes in federal taxation pursuant to the Tax Act to keep its distribution prices stable while making its electric system more reliable. CMP's general rate case filing included a proposal to enhance the resiliency of the energy grid by expanding vegetation management and pursuing additional reliability measures such as pole replacements and addition of tree wire in selected areas. Such investments are designed to strengthen CMP's power grid so it can better stand up to severe weather. On December 20, 2018, the MPUC released the findings of the forensic audit of CMP's customer billing system and customer communication practices.

On January 14, 2019, the MPUC issued an Order and Notice of Investigation initiating an investigation of CMP's metering and billing practices and initiating a separate investigation of the audit of CMP's customer service and communication practices and incorporating such investigation into the general rate case. On February 22, 2019, the MPUC staff issued a Bench Analysis (BA) on all revenue requirement issues in this case, including customer service issues. The BA included, among other things, a proposal to reduce CMP's existing distribution rates by $2.0 - $3.6 million, inclusive of one-time items from July 2018, and implement a management efficiency adjustment as part of the rate setting process to reduce the MPUC staff recommended "unadjusted ROE of 9.35% by 75 to 100 basis points. On April 12, 2019, CMP filed rebuttal testimony to the Bench Analysis and intervenor testimony. On June 17, 2019, the MPUC Staff issued its Reply Bench Analysis in response to CMP's rebuttal testimony, which included a reduction of the "unadjusted" ROE recommendation to 8.75% based on current market conditions, maintained the proposed management efficiency adjustment of 75 to 100 basis points and proposed to maintain the current cap of $31.4 million on the shared service costs provided to CMP until a management audit on the cost effectiveness of such services is completed. The Maine Office of the Public Advocate (OPA) for utility issues filed a motion to delay CMP's rate order decision to allow incorporation of the results of the separate metering and billing investigation. CMP did not oppose this motion. In August 2019, the MPUC granted the OPA motion stating the outcome of the metering and billing investigation could aid the Commission in its final determination in the rate case. Regarding the other two tracks of the rate case (1) rate design and (2) the affiliate services market study; the MPUC decided those tracks can proceed and decisions on those issues can occur at the same time the Commission decides the revenue requirement issues. Finally, the MPUC decided not to address CMP's request to defer lost revenues with carrying costs or its request that the proposed service quality metrics and other tracking mechanisms be effective October 1, 2019. The MPUC decided to address those matters in its ultimate decision in the rate case.

In an order issued on February 19, 2020, the MPUC authorized an increase in CMP's distribution revenue requirement of $17 million, or approximately 7%, based on an allowed ROE of 9.25% and a 50% equity ratio. The rate increase is effective March 1, 2020. The MPUC also imposed a 1.00% ROE reduction (to 8.25%) for management efficiency associated with CMP's customer service performance following the implementation of its new billing system in 2017. The management efficiency adjustment will remain in effect until CMP Company has demonstrated satisfactory customer service performance on four specified service quality measures for a period of 18 consecutive months with measurement commencing on March 1, 2020. The order provides additional funding for staffing increases, vegetation management programs and storm restoration costs, while retaining the basic tiered structure for storm cost recovery implemented in the 2014 stipulation. The MPUC order also retains the revenue decoupling mechanism implemented in 2014. The order denies CMP's request to increase rates for higher costs associated with services provided by its affiliates and will instead initiate a management audit to assess the quality of these services as well as the impacts of the AVANGRID management structure on the quality of CMP's customer service.

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NYSEG and RG&E Rate Plans and Rate Case Filings

On June 15, 2016, the NYPSC approved NYSEG's and RG&E's Joint Proposal for a three-year rate plan for electric and gas service which balanced the varied interests of the signatory parties including but not limited to maintaining the companies' credit quality and mitigating the rate impacts to customers. The Joint Proposal reflects many customer benefits including: acceleration of the companies' natural gas leak prone main replacement programs and increased funding for electric vegetation management to provide continued safe and reliable service. The delivery rate increases in the Joint Proposal can be summarized as follows:

	May 1, 2016		May 1, 2017		May 1, 2018	
Utility	Rate Increase (Millions)	Delivery Rate Increase %	Rate Increase (Millions)	Delivery Rate Increase %	Rate Increase (Millions)	Delivery Rate Increase %
NYSEG Electric	$ 29.6	4.10%	$ 29.9	4.10%	$ 30.3	4.10%
NYSEG Gas	$ 13.1	7.30%	$ 13.9	7.30%	$ 14.8	7.30%
RG&E Electric	$ 3.0	0.70%	$ 21.6	5.00%	$ 25.9	5.70%
RG&E Gas	$ 8.8	5.20%	$ 7.7	4.40%	$ 9.5	5.20%

The allowed rate of return on common equity for NYSEG Electric, NYSEG Gas, RG&E Electric and RG&E Gas is 9.00%. The equity ratio for each company is 48%; however, the equity ratio is set at the actual up to 50% for earnings sharing calculation purposes. The customer share of any earnings above allowed levels increases as the ROE increases, with customers receiving 50%, 75% and 90% of earnings over 9.5%, 10.0% and 10.5% ROE, respectively, in the first rate year covering the period May 1, 2016 – April 30, 2017. The earnings sharing levels increase in rate year two (May 1, 2017 – April 30, 2018) to 9.65%, 10.15% and 10.65% ROE, respectively. The earnings sharing levels further increase in rate year three (May 1, 2018 – April 30, 2019) to 9.75%, 10.25% and 10.75% ROE, respectively. The rate plans also include the implementation of a rate adjustment mechanism (RAM) designed to return or collect certain defined reconciled revenues and costs, new depreciation rates and continuation of the existing RDM for each business. The Joint Proposal reflects the recovery of deferred NYSEG Electric storm costs of approximately $262 million, of which $123 million is being amortized over ten years and the remaining $139 million is being amortized over five years. The proposal also continues reserve accounting for qualifying Major Storms ($21.4 million annually for NYSEG Electric and $2.5 million annually for RG&E Electric). Incremental maintenance costs incurred to restore service in qualifying divisions will be chargeable to the Major Storm Reserve provided they meet certain thresholds.

The Joint Proposal maintains NYSEG's and RG&E's current electric reliability performance measures (and associated potential negative revenue adjustments for failing to meet established performance levels) which include the system average interruption frequency index (SAIFI) and the customer average interruption duration index (CAIDI). The Joint Proposal also modifies certain gas safety performance measures at the companies, including those relating to the replacement of leak prone mains, leak backlog management, emergency response and damage prevention. The proposal establishes threshold performance levels for designated aspects of customer service quality and continues and expands NYSEG's and RG&E's bill reduction and arrears forgiveness Low Income Programs with increased funding levels included in the proposal. The Joint Proposal provides for the implementation of NYSEG's Energy Smart Community (ESC) Project in the Ithaca region which serves as a test-bed for implementation and deployment of Reforming the Energy Vision (REV) initiatives. The ESC Project is supported by NYSEG's planned Distribution Automation upgrades and Advanced Metering Infrastructure (AMI) implementation for customers on circuits in the Ithaca region. The companies also are pursuing Non-Wires Alternative projects as described in the proposal. Other REV-related incremental costs and fees are included in the RAM to the extent cost recovery is not provided for elsewhere. Under the proposal, the RAM is applicable to all customers and serves to return or collect RAM Eligible Deferrals and Costs, including: (1) property taxes; (2) Major Storm deferral balances; (3) gas leak prone pipe replacement; (4) REV costs and fees which are not covered by other recovery mechanisms; and (5) NYSEG Electric Pole Attachment revenues. RG&E implemented a RAM in July 2018 since certain eligibility thresholds were exceeded.

The Joint Proposal provides for partial or full reconciliation of certain expenses including, but not limited to: pensions and other postretirement benefits; property taxes; variable rate debt and new fixed rate debt; gas research and development; environmental remediation costs; major storms; nuclear electric insurance limited credits; economic development; and low income programs. The Joint Proposal also includes a downward-only Net Plant reconciliation. In addition, the Joint Proposal includes downward-only reconciliations for the costs of electric distribution and gas vegetation management, pipeline integrity and incremental maintenance. The Joint Proposal provides that NYSEG and RG&E continue their electric RDMs on a total revenue per class basis and their gas RDMs on a revenue per customer basis.

On May 20, 2019, NYSEG and RG&E filed rate cases with the New York State Department of Public Service (NYDPS) for new tariffs. The effective date of new tariffs, assuming an approximately 11-month suspension period, will be April 20, 2020. The proposed rates facilitate the companies' transition to a cleaner energy future while allowing for important initiatives such as

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vegetation management, hardening/resiliency and emergency preparedness. The companies are requesting delivery revenues to be based on a 9.50% ROE and 50% equity ratio. The below table provides a summary of the initial proposed delivery rate increases, delivery revenue percentages and total revenue percentages for all four businesses:

Utility	Requested Revenue Increase (Millions)	Delivery Revenue %	Total Revenue %
NYSEG Electric	$ 156.7	20.4%	10.4%
NYSEG Gas	$ 6.3	3.0%	1.4%
RG&E Electric	$ 31.7	7.0%	4.1%
RG&E Gas	$ 5.8	3.3%	1.4%

NYPSC staff and other parties filed responsive testimony on September 15, 2019. NYPSC staff is recommending an 8.2% ROE and 48% equity. NYPSC staff recommended the following rate increases/decreases: NYSEG electric a rate increase of $76.7 million, NYSEG Gas a rate decrease of $15.9 million, RG&E Electric a rate increase of $0.7 million and RG&E Gas a rate decrease of $22.5 million. NYPSC Staff is also recommending NYSEG credit the environmental reserve by $31.1 million due to the legal rulings in 2017 and 2018 that denied insurance claims against OneBeacon and Century Indemnity in an insurance lawsuit. The companies entered into settlement discussion with the staff and other parties in October 2019. On February 26, 2020, the companies filed notice with the NYPSC that an agreement in principle has been reached among the companies, the NYDPS staff and certain other parties to the matter. As a result, drafting of a joint proposal (settlement agreement) has commenced.

UI, CNG, SCG and BGC Rate Plans

Under Connecticut law, The United Illuminating Company's (UI) retail electricity customers are able to choose their electricity supplier while UI remains their electric distribution company. UI purchases power for those of its customers under standard service rates who do not choose a retail electric supplier and have a maximum demand of less than 500 kilowatts and its customers under supplier of last resort service for those who are not eligible for standard service and who do not choose to purchase electric generation service from a retail electric supplier. The cost of the power is a "pass-through" to those customers through the Generation Service Charge on their bills.

UI has wholesale power supply agreements in place for its entire standard service load for the first half of 2020, 70% of its standard service load for the second half of 2020 and 40% of its standard service load for the first half of 2021. Supplier of last resort service is procured on a quarterly basis and UI has wholesale power supply agreement in place for the second quarter of 2020. However, from time to time there are no bidders in the procurement process for supplier of last resort service and, in such cases, UI manages the load directly.

In December 2016, the PURA approved new distribution rate schedules for UI for three years, which became effective January 1, 2017 and, among other things, provide for annual tariff increases and an ROE of 9.10% based on a 50% equity ratio, continued UI's existing ESM pursuant to which UI and its customers share on a fifty-fifty basis all distribution earnings above the allowed ROE in a calendar year, continued the existing decoupling mechanism and approved the continuation of the requested storm reserve. Any dollars due to customers from the ESM continue to be first applied against any storm regulatory asset balance (if one exists at that time) or refunded to customers through a bill credit if such storm regulatory asset balance does not exist.

In December 2017, PURA approved new tariffs for the Southern Connecticut Gas Company (SCG) effective January 1, 2018 for a three-year rate plan with rate increases of $1.5 million, $4.7 million and $5.0 million in 2018, 2019 and 2020, respectively. The new tariffs also include an RDM and Distribution Integrity Management Program (DIMP) mechanism similar to the mechanisms authorized for Connecticut Natural Gas Corporation (CNG), ESM, the amortization of certain regulatory liabilities (most notably accumulated hardship deferral balances and certain accumulated deferred income taxes) and tariff increases based on a ROE of 9.25% and approximately 52% equity level. Any dollars due to customers from the ESM will be first applied against any environmental regulatory asset balance as defined in the settlement agreement (if one exists at that time) or refunded to customers through a bill credit if such environmental regulatory asset balance does not exist.

In December, 2018, PURA approved new tariffs for CNG effective January 1, 2019 for a three-year rate plan with rate increases of $9.9 million, $4.6 million and $5.2 million in 2019, 2020 and 2021, respectively. The new tariffs continued the RDM and DIMP mechanism, ESM and tariff increases based on an ROE of 9.30%, and an equity ratio of 54% in 2019, 54.50% in 2020 and 55% in 2021.

On January 18, 2019, the DPU approved a settlement agreement between BGC and the Massachusetts Attorney General's Office providing for new distribution rates for BGC. The settlement agreement provides for a $1.6 million distribution base rate increase effective February 1, 2019 (with a make-whole provision back to January 1, 2019), and an additional $0.7 million base distribution

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increase effective November 1, 2019, if certain investments are made by BGC. The distribution rate increase is based on a 9.70% ROE and 54% equity ratio. The settlement agreement provides for the implementation of a RDM and pension expense tracker and also provides that BGC will not file to change base distribution to become effective before November 1, 2021.

REV

In April 2014, the NYPSC commenced a proceeding entitled REV, which is a wide-ranging initiative to reform New York State's energy industry and regulatory practices. REV has been divided into two tracks, Track 1 for Market Design and Technology, and Track 2 for Regulatory Reform. REV and its related proceedings have and will continue to propose regulatory changes that are intended to promote more efficient use of energy, deeper penetration of renewable energy resources such as wind and solar and wider deployment of distributed energy resources (DER), such as micro grids, on-site power supplies and storage.

REV is also intended to promote greater use of advanced energy management products to enhance demand elasticity and efficiencies. Track 1 of this initiative involves a collaborative process to examine the role of distribution utilities in enabling market-based deployment of DER to promote load management and greater system efficiency, including peak load reductions. NYSEG is participating in the initiative with other New York utilities. The NYPSC issued a 2015 order in Track 1, which acknowledges the utilities' role as a Distribution System Platform (DSP) provider, and required the utilities to file an initial Distribution System Implementation Plan (DSIP) by June 30, 2016, followed by bi-annual updates. The companies filed the initial DSIP, which also included information regarding the potential deployment of Automated Metering Infrastructure (AMI) across its entire service territory. In December 2016, the companies filed a petition to the NYPSC requesting approval for cost recovery associated with the full deployment of AMI. A collaborative associated with this petition began in the first quarter of 2017, was suspended in the second quarter of 2017, subsequently resumed in the first quarter of 2018 and then further suspended and has been included in the companies' May 20, 2019 rate filing.

Other various proceedings have also been initiated by the NYPSC which are REV related, and each proceeding has its own schedule. These proceedings include the Clean Energy Standard, Value of DER and Net Energy Metering, Demand Response Tariffs and Community Choice Aggregation. As part of the Clean Energy Standard proceeding, all electric utilities were ordered to begin payments to New York State Energy Research and Development Authority (NYSERDA) for RECs and Zero Emissions Credits beginning in 2017.

Track 2 of the REV initiative is also underway, and through a NYPSC staff whitepaper review process, is examining potential changes in current regulatory, tariff, market design and incentive structures that could better align utility interests with achieving New York state and NYPSC's policy objectives. New York utilities will also be addressing related regulatory issues in their individual rate cases. A Track 2 order was issued in May 2016, and includes guidance related to the potential for Earnings Adjustment Mechanisms (EAMs), Platform Service Revenues, innovative rate designs and data utilization and security. The companies, in December 2016, filed a proposal for the implementation of EAMs in the areas of System Efficiency, Energy Efficiency, Interconnections and Clean Air. A collaborative process to review the companies' petition was suspended in 2017. A proposal for EAMs was included in the companies' May 20, 2019 rate filing.

In March 2017, the NYPSC issued three separate REV-related orders. These orders created a series of filing requirements for NYSEG and RG&E beginning in March 2017 and extending through the end of 2018. The three orders involve: 1) modifications to the electric utilities' proposed interconnection EAM framework; 2) further DSIP requirements, including filing of an updated DSIP plan by mid-2018 and implementing two energy storage projects at each company by the end of 2018; and 3) Net Energy Metering Transition including implementation of Phase One of the Value of DER. In September 2017, the NYPSC issued another order related to the Value of DER, requiring tariff filings, changes to Standard Interconnection Requirements and planning for the implementation of automated consolidated billing. In July 2018, NYSEG and RG&E submitted an updated DSIP plan consistent with guidance received from the NY Department of Public Service. As of the end of 2018, both NYSEG and RG&E had deployed two energy storage projects each, consistent with the March 2017 NYPSC order requirements. In December 2018, the NYPSC staff submitted whitepapers on standby and buyback service rate design, future value stack compensation and capacity value compensation. The NYPSC ruled on the proposals set forth in the whitepapers on May 16, 2019. NYSEG and RG&E filed proposed standby and buyback rates with the NYPSC on September 24, 2019. The NYPSC also issued an order on value stack compensation for high-capacity-factor Resources on December 12, 2019.

CMP Customer Billing System Investigation

On March 1, 2018, the MPUC issued a Notice of Investigation initiating a summary investigation into CMP's metering, billing and customer communications practices. Due to the highly technical nature of CMP's customer billing system, on March 22, 2018 the MPUC issued an Order Initiating Audit commencing a forensic audit of CMP's customer billing system to identify any errors that have, or continue to result in billing inaccuracies. On July 10, 2018, the MPUC issued an Order Modifying Scope of Audit, which expanded the scope of the audit to include CMP's customer communication practices. On December 20, 2018, the MPUC released the findings of the forensic audit of CMP's customer billing system and customer communication practices. On January

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14, 2019, the MPUC issued an Order and Notice of Investigation initiating an investigation of CMP's metering and billing, practices and initiating a separate investigation of the audit of CMP's customer service and communication practices and incorporating such investigation into CMP's general rate case. On September 3, 2019, the MPUC issued its Bench Analysis in the Metering and Billing Investigation and supported the findings of the independent audit. On September 7, the OPA issued testimony and findings from a separate audit firm which agreed with certain portions of the independent audit and also stated that continuing problems still persist in CMP's billing system. CMP provided rebuttal testimony on October 16, 2019. On January 9, 2020 the hearing examiners issued their report whereby they recommended that the Commission find that the evidence in the record shows that there is no systemic problem within CMP's metering and billing systems that has caused erroneous high usage on customers' bills. Instead, the evidence-including the detailed forensic audit conducted by an independent third-party auditor-demonstrates that CMP's metering and billing systems have been, and continue to be, recording and transmitting customer usage data accurately, and, with the exception of discrete billing calculation and presentation issues, customers' billed amounts have been accurate. On January 30, 2020, the MPUC Commissioners deliberated and based on the verbal discussion, the Commissioners indicated that CMP's Metering and Billing system is accurately reporting data; there is no systemic root cause for high usage complaints and errors related to CMP's metering and billing system are localized and random, not systemic. The Commissioners were critical of CMP finding that CMP failed to implement proper testing of the SmartCare system prior to go-live; CMP's implementation of SmartCare was imprudent; CMP's SmartCare implementation experienced an unacceptable number of billing errors, delayed or estimated bills, bill presentment issues and unreasonable time required to address these issues; and the implementation issues were compounded by inadequate staffing, resulting in the inability of customers to contact a CMP representative. In its February 19, 2020 order in the CMP's distribution rate case proceeding discussed above the MPUC imposed a reduction of 100 basis points in ROE, as a management efficiency adjustment, to address concerns with CMP's customer service performance following the implementation of its new billing system in 2017. The management efficiency adjustment will remain in effect until CMP has demonstrated satisfactory customer service performance on four specified service quality measures for a period of 18 consecutive months with measurement commencing on March 1, 2020.

Tax Cuts and Jobs Act

On December 22, 2017, the Tax Cuts and Jobs Act of 2017 (the Tax Act) was signed into law. The Tax Act significantly changed the federal taxation of business entities including, among other things, implementing a federal corporate tax rate decrease from 35% to 21% for tax years beginning after December 31, 2017. Reductions in accumulated deferred income tax balances due to the reduction in the corporate income tax rates will result in amounts previously and currently collected from utility customers for these deferred taxes to be refundable to such customers, generally through reductions in future rates. The NYPSC, MPUC, PURA, DPU and the FERC have instituted separate proceedings in New York, Maine, Connecticut, Massachusetts and the FERC, respectively, to review and address the implications of the Tax Act on the utilities.

In New York, the NYPSC staff issued a proposal on March 29, 2018, whereby the staff recommended that Tax Act benefits be returned to customers beginning October 1, 2018. Comments on this staff proposal were submitted by the Joint Utilities of New York with a separate Appendix by each respective major utility on June 27, 2018, including our New York utility companies. NYSEG and RG&E have stated that they believe Tax Act benefits should be utilized for utility programs for the benefit of customers, including for new projects such as AMI, other future resiliency investments and to recover deferred regulatory assets. On August 9, 2018, the NYPSC issued an Order requiring sur-credits effective October 1, 2018. The sur-credits for NYSEG and RG&E reflected the lower effective tax rate of 21%. For NYSEG Gas, RG&E Electric and RG&E Gas the NYPSC also required the sur-credit to include the return to customers of the January - September 2018 Tax Act savings over three years. The NYPSC allowed NYSEG Electric to continue to defer the January - September 2018 Tax Act savings as well as to continue to preserve the protected and unprotected Tax Act savings until the companies' next rate cases. In Connecticut, UI and SCG expect Tax Act savings to be deferred until they are reflected in tariffs in a future rate case, unless PURA determines otherwise. CNG and Berkshire included Tax Act savings in rate cases that were filed with PURA and the DPU, respectively, in the second quarter of 2018. In Maine, CMP adjusted rates beginning July 1, 2018 to pass back to customers the Tax Act savings after offsetting for recovery of deferred 2017 storm costs. In its February 19, 2020 order in the CMP's distribution rate case proceeding discussed above, the MPUC approved CMP's distribution related accumulated deferred income tax balances associated with the Tax Act as well as the authorized amortization periods for the return of regulatory liabilities and the recovery regulatory assets. At the FERC, CMP transmission and UI transmission adjusted their tariffs in June 2018 to reflect the income statement value of Tax Act savings.

Power Tax Audits

Previously, CMP, NYSEG and RG&E implemented Power Tax software to track and measure their respective deferred tax amounts. In connection with this change, we identified historical updates needed with deferred taxes recognized by CMP, NYSEG and RG&E and increased our deferred tax liabilities, with a corresponding increase to regulatory assets, to reflect the updated amounts calculated by the Power Tax software. Since 2015, the NYPSC and MPUC accepted certain adjustments to deferred taxes and associated regulatory assets for this item in recent distribution rate cases, resulting in regulatory asset balances of approximately $153 million and $157 million for this item at December 31, 2019 and 2018, respectively.

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In 2017, audits of the power tax regulatory assets were commenced by the NYPSC and MPUC. On January 11, 2018, the NYPSC issued an order opening an operations audit on NYSEG and RG&E and certain other New York utilities regarding tax accounting. The NYPSC audit report is expected to be completed during 2020. In January 2018, the MPUC published the Power Tax audit report with respect to CMP, which indicated the auditor was unable to verify the asset "acquisition value" used to calculate the Power Tax regulatory asset. CMP responded to the audit report in its rate case filing by providing additional acquisition value support and, therefore, requested full recovery of the Power Tax regulatory asset. The MPUC had an outside firm conduct an audit of CMP's filing and acquisition values, and the auditor found CMP's information was reasonable. In September 2019, CMP filed a report in response to the audit report and addressed MPUC staff concerns. On December 17, 2019, CMP filed a stipulation with the MPUC providing for recovery of the Power Tax regulatory asset and adjusting the carrying costs values for the period of July 1, 2017 through June 30, 2019. The MPUC approved the stipulation on January 21, 2020 and CMP will begin collecting the Power Tax Regulatory asset beginning in July 2020 over 32.5 years.

Ginna Reliability Support Service Agreement

Ginna Nuclear Power Plant, LLC (GNPP), which is a subsidiary of Constellation Energy Nuclear Group, LLC (CENG), owns and operates the R.E. Ginna Nuclear Power Plant (Ginna Facility and together with GNPP, Ginna), a 581 MW single-unit pressurized water reactor located in Ontario, New York. In May 2014, the NYISO and then the NYPSC ruled that the Ginna Facility was required to maintain system reliability and ordered RG&E and GNPP to negotiate a Reliability Support Service Agreement (RSSA).

On October 21, 2015, RG&E, GNPP, New York Department of Public Service, Utility Intervention Unit and Multiple Intervenors filed a Joint Proposal with the NYPSC for approval of the RSSA, as modified. On February 23, 2016, the NYPSC unanimously adopted the joint proposal, which provided for a term of the RSSA from April 1, 2015 through March 31, 2017 and RG&E monthly payments to Ginna in the amount of $15.4 million. In addition, RG&E was entitled to 70% of revenues from Ginna's sales into the NYISO energy and capacity markets, while Ginna was entitled to 30% of such revenues. The NYPSC also authorized RG&E to implement a rate surcharge effective January 1, 2016, to recover amounts paid to Ginna pursuant to the RSSA. The FERC issued an order authorizing the FERC Settlement agreement in the Settlement Docket on March 1, 2016, at which point the rate surcharge went into effect. RG&E used deferred rate credit amounts (regulatory liabilities) to offset the full amount of the Deferred Collection Amount (including carrying costs), plus credit amounts to offset all RSSA costs that exceed $2.3 million per month, not to exceed a total use of credits in the amount of $110 million, applicable through June 30, 2017. The available credits were insufficient to satisfy the final payment amount from RG&E to Ginna, and consistent with the agreement with the NYPSC, the RSSA surcharge continues past March 31, 2017, to recover up to $2.3 million per month until the final payment has been recovered by RG&E from customers. RG&E has met all payment obligations associated with the RSSA and the surcharge is no longer in effect beginning August 1, 2019.

Minimum Equity Requirements for Regulated Subsidiaries

Our regulated utility subsidiaries of Maine and New York (NYSEG, RG&E, CMP and MNG) are each subject to a minimum equity ratio requirement that is tied to the capital structure assumed in establishing revenue requirements. Pursuant to these requirements, each of NYSEG, RG&E, CMP and MNG must maintain a minimum equity ratio equal to the ratio in its currently effective rate plan or decision measured using a trailing 13-month average. On a monthly basis, each utility must maintain a minimum equity ratio of no less than 300 basis points below the equity ratio used to set rates. The minimum equity ratio requirement has the effect of limiting the amount of dividends that may be paid and may, under certain circumstances, require that the parent contribute equity capital. In addition, NYSEG and RG&E equity distributions that would result in a 13-month average common equity less than the maximum equity ratio utilized for the earnings sharing mechanism, or ESM, are prohibited if the credit rating of NYSEG, RG&E, AVANGRID or Iberdrola are downgraded by a nationally recognized rating agency to the lowest investment grade with a negative watch or downgraded to non-investment grade. These regulated utility subsidiaries are prohibited by regulation from lending to unregulated affiliates. These regulated utility subsidiaries have also agreed to minimum equity ratio requirements in certain borrowing agreements. These requirements are lower than the regulatory requirements.

Pursuant to agreements with the relevant utility commission, UI, SCG, CNG and BGC are restricted from paying dividends if paying such dividend would result in a common equity ratio lower than 300 basis points below the equity percentage used to set rates in the most recent distribution rate proceeding as measured using a trailing 13-month average calculated as of the most recent quarter end. In addition, UI, SCG, CNG and BGC are prohibited from paying dividends to their parent if the utility's credit rating, as rated by any of the three major credit rating agencies, falls below investment grade, or if the utility's credit rating, as determined by two of the three major credit rating agencies, falls to the lowest investment grade and there is a negative watch or review downgrade notice.

We had restricted net assets of approximately $5,090 million associated with the minimum equity requirements as of December 31, 2019.

Movement of capital from our wholly owned unregulated subsidiaries is unrestricted.

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New Renewable Source Generation

Under Connecticut Public Act (PA) 11-80, Connecticut electric utilities are required to enter into long-term contracts to purchase Connecticut Class I RECs from renewable generators located on customer premises. Under this program, UI is required to enter into contracts totaling approximately $200 million in commitments over an approximate 21-year period. The obligations were initially expected to phase in over a six-year solicitation period and peak at an annual commitment level of about $14 million per year after all selected projects are online. PA 17-144, PA 18-50, and PA 19-35 extended the original six-year solicitation period of the program by adding seventh, eighth, ninth, and tenth years, and increased the original funding level of this program by adding up to $64 million in additional commitments by UI. Upon purchase, UI accounts for the RECs as inventory. UI expects to partially mitigate the cost of these contracts through the resale of the RECs. PA 11-80 provides that the remaining costs (and any benefits) of these contracts, including any gain or loss resulting from the resale of the RECs, are fully recoverable from (or credited to) customers through electric rates.

In October of 2018, UI entered into five PPAs totaling approximately 50 MW from developers of offshore wind and fuel cell generation. These PPAs originated from an RFP issued by DEEP, under PA 17-144 which provides that the net costs of the PPAs are recoverable through electric rates. The PPAs were filed for PURA approval on October 25, 2018. On December 19, 2018, PURA issued its final decision approving the five PPAs, and approved UI's use of the non by-passable federally mandated congestion charges for all customers to recover the net costs of the PPAs.

On December 28, 2018, DEEP issued a directive to UI to negotiate and enter into PPAs with twelve projects, totaling approximately 12 million MWh, that were selected as a result of the Zero Carbon RFP issued by DEEP pursuant to PA 17-3, which provides that the net costs of the PPAs are recoverable through electric rates. One of the selected projects is the Millstone nuclear facility located in Waterford, Connecticut which is owned by Dominion Energy, Inc. UI completed negotiations and executed the PPA with the Millstone nuclear facility. UI filed the PPA with PURA on March 29, 2019, and PURA approved the PPA in September 2019. UI finalized negotiations and executed ten PPAs with ten of the remaining selected projects that were filed with PURA on May 31, 2019. At the direction of PURA, UI refiled Amended and Restated PPA's for nine of these projects in November 2019 and PURA approved those nine PPAs also in November 2019. The remaining PPA has been executed and submitted for approval to PURA. The twelfth selected project has declined to continue negotiations.

In August 2019, DEEP issued a RFP for up to 2,000 MW of offshore wind. On December 5, 2019, DEEP announced that it had selected Vineyard Wind, an affiliate of UI, to provide 804 MW of offshore wind through the development of its Park City Wind Project. DEEP also ordered Eversource and UI to negotiate PPAs with Vineyard. Similar to the case with the zero carbon PPAs discussed above, the net costs of the PPAs are recoverable through electric rates.

Under Maine law 35-A M.R.S.A §§ 3210-C, 3210-D, the MPUC is authorized to conduct periodic requests for proposals seeking long-term supplies of energy, capacity or Renewable Energy Certificates, or RECs, from qualifying resources. The MPUC is further authorized to order Maine transmission and distribution utilities to enter into contracts with sellers selected from the MPUC's competitive solicitation process. Pursuant to a MPUC Order dated October 8, 2009, CMP entered into a 20-year agreement with Evergreen Wind Power III, LLC, on March 31, 2010, to purchase capacity and energy from Evergreen's 60 Megawatt (MW) Rollins wind farm in Penobscot County, Maine. CMP's purchase obligations under the Rollins contract are approximately $7 million per year. Pursuant to a MPUC Order dated December 18, 2017, CMP entered into a 20-year agreement with Dirigo Solar, LLC on September 10, 2018, to purchase capacity and energy from multiple Dirigo solar facilities throughout CMP's service territory. CMP's purchase obligations under the Dirigo contract will increase as additional solar facilities are brought on line, eventually reaching a level of approximately $4 million per year. Pursuant to a MPUC Order dated November 6, 2019, CMP entered into a 20-year agreement with Maine Aqua Ventus I GP LLC on December 9, 2019, to purchase capacity and energy from an off-shore wind under development near Monhegan Island, Maine. CMP's purchase obligations under the Maine Aqua Ventus contract will be approximately $12 million per year once the facility begins commercial operation. In accordance with MPUC orders, CMP either sells the purchased energy from these facilities in the ISO New England markets or periodically auctions the purchased output to wholesale buyers in the New England regional market. Under applicable law, CMP is assured recovery of any differences between power purchase costs and achieved market revenues through a reconcilable component of its retail distribution rates. Although the MPUC has conducted multiple requests for proposals under M.R.S.A §3210-C and has tentatively accepted long-term proposals from other sellers, these selections have not yet resulted in additional currently effective contracts with CMP.

Equity Investment in Peaking Generation

UI is party to a 50-50 joint venture with Clearway Energy, Inc. in GenConn, which operates two peaking generation plants in Connecticut. The two peaking generation plants, GenConn Devon and GenConn Middletown, are both participating in the ISO-NE markets. PURA has approved revenue requirements for the period from January 1, 2020 through December 31, 2020 of $25 million and $29 million for GenConn Devon and GenConn Middletown, respectively.

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Note 6. Regulatory Assets and Liabilities

Pursuant to the requirements concerning accounting for regulated operations, our utilities capitalize as regulatory assets incurred and accrued costs that are probable of recovery in future electric and natural gas rates. We base our assessment of whether recovery is probable on the existence of regulatory orders that allow for recovery of certain costs over a specific period, or allow for reconciliation or deferral of certain costs. When costs are not treated in a specific regulatory order, we use regulatory precedent to determine if recovery is probable. Our operating utilities also record, as regulatory liabilities, obligations to refund previously collected revenue or to spend revenue collected from customers on future costs. The primary items that are not included in the rate base or accruing carrying costs are the regulatory assets for qualified pension and other postretirement benefits, which reflect unrecognized actuarial gains and losses; debt premium; environmental remediation costs, which are primarily the offset of accrued liabilities for future spending; unfunded future income taxes, which are the offset to the unfunded future deferred income tax liability recorded; asset retirement obligations; hedge losses; and contracts for differences. The total net amount of these items is approximately $1,749 million.

The regulatory assets and regulatory liabilities shown in the tables below result from various regulatory orders that allow for the deferral and/or reconciliation of specific costs. Regulatory assets and regulatory liabilities are classified as current when recovery or refund in the coming year is allowed or required through a specific order or when the rates related to a specific regulatory asset or regulatory liability are subject to automatic annual adjustment.

Regulatory assets as of December 31, 2019 and 2018 consisted of:

As of December 31,	2019	2018
(Millions)		
Pension and other post-retirement benefits cost deferrals	$ 125	$ 141
Pension and other post-retirement benefits	1,061	1,138
Storm costs	272	346
Rate adjustment mechanism	79	18
Reliability support services	—	13
Revenue decoupling mechanism	19	7
Transmission revenue reconciliation mechanism	5	11
Contracts for differences	92	97
Hardship programs	29	26
Plant decommissioning	5	11
Deferred purchased gas	25	37
Deferred transmission expense	11	11
Environmental remediation costs	277	278
Debt premium	97	118
Unamortized losses on reacquired debt	29	23
Unfunded future income taxes	399	371
Federal tax depreciation normalization adjustment	153	157
Asset retirement obligation	17	18
Deferred meter replacement costs	27	29
Other	139	95
Total regulatory assets	**2,861**	**2,945**
Less: current portion	294	299
Total non-current regulatory assets	**$ 2,567**	**$ 2,646**

"Pension and other post-retirement benefits" represent the actuarial losses on the pension and other post-retirement plans that will be reflected in customer rates when they are amortized and recognized in future pension expenses. "Pension and other post-retirement benefits cost deferrals" include the difference between actual expense for pension and other post-retirement benefits and the amount provided for in rates for certain of our regulated utilities. The recovery of these amounts will be determined in future proceedings.

"Storm costs" for CMP, NYSEG and RG&E are allowed in rates based on an estimate of the routine costs of service restoration. The companies are also allowed to defer unusually high levels of service restoration costs resulting from major storms when they meet certain criteria for severity and duration. As of December 31, 2019, deferred storm costs include $78 million and $37 million at NYSEG being recovered over ten and five year periods, respectively, from the June 2016 approval of the Joint Proposal by the NYPSC, and $96 million and $27 million at NYSEG and RG&E, respectively, not included in the Joint Proposal. The recovery of amounts not included in the Joint Proposal will occur through the RAM or determined as part of the current rate proceedings.

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“Rate adjustment mechanism” represents an interim rate change to return or collect certain defined reconciled revenues and costs for NYSEG and RG&E following the approval of the Joint Proposal by the NYPSC. The RAM, when triggered, is implemented in rates on July 1 of each year for return or collection over a twelve-month period.

“Reliability support services” represents the difference between actual expenses for reliability support services and the amount provided for in rates.

“Deferred meter replacement costs” represent the deferral of the book value of retired meters which were replaced by AMI meters. This amount is being amortized over the initial depreciation period of related retired meters.

“Contracts for Differences” represent the deferral of unrealized gains and losses on contracts for differences derivative contracts. The balance fluctuates based upon quarterly market analysis performed on the related derivatives. The amounts, which do not earn a return, are fully offset by a corresponding derivative asset/liability.

“Hardship Programs” represent hardship customer accounts deferred for future recovery to the extent they exceed the amount in rates.

“Deferred Purchased Gas” represents the difference between actual gas costs and gas costs collected in rates.

“Deferred Transmission Expense” represents deferred transmission income or expense and fluctuates based upon actual revenues and revenue requirements.

“Environmental remediation costs” includes spending that has occurred and is eligible for future recovery in customer rates. Environmental costs are currently recovered through a reserve mechanism whereby projected spending is included in rates with any variance recorded as a regulatory asset or a regulatory liability. The amortization period will be established in future proceedings and will depend upon the timing of spending for the remediation costs. It also includes the anticipated future rate recovery of costs that are recorded as environmental liabilities since these will be recovered when incurred. Because no funds have yet been expended for the regulatory asset related to future spending, it does not accrue carrying costs and is not included within rate base.

“Debt premium” represents the regulatory asset recorded to offset the fair value adjustment to the regulatory component of the non-current debt of UIL at the acquisition date. This amount is being amortized to interest expense over the remaining term of the related outstanding debt instruments.

“Unamortized losses on reacquired debt” represent deferred losses on debt reacquisitions that will be recovered over the remaining original amortization period of the reacquired debt.

“Unfunded future income taxes” represent unrecovered federal and state income taxes primarily resulting from regulatory flow through accounting treatment and are the offset to the unfunded future deferred income tax liability recorded. The income tax benefits or charges for certain plant related timing differences, such as removal costs, are immediately flowed through to, or collected from, customers. This amount is being amortized as the amounts related to temporary differences that give rise to the deferrals are recovered in rates. These amounts are being collected over a period of fifty years and the NYPSC Staff has initiated an audit, as required, of the unfunded future income taxes and other tax assets to verify the balances.

“Federal tax depreciation normalization adjustment” represents the revenue requirement impact of the difference in the deferred income tax expense required to be recorded under the IRS normalization rules and the amount of deferred income tax expense that was included in cost of service for rates years covering 2011 forward. The recovery period in New York is from 27 to 39 years and for CMP 32.5 years beginning in 2020.

“Asset retirement obligations” represents the differences in timing of the recognition of costs associated with our AROs and the collection of such amounts through rates. This amount is being amortized at the related depreciation and accretion amounts of the underlying liability.

“Other” includes post term amortization deferrals and various items subject to reconciliation including hedge losses and deferred property tax.

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Regulatory liabilities as of December 31, 2019 and 2018 consisted of:

As of December 31, (Millions)	2019	2018
Energy efficiency portfolio standard	$ 72	$ 56
Gas supply charge and deferred natural gas cost	11	4
Pension and other post-retirement benefits cost deferrals	80	97
Carrying costs on deferred income tax bonus depreciation	49	72
Carrying costs on deferred income tax - Mixed Services 263(a)	15	20
2017 Tax Act	1,548	1,509
Revenue decoupling mechanism	17	19
Accrued removal obligations	1,173	1,153
Asset sale gain account	10	10
Economic development	27	28
Positive benefit adjustment	37	39
Theoretical reserve flow thru impact	14	19
Deferred property tax	17	25
Net plant reconciliation	23	19
Debt rate reconciliation	67	49
Rate refund – FERC ROE proceeding	32	29
Transmission congestion contracts	23	21
Merger-related rate credits	16	18
Accumulated deferred investment tax credits	13	14
Asset retirement obligation	14	13
Earnings sharing provisions	28	17
Middletown/Norwalk local transmission network service collections	18	19
Low income programs	33	38
Non-firm margin sharing credits	16	10
New York 2018 winter storm settlement	11	—
Other	159	130
Total regulatory liabilities	**3,523**	**3,428**
Less: current portion	242	205
Total non-current regulatory liabilities	**$ 3,281**	**$ 3,223**

"Energy efficiency portfolio standard" represents the difference between revenue billed to customers through an energy efficiency charge and the costs of our energy efficiency programs as approved by the state authorities. This may be refunded to customers within the next year.

"Pension and other postretirement benefits" represent the actuarial gains on other postretirement plans that will be reflected in customer rates when they are amortized and recognized in future expenses. Because no funds have yet been received for this, a regulatory liability is not reflected within rate base. They also represent the difference between actual expense for pension and other postretirement benefits and the amount provided for in rates. Recovery of these amounts will be determined in future proceedings.

"Carrying costs on deferred income tax bonus depreciation" represent the carrying costs benefit of increased accumulated deferred income taxes created by the change in tax law allowing bonus depreciation. The amortization period is five years following the approval of the Joint Proposal by the NYPSC.

"2017 Tax Act" represents the impact from remeasurement of deferred income tax balances as a result of the Tax Act enacted by the U.S. federal government on December 22, 2017. Reductions in accumulated deferred income tax balances due to the reduction in the corporate income tax rates from 35% to 21% under the provisions of the Tax Act will result in amounts previously and currently collected from utility customers for these deferred taxes to be refundable to such customers, generally through reductions in future rates. The NYPSC, MPUC, PURA and DPU have instituted separate proceedings in New York, Maine, Connecticut and Massachusetts, respectively, to review and address the implications associated with the Tax Act on the utilities providing service in such states.

"Accrued removal obligations" represent the differences between asset removal costs recorded and amounts collected in rates for those costs. The amortization period is dependent upon the asset removal costs of underlying assets and the life of the utility plant.

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"Asset sale gain account" represents the gain on NYSEG's 2001 sale of its interest in Nine Mile Point 2 nuclear generating station located in Oswego, New York. The net proceeds from the Nine Mile Point 2 nuclear generating station were placed in this account and will be used to benefit customers. The amortization period is five years and began in 2016.

"Economic development" represents the economic development program which enables NYSEG and RG&E to foster economic development through attraction, expansion and retention of businesses within its service territory. If the level of actual expenditures for economic development allocated to NYSEG and RG&E varies in any rate year from the level provided for in rates, the difference is refunded to customers. The amortization period is five years and began in 2016.

"Positive benefit adjustment" resulted from Iberdrola's 2008 acquisition of AVANGRID (formerly Energy East Corporation). This is being used to moderate increases in rates. The amortization period is five years and began in 2016.

"Theoretical reserve flow thru impact" represents the differences from the rate allowance for applicable federal and state flow through impacts related to the excess depreciation reserve amortization. It also represents the carrying cost on the differences. The amortization period is five years and began in 2016.

"Merger-related rate credits" resulted from the acquisition of UIL. This is being used to moderate increases in rates. In the years ended December 31, 2019 and 2018, respectively, $2 million and $3 million of rate credits were applied against customer bills.

"Low Income Programs" represent various hardship and payment plan programs approved for recovery.

"Other" includes various items subject to reconciliation including excess generation service charge, rate change levelization and RAM.

Note 7. Goodwill and Intangible assets

Goodwill by reportable segment as of December 31, 2019 and 2018 consisted of:

As of December 31, (Millions)	2019	2018
Networks	$ 2,747	$ 2,747
Renewables	372	380
Total	**$ 3,119**	**$ 3,127**

During 2019, Renewables' goodwill was reduced by $8 million as a result of the sale of a 50% interest in the Poseidon projects described in Note 22. During 2018, there were no changes in gross amounts and accumulated losses of goodwill for the Networks and Renewables reportable segments.

Goodwill Impairment Assessment

For impairment testing purposes our reporting units are the same as operating segments, except for Networks, which contains three reporting units, Maine, New York and UIL. The goodwill for the Maine reporting unit resulted from the purchase of CMP by Energy East Corporation in 2000 and amounted to $325 million. Separately, the goodwill for the New York reporting unit resulted primarily from the purchase of RG&E by Energy East in 2002 and amounted to $654 million. The goodwill for the UIL reporting unit was generated from the acquisition of UIL on December 16, 2015, and amounts to $1,768 million.

Our annual impairment testing takes place as of October 1. Our step zero qualitative assessment involves evaluating key events and circumstances that could affect the fair value of our reporting units, as well as other factors. Events and circumstances evaluated include macroeconomic conditions, industry, regulatory and market considerations, cost factors and their effect on earnings and cash flows, overall financial performance as compared with projected results and actual results of relevant prior periods, other relevant entity specific events and events affecting a reporting unit.

Our step one impairment testing includes various assumptions, primarily the discount rate, which is based on an estimate of a market participant's marginal, weighted average cost of capital and forecasted cash flows. We test the reasonableness of the conclusions of our step one impairment testing using a range of discount rates and a range of assumptions for long term cash flows.

We had no impairment of goodwill in 2019 and 2018 as a result of our impairment testing.

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Intangible assets

Intangible assets include those assets acquired in business acquisitions and intangible assets acquired and developed from external third parties and from affiliated companies. Following is a summary of intangible assets as of December 31, 2019 and 2018:

As of December 31, 2019	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
(Millions)			
Wind development	$ 591	$ (289)	$ 302
Other	28	(16)	12
Total Intangible Assets	**$ 619**	**$ (305)**	**$ 314**

As of December 31, 2018	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
(Millions)			
Wind development	$ 588	$ (275)	$ 313
Other	25	(15)	10
Total Intangible Assets	**$ 613**	**$ (290)**	**$ 323**

Wind development costs, with the exception of future 'pipeline' development costs, are amortized on a straight-line basis in accordance with the life of the related assets once placed in service. Amortization expense for both the years ended December 31, 2019 and 2018 was $15 million, and for the year ended December 31, 2017, amortization expense was $22 million. We believe our future cash flows will support the recoverability of our intangible assets.

We expect amortization expense for the five years subsequent to December 31, 2019, to be as follows:

Year ending December 31,	Amount
(Millions)	
2020	$ 15
2021	$ 14
2022	$ 13
2023	$ 12
2024	$ 12

Note 8. Property, Plant and Equipment

Property, plant and equipment as of December 31, 2019, consisted of:

As of December 31, 2019	Regulated	Nonregulated	Total
(Millions)			
Electric generation, distribution, transmission and other	$ 15,092	$ 12,360	$ 27,452
Natural gas transportation, distribution and other	4,387	13	4,400
Other common operating property	—	258	258
Total Property, Plant and Equipment in Service	**19,479**	**12,631**	**32,110**
Total accumulated depreciation	(4,969)	(4,090)	(9,059)
Total Net Property, Plant and Equipment in Service	**14,510**	**8,541**	**23,051**
Construction work in progress	1,269	898	2,167
Total Property, Plant and Equipment	**$ 15,779**	**$ 9,439**	**$ 25,218**

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Property, plant and equipment as of December 31, 2018, consisted of:

As of December 31, 2018 (Millions)	Regulated	Nonregulated	Total
Electric generation, distribution, transmission and other	$ 14,242	$ 11,669	$ 25,911
Natural gas transportation, distribution and other	4,058	13	4,071
Other common operating property	—	226	226
Total Property, Plant and Equipment in Service (a)	**18,300**	**11,908**	**30,208**
Total accumulated depreciation (b)	(4,615)	(3,744)	(8,359)
Total Net Property, Plant and Equipment in Service	**13,685**	**8,164**	**21,849**
Construction work in progress	1,010	600	1,610
Total Property, Plant and Equipment	**$ 14,695**	**$ 8,764**	**$ 23,459**

(a) Includes capitalized leases of $226 million primarily related to electric generation, distribution, transmission and other. Finance leases (formerly known as capital leases) are no longer included in property plant and equipment after adoption of ASC 842 on January 1, 2019. See Note 3 for further information.
(b) Includes accumulated amortization of capitalized leases of $76 million.

Capitalized interest costs were $55 million, $26 million and $28 million for the years ended December 31, 2019, 2018 and 2017, respectively. Accrued liabilities for property, plant and equipment additions were $357 million, $154 million and $209 million as of December 31, 2019, 2018 and 2017, respectively.

We impaired or wrote off amounts of $11 million, $0 and $5 million for the years ended December 31, 2019, 2018 and 2017, respectively, resulting from reassessment of the economic feasibility of our various Renewables development projects under construction.

Depreciation expense for the years ended December 31, 2019, 2018 and 2017, amounted to $919 million, $840 million and $802 million, respectively.

Note 9. Asset retirement obligations

AROs are intended to meet the costs for dismantling and restoration work that we have committed to carry out at our operational facilities.

The reconciliation of ARO carrying amounts for the years ended December 31, 2019 and 2018 consisted of:

(Millions)	
As of December 31, 2017	**$ 196**
Liabilities settled during the year	(1)
Liabilities incurred during the year	5
Accretion expense	12
Revisions in estimated cash flows	5
As of December 31, 2018	**$ 217**
Liabilities settled during the year	(5)
Liabilities incurred during the year	6
Accretion expense	12
Revisions in estimated cash flows (a)	(40)
As of December 31, 2019	**$ 190**

(a) Represents a reduction in our estimate of expected cash flows required for retirement activities related to our renewable energy facilities.

Several of the wind generation facilities have restricted cash for purposes of settling AROs. Restricted cash related to AROs was $2 million as of both December 31, 2019 and 2018. These amounts have been included in “Other Assets” on our consolidated balance sheets. Accretion expenses are included in “Operations and maintenance” in our consolidated statements of income.

We have AROs for which a liability has not been recognized because the fair value cannot be reasonably estimated due to indeterminate settlement dates, including for the removal of hydroelectric dams due to structural inadequacy or for decommissioning; the removal of property upon termination of an easement, right-of-way or franchise; and costs for abandonment of certain types of gas mains.

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Note 10. Debt

Long-term debt as of December 31, 2019 and 2018 consisted of:

As of December 31,		2019		2018	
(Millions)	Maturity Dates	Balances	Interest Rates	Balances	Interest Rates
First mortgage bonds - fixed (a)	2021-2049	$ 2,218	3.07%-8.00%	$ 2,055	3.07%-10.06%
Unsecured pollution control notes - fixed	2020-2029	538	2.00%-3.50%	526	2.00%-3.50%
Term loan - variable	2021	500	2.40%	—	
Other various non-current debt - fixed	2020-2049	4,228	2.80%-10.48%	3,127	2.80%-10.48%
Obligations under capital leases (b)		—		89	4.00%-4.44%
Unamortized debt issuance costs and discount		(38)		(35)	
Total Debt		**7,446**		**5,762**	
Less: debt due within one year, included in current liabilities		730		394	
Total Non-current Debt		**$ 6,716**		**$ 5,368**	

(a) The first mortgage bonds have pledged collateral of substantially all the respective utility's in service properties of approximately $6,876 million.

(b) Due to the adoption of ASC 842 in 2019 (see Notes 3 and 13 for more information), capital leases, now known as financing leases, are no longer reported as part of long-term debt.

On January 15, 2019, UI, CNG, SCG and BGC issued $195 million in aggregate amount of notes/bonds with maturity dates ranging from 2029 to 2049 and fixed interest rates ranging from 4.07% to 4.52%.

On April 1, 2019, NYSEG issued $12 million of Indiana County Industrial Development Authority Pollution Control Revenue Bonds in a private placement maturing in 2024 with a 2.65% fixed interest rate.

On May 16, 2019, we issued $750 million of senior unsecured notes maturing in 2029 at a fixed interest rate of 3.80%.

On June 3, 2019, CMP issued $240 million aggregate principal amount of first mortgage bonds with maturity dates ranging from 2026 to 2034 and fixed interest rates ranging from 3.87% to 4.20%.

On August 27, 2019, RG&E issued $150 million aggregate principal amount of first mortgage bonds maturing in 2027 at a fixed interest rate of 3.10%.

On September 5, 2019, NYSEG issued $300 million aggregate principal amount of senior unsecured notes maturing in 2049 at a fixed interest rate of 3.30%.

On December 31, 2019, we entered into a $500 million term loan credit agreement with two financial institutions. The agreement expires on June 30, 2021 and has a variable interest rate based on the London Interbank Offer Rate (LIBOR). The initial rate was set at 2.40% on December 31, 2019.

Long-term debt maturities, including sinking fund obligations, due over the next five years consists of:

2020	2021	2022	2023	2024	Total
(Millions)					
$ 730	$ 801	$ 363	$ 439	$ 612	$ 2,945

We make certain standard covenants to lenders in our third-party debt agreements, including, in certain agreements, covenants regarding the ratio of indebtedness to total capitalization. A breach of any covenant in the existing credit facilities or the agreements governing our other indebtedness would result in an event of default. Certain events of default may trigger automatic acceleration. Other events of default may be remedied by the borrower within a specified period or waived by the lenders and, if not remedied or waived, give the lenders the right to accelerate. Neither we nor any of our subsidiaries were in breach of covenants or of any obligation that could trigger the early redemption of our debt as of both December 31, 2019 and 2018.

Fair Value of Debt

The estimated fair value of debt amounted to $8,168 million and $5,952 million as of December 31, 2019 and 2018, respectively. The estimated fair value was determined, in most cases, by discounting the future cash flows at market interest rates. The interest

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rate curve used to make these calculations takes into account the risks associated with the electricity industry and the credit ratings of the borrowers in each case. The fair value of debt is considered Level 2 within the fair value hierarchy.

Short-term Debt

Outstanding Notes Payable

AVANGRID had $560 million and $587 million of notes payable as of December 31, 2019 and 2018, respectively. As of December 31, 2019 and 2018, the balance consisted of $562 million and $589 million, respectively, of commercial paper, presented net of discounts on the balance sheet. AVANGRID has a commercial paper program with a limit of $2 billion which is backstopped by the AVANGRID credit facility described below.

AVANGRID Credit Facility

AVANGRID and its subsidiaries, NYSEG, RG&E, CMP, UI, CNG, SCG and BGC have a revolving credit facility with a syndicate of banks, or the AVANGRID Credit Facility, that provides for maximum borrowings of up to $2.5 billion in the aggregate.

Under the terms of the AVANGRID Credit Facility, each joint borrower has a maximum borrowing entitlement, or sublimit, which can be periodically adjusted to address specific short-term capital funding needs, subject to the maximum limit contained in the agreement. AVANGRID's maximum sublimit is $2 billion, NYSEG, RG&E, CMP and UI have maximum sublimits of $400 million, CNG and SCG have maximum sublimits of $150 million and BGC has a maximum sublimit of $40 million. Under the AVANGRID Credit Facility, each of the borrowers will pay an annual facility fee that is dependent on their credit rating. As of December 31, 2019, the facility fees range from 10.0 to 17.5 basis points. During 2019, we extended the maturity date for the AVANGRID Credit Facility by one year to June 29, 2024.

Since the facility is a backstop to the AVANGRID commercial paper program, the amounts available under the facility as of December 31, 2019 and December 31, 2018 were $1,938 million and $1,911 million, respectively.

Iberdrola Group Credit Facility

AVANGRID has a credit facility with Iberdrola Financiacion, S.A.U., a company of the Iberdrola Group. The facility has a limit of $500 million and matures on June 18, 2023. AVANGRID pays a facility fee of 10.5 basis points annually on the facility. As of both December 31, 2019 and 2018, there was no outstanding amount under this credit facility.

Note 11. Fair Value of Financial Instruments and Fair Value Measurements

We determine the fair value of our derivative assets and liabilities and non-current equity investments associated with Networks' activities utilizing market approach valuation techniques:

- Our equity and other investments consist of Rabbi Trusts for deferred compensation plans and a supplemental retirement benefit life insurance trust. The Rabbi Trusts primarily include equity securities and money market funds. We measure the fair value of our Rabbi Trust portfolio using observable, unadjusted quoted market prices in active markets for identical assets and include the measurements in Level 1. We measure the fair value of the supplemental retirement benefit life insurance trust based on quoted prices in the active markets for the various funds within which the assets are held and include the measurement in Level 2.
- NYSEG and RG&E enter into electric energy derivative contracts to hedge the forecasted purchases required to serve their electric load obligations. They hedge their electric load obligations using derivative contracts that are settled based upon Locational Based Marginal Pricing published by the NYISO. NYSEG and RG&E hedge approximately 70% of their electric load obligations using contracts for a NYISO location where an active market exists. The forward market prices used to value the companies' open electric energy derivative contracts are based on quoted prices in active markets for identical assets or liabilities with no adjustment required and therefore we include the fair value measurements in Level 1.
- NYSEG and RG&E enter into natural gas derivative contracts to hedge their forecasted purchases required to serve their natural gas load obligations. The forward market prices used to value open natural gas derivative contracts are exchange-based prices for the identical derivative contracts traded actively on the New York Mercantile Exchange (NYMEX). Because we use prices quoted in an active market we include the fair value measurements in Level 1.
- NYSEG, RG&E and CMP enter into fuel derivative contracts to hedge their unleaded and diesel fuel requirements for their fleet vehicles. Exchange-based forward market prices are used, but because an unobservable basis adjustment is added to the forward prices, we include the fair value measurement for these contracts in Level 3.

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- UI enters into CfDs, which are marked-to-market based on a probability-based expected cash flow analysis that is discounted at risk-free interest rates and an adjustment for non-performance risk using credit default swap rates. We include the fair value measurement for these contracts in Level 3 (See Note 12 for further discussion of CfDs).

We determine the fair value of our derivative assets and liabilities associated with Renewables activities utilizing market approach valuation techniques. Exchange-traded transactions, such as NYMEX futures contracts, that are based on quoted market prices in active markets for identical products with no adjustment are included in fair value Level 1. Contracts with delivery periods of two years or less which are traded in active markets and are valued with or derived from observable market data for identical or similar products such as over-the-counter NYMEX, foreign exchange swaps, and fixed price physical and basis and index trades are included in fair value Level 2. Contracts with delivery periods exceeding two years or that have unobservable inputs or inputs that cannot be corroborated with market data for identical or similar products are included in fair value Level 3. The unobservable inputs include historical volatilities and correlations for tolling arrangements and extrapolated values for certain power swaps. The valuation for this category is based on our judgments about the assumptions market participants would use in pricing the asset or liability since limited market data exists.

We determine the fair value of our interest rate swap derivative instruments based on a model whose inputs are observable, such as the London Interbank Offered Rate (LIBOR) forward interest rate curves. We include the fair value measurement for these contracts in Level 2 (See Note 12 for further discussion of interest rate swaps).

We determine the fair value of our foreign currency exchange derivative instruments based on current exchange rates compared to the rates at inception of the hedge. We include the fair value measurement for these contracts in Level 2.

The carrying amounts for cash and cash equivalents, restricted cash, accounts receivable, accounts payable, notes payable, lease obligations and interest accrued approximate their estimated fair values and are considered Level 1.

Restricted cash was $6 million and $7 million as of December 31, 2019 and 2018, respectively, which is included in "Other Assets" on our consolidated balance sheets.

The financial instruments measured at fair value as of December 31, 2019 and 2018 consisted of:

As of As of December 31, 2019	Level 1	Level 2	Level 3	Netting	Total
(Millions)					
Equity and other investments with readily determinable fair values	**$ 38**	**$ 13**	**$ —**	**$ —**	**$ 51**
Derivative assets					
Derivative financial instruments - power	$ 4	$ 23	$ 120	$ (54)	$ 93
Derivative financial instruments - gas	—	40	31	(71)	—
Contracts for differences	—	—	2	—	2
Total	**$ 4**	**$ 63**	**$ 153**	**$ (125)**	**$ 95**
Derivative liabilities					
Derivative financial instruments - power	$ (28)	$ (43)	$ (29)	$ 92	$ (8)
Derivative financial instruments - gas	(4)	(26)	(5)	33	(2)
Contracts for differences	—	—	(94)	—	(94)
Derivative financial instruments – Other	—	(1)	—	—	(1)
Total	**$ (32)**	**$ (70)**	**$ (128)**	**$ 125**	**$ (105)**

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As of As of December 31, 2018 (Millions)	Level 1	Level 2	Level 3	Netting	Total
Equity and other investments with readily determinable fair values	**$ 37**	**$ 10**	**$ —**	**$ —**	**$ 47**
Derivative assets					
Derivative financial instruments - power	$ 17	$ 23	$ 91	$ (59)	$ 72
Derivative financial instruments - gas	1	20	36	(55)	2
Contracts for differences	—	—	5	—	5
Total	**$ 18**	**$ 43**	**$ 132**	**$ (114)**	**$ 79**
Derivative liabilities					
Derivative financial instruments - power	$ (12)	$ (41)	$ (36)	$ 77	$ (12)
Derivative financial instruments - gas	(1)	(23)	(7)	22	(9)
Contracts for differences	—	—	(102)	—	(102)
Derivative financial instruments – Other	—	(16)	(2)	—	(18)
Total	**$ (13)**	**$ (80)**	**$ (147)**	**$ 99**	**$ (141)**

The reconciliation of changes in the fair value of financial instruments based on Level 3 inputs for the years ended December 31, 2019, 2018 and 2017 consisted of:

(Millions)	2019	2018	2017
Fair value as of January 1,	**$ (15)**	**$ 6**	**$ 31**
Gains for the year recognized in operating revenues	53	18	18
Losses for the year recognized in operating revenues	(2)	(9)	(1)
Total gains or losses for the period recognized in operating revenues	51	9	17
Gains recognized in OCI	2	—	2
Losses recognized in OCI	(3)	(5)	(1)
Total gains or losses recognized in OCI	(1)	(5)	1
Net change recognized in regulatory assets and liabilities	5	(5)	(17)
Purchases	(22)	(6)	(5)
Settlements	4	(10)	(17)
Transfers out of Level 3 (a)	3	(4)	(4)
Fair value as of December 31,	**$ 25**	**$ (15)**	**$ 6**
Gains for the year included in operating revenues attributable to the change in unrealized gains relating to financial instruments still held at the reporting date	$ 51	$ 9	$ 17

(a) Transfers out of Level 3 were the result of increased observability of market data.

For assets and liabilities that are recognized in the consolidated financial statements at fair value on a recurring basis, we determine whether transfers have occurred between levels in the hierarchy by re-assessing categorization based on the lowest level of input that is significant to the fair value measurement as a whole at the end of each reporting period. There have been no transfers between Level 1 and Level 2 during the years reported.

Level 3 Fair Value Measurement

The table below illustrates the significant sources of unobservable inputs used in the fair value measurement of our Level 3 derivatives and the variability in prices for those transactions classified as Level 3 derivatives.

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As of December 31, 2019							
Instruments	Instrument Description	Valuation Technique	Valuation Inputs	Index	Avg.	Max.	Min.
Fixed price power and gas swaps with delivery period > two years	Transactions with delivery periods exceeding two years	Transactions are valued against forward market prices on a discounted basis	Observable and extrapolated forward gas and power prices not all of which can be corroborated by market data for identical or similar products	NYMEX ($/MMBtu)	$ 2.90	$ 4.90	$ 2.07
				Indiana hub ($/MWh)	$30.54	$ 61.12	$19.10
				Mid C ($/MWh)	$24.75	$105.00	$ (0.50)
				Minn hub ($/MWh)	$25.10	$ 52.17	$12.51
				NoIL hub ($/MWh)	$27.36	$ 55.39	$15.50
				Ercot S hub ($/MWh)	$31.00	$248.39	$14.62

Our Level 3 valuations primarily consist of NYMEX gas and fixed price power swaps with delivery periods extending through 2024 and 2032, respectively. The gas swaps are used to hedge merchant wind positions. The power swaps are used to hedge merchant wind production in the West and Midwest.

We performed a sensitivity analysis around the Level 3 gas and power positions to changes in the valuation inputs. Given the nature of the transactions in Level 3, the only material input to the valuation is the market price of gas or power for transactions with delivery periods exceeding two years. The fixed price power swaps are economic hedges of future power generation, with decreases in power prices resulting in unrealized gains and increases in power prices resulting in unrealized losses. The gas swaps are economic hedges of merchant generation, with decreases in gas prices resulting in unrealized gains and increases in gas prices resulting in unrealized losses. As all transactions are economic hedges of the underlying position, any changes in the fair value of these transactions will be offset by changes in the anticipated purchase/sales price of the underlying commodity.

Two elements of the analytical infrastructure employed in valuing transactions are the price curves used in the calculation of market value and the models themselves. We maintain and document authorized trading points and associated forward price curves, and we develop and document models used in valuation of the various products.

Transactions are valued in part on the basis of forward price, correlation and volatility curves. We maintain and document descriptions of these curves and their derivations. Forward price curves used in valuing the transactions are applied to the full duration of the transaction.

The determination of fair value of the CfDs (see Note 12 for further details on CfDs) was based on a probability-based expected cash flow analysis that was discounted at risk-free interest rates, as applicable, and an adjustment for non-performance risk using credit default swap rates. Certain management assumptions were required, including development of pricing that extends over the term of the contracts. We believe this methodology provides the most reasonable estimates of the amount of future discounted cash flows associated with the CfDs. Additionally, on a quarterly basis, we perform analytics to ensure that the fair value of the derivatives is consistent with changes, if any, in the various fair value model inputs. Significant isolated changes in the risk of non-performance, the discount rate or the contract term pricing would result in an inverse change in the fair value of the CfDs. Additional quantitative information about Level 3 fair value measurements of the CfDs is as follows:

Unobservable Input	Range at December 31, 2019
Risk of non-performance	0.05% - 0.45%
Discount rate	1.69% - 1.83%
Forward pricing ($ per KW-month)	$3.80 - $7.03

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Note 12. Derivative Instruments and Hedging

Our Networks, Renewables and Gas activities are exposed to certain risks, which are managed by using derivative instruments. All derivative instruments are recognized as either assets or liabilities at fair value on our consolidated balance sheets in accordance with the accounting requirements concerning derivative instruments and hedging activities.

(a) Networks activities

The tables below present Networks' derivative positions as of December 31, 2019 and 2018, respectively, including those subject to master netting agreements and the location of the net derivative positions on our consolidated balance sheets:

As of December 31, 2019	Current Assets	Noncurrent Assets	Current Liabilities	Noncurrent Liabilities
(Millions)				
Not designated as hedging instruments				
Derivative assets	$ 1	$ 4	$ 1	$ 2
Derivative liabilities	(1)	(2)	(39)	(86)
	—	2	(38)	(84)
Designated as hedging instruments				
Derivative assets	—	—	—	—
Derivative liabilities	—	—	(1)	(1)
	—	—	(1)	(1)
Total derivatives before offset of cash collateral	—	2	(39)	(85)
Cash collateral receivable	—	—	27	1
Total derivatives as presented in the balance sheet	$ —	$ 2	$ (12)	$ (84)

As of December 31, 2018	Current Assets	Noncurrent Assets	Current Liabilities	Noncurrent Liabilities
(Millions)				
Not designated as hedging instruments				
Derivative assets	$ 18	$ 6	$ 10	$ 3
Derivative liabilities	(10)	(3)	(21)	(93)
	8	3	(11)	(90)
Designated as hedging instruments				
Derivative assets	—	—	—	—
Derivative liabilities	—	—	(2)	—
	—	—	(2)	—
Total derivatives before offset of cash collateral	8	3	(13)	(90)
Cash collateral receivable	—	—	—	—
Total derivatives as presented in the balance sheet	$ 8	$ 3	$ (13)	$ (90)

The net notional volumes of the outstanding derivative instruments associated with Networks' activities as of December 31, 2019 and 2018, respectively, consisted of:

As of December 31,	2019	2018
(Millions)		
Wholesale electricity purchase contracts (MWh)	5.1	4.9
Natural gas purchase contracts (Dth)	8.5	7.8
Fleet fuel purchase contracts (Gallons)	2.2	2.1

Derivatives not designated as hedging instruments

NYSEG and RG&E have an electric commodity charge that passes through rates costs for the market price of electricity. We use electricity contracts, both physical and financial, to manage fluctuations in electricity commodity prices in order to provide price stability to customers. We include the cost or benefit of those contracts in the amount expensed for electricity purchased when the related electricity is sold. We record changes in the fair value of electric hedge contracts to derivative assets and/or liabilities with an offset to regulatory assets and/or regulatory liabilities, in accordance with the accounting requirements concerning regulated operations.

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NYSEG and RG&E have purchased gas adjustment clauses that allow us to recover through rates any changes in the market price of purchased natural gas, substantially eliminating their exposure to natural gas price risk. NYSEG and RG&E use natural gas futures and forwards to manage fluctuations in natural gas commodity prices to provide price stability to customers. We include the cost or benefit of natural gas futures and forwards in the commodity cost that is passed on to customers when the related sales commitments are fulfilled. We record changes in the fair value of natural gas hedge contracts to derivative assets and/or liabilities with an offset to regulatory assets and/or regulatory liabilities in accordance with the accounting requirements for regulated operations.

The amounts for electricity hedge contracts and natural gas hedge contracts recognized in regulatory liabilities and assets as of December 31, 2019 and 2018 and amounts reclassified from regulatory assets and liabilities into income for the years ended 2019, 2018 and 2017 are as follows:

(Millions)	Loss or Gain Recognized in Regulatory Assets/Liabilities		Location of Loss (Gain) Reclassified from Regulatory Assets/ Liabilities into Income	Loss (Gain) Reclassified from Regulatory Assets/ Liabilities into Income	
As of				For the Year Ended December 31,	
December 31, 2019	**Electricity**	**Natural Gas**	**2019**	**Electricity**	**Natural Gas**
Regulatory assets	$ 24	$ 4	Purchased power, natural gas and fuel used	$ 25	$ 1
Regulatory liabilities	$ —	$ —			
December 31, 2018			**2018**		
Regulatory assets	$ —	$ —	Purchased power, natural gas and fuel used	$ (10)	$ (1)
Regulatory liabilities	$ 5	$ —			
			2017		
			Purchased power, natural gas and fuel used	$ 37	$ —

Pursuant to a PURA order, UI and Connecticut's other electric utility, CL&P, each executed two long-term CfDs with certain incremental capacity resources, each of which specifies a capacity quantity and a monthly settlement that reflects the difference between a forward market price and the contract price. The costs or benefits of each contract will be paid by or allocated to customers and will be subject to a cost-sharing agreement between UI and CL&P pursuant to which approximately 20% of the cost or benefit is borne by or allocated to UI customers and approximately 80% is borne by or allocated to CL&P customers.

PURA has determined that costs associated with these CfDs will be fully recoverable by UI and CL&P through electric rates, and UI has deferred recognition of costs (a regulatory asset) or obligations (a regulatory liability), including carrying costs. For those CfDs signed by CL&P, UI records its approximate 20% portion pursuant to the cost-sharing agreement noted above. As of December 31, 2019, UI has recorded a gross derivative asset of $2 million ($0 of which is related to UI's portion of the CfD signed by CL&P), a regulatory asset of $92 million, a gross derivative liability of $94 million ($92 million of which is related to UI's portion of the CfD signed by CL&P) and a regulatory liability of $0. As of December 31, 2018, UI has recorded a gross derivative asset of $5 million ($0 of which is related to UI's portion of the CfD signed by CL&P), a regulatory asset of $97 million, a gross derivative liability of $102 million ($96 million of which is related to UI's portion of the CfD signed by CL&P) and a regulatory liability of $0.

The unrealized gains and losses from fair value adjustments to these derivatives, which are recorded in regulatory assets or regulatory liabilities, for the years ended December 31, 2019, 2018 and 2017, respectively, were as follows:

	Years Ended December 31,		
	2019	2018	2017
(Millions)			
Derivative Assets	$ (3)	$ (6)	$ (8)
Derivative Liabilities	$ 8	$ 1	$ (9)

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Derivatives designated as hedging instruments

The effect of derivatives in cash flow hedging relationships on OCI and income for the years ended December 31, 2019, 2018 and 2017, respectively, consisted of:

Year Ended December 31, (Millions)	(Loss) Recognized in OCI on Derivatives (a)	Location of Loss Reclassified from Accumulated OCI into Income	Loss Reclassified from Accumulated OCI into Income	Total amount per Income Statement
2019				
Interest rate contracts	$ —	Interest expense	$ 6	$ 306
Commodity contracts	—	Purchased power, natural gas and fuel used	1	1,509
Foreign currency exchange contracts	(1)		—	
Total	**$ (1)**		**$ 7**	
2018				
Interest rate contracts	$ —	Interest expense	$ 8	$ 303
Commodity contracts	(1)	Purchased power, natural gas and fuel used	—	1,653
Total	**$ (1)**		**$ 8**	
2017				
Interest rate contracts	$ —	Interest expense	$ 8	$ 280
Commodity contracts	(1)	Purchased power, natural gas and fuel used	1	1,338
Total	**$ (1)**		**$ 9**	

(a) Changes in accumulated OCI are reported in pre-tax basis.

On June 20, 2019, Networks entered into a forward contract to hedge the foreign currency exchange risk of approximately $100 million in forecasted capital expenditures through June 2023. The forward foreign currency contracts are designated and qualify as cash flow hedges and are expected to be settled upon the payment to vendors for capital expenditures. The gain or loss on the foreign exchange derivative is reported as a component of accumulated OCI and will be reclassified into earnings over the useful life of the underlying capital expenditures.

The net loss in accumulated OCI related to previously settled forward starting swaps and accumulated amortization is $55 million and $61 million, as of December 31, 2019 and 2018, respectively. We recorded $6 million in net derivative losses related to discontinued cash flow hedges in each of the years ended December 31, 2019, 2018 and 2017. We will amortize approximately $4 million of discontinued cash flow hedges in 2020.

The unrealized loss of $1 million on hedge derivatives is reported in OCI because the forecasted transaction is considered to be probable as of December 31, 2019. We expect that immaterial amounts of those losses will be reclassified into earnings within the next twelve months. The maximum length of time over which we are hedging our exposure to the variability in future cash flows for forecasted fleet fuel transactions is twelve months.

(b) Renewables and Gas activities

The below presented quantitative information includes derivative financial instruments associated with Gas activities, which were sold during 2018.

We sell fixed-price gas and power forwards to hedge our merchant wind assets from declining commodity prices for our Renewables business. We also purchase fixed-price gas and basis swaps and sell fixed-price power in the forward market to hedge the spark spread or heat rate of our merchant thermal assets. We also enter into tolling arrangements to sell the output of our thermal generation facilities.

Renewables has proprietary trading operations that enter into fixed-price power and gas forwards in addition to basis swaps. The intent is to speculate on fixed-price commodity and basis volatility in the U.S. commodity markets.

Renewables will periodically designate derivative contracts as cash flow hedges for both its thermal and wind portfolios. The fair value changes are recorded in OCI. For thermal operations, Renewables will periodically designate both fixed price NYMEX gas contracts and natural gas basis swaps that hedge the fuel requirements of its Klamath Plant in Klamath, Oregon. Renewables will

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also designate fixed price power swaps at various locations in the U.S. market to hedge future power sales from its Klamath facility and various wind farms.

The net notional volumes of outstanding derivative instruments associated with Renewables' activities as of December 31, 2019 and 2018, respectively, consisted of:

As of December 31,	2019	2018
(MWh/Dth in Millions)		
Wholesale electricity purchase contracts	4	5
Wholesale electricity sales contracts	9	6
Natural gas and other fuel purchase contracts	29	29
Financial power contracts	10	11
Basis swaps - purchases	42	42
Basis swaps - sales	1	4

The fair values of derivative contracts associated with Renewables' activities as of December 31, 2019 and 2018, respectively, consisted of:

As of December 31,	2019	2018
(Millions)		
Wholesale electricity purchase contracts	$ 10	$ 11
Wholesale electricity sales contracts	4	(12)
Natural gas and other fuel purchase contracts	(2)	(2)
Financial power contracts	73	55
Basis swaps - purchases	—	(6)
Total	**$ 85**	**$ 46**

The tables below present Renewables' derivative positions as of December 31, 2019 and 2018, respectively, including those subject to master netting agreements and the location of the net derivative position on our consolidated balance sheets:

As of December 31, 2019	Current Assets	Noncurrent Assets	Current Liabilities	Noncurrent Liabilities
(Millions)				
Not designated as hedging instruments				
Derivative assets	$ 23	$ 110	$ 42	$ 13
Derivative liabilities	(1)	(7)	(48)	(18)
	22	103	(6)	(5)
Designated as hedging instruments				
Derivative assets	—	18	5	4
Derivative liabilities	—	(9)	(13)	(6)
	—	9	(8)	(2)
Total derivatives before offset of cash collateral	22	112	(14)	(7)
Cash collateral (payable) receivable	(11)	(30)	7	6
Total derivatives as presented in the balance sheet	$ 11	$ 82	$ (7)	$ (1)

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As of December 31, 2018 (Millions)	Current Assets	Noncurrent Assets	Current Liabilities	Noncurrent Liabilities
Not designated as hedging instruments				
Derivative assets	$ 19	$ 96	$ 29	$ 17
Derivative liabilities	(5)	(3)	(48)	(35)
	14	93	(19)	(18)
Designated as hedging instruments				
Derivative assets	2	1	2	4
Derivative liabilities	—	—	(7)	(10)
	2	1	(5)	(6)
Total derivatives before offset of cash collateral	16	94	(24)	(24)
Cash collateral (payable) receivable	(8)	(34)	9	17
Total derivatives as presented in the balance sheet	$ 8	$ 60	$ (15)	$ (7)

Derivatives not designated as hedging instruments

The effects of trading and non-trading derivatives associated with Renewables' activities for the year ended December 31, 2019, consisted of:

	Year Ended December 31, 2019		
(Millions)	Trading	Non-trading	Total amount per income statement
Operating Revenues			
Wholesale electricity purchase contracts	$ (1)	$ —	
Wholesale electricity sales contracts	3	40	
Financial power contracts	(3)	23	
Financial and natural gas contracts	(1)	1	
Total (loss) gain included in operating revenues	$ (2)	$ 64	$ 1,338
Purchased power, natural gas and fuel used			
Wholesale electricity purchase contracts	$ —	$ —	
Wholesale electricity sales contracts	—	—	
Financial power contracts	—	(1)	
Financial and natural gas contracts	—	15	
Total gain included in purchased power, natural gas and fuel used	$ —	$ 14	$ 1,509
Total (Loss) Gain	$ (2)	$ 78	

During September 2019, Renewables liquidated a portion of one of its wholesale electricity sales contracts and recorded a gain of $43 million for the year ended December 31, 2019.

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The effects of trading and non-trading derivatives associated with Renewables' and Gas' activities for the years ended December 31, 2018 and 2017, consisted of:

Years Ended December 31,	2018		2017	
(Millions)	Trading	Non-trading	Trading	Non-trading
Wholesale electricity purchase contracts	$ 4	$ 11	$ (3)	$ 1
Wholesale electricity sales contracts	(2)	(15)	4	(3)
Financial power contracts	—	(19)	(1)	(5)
Financial and natural gas contracts	4	—	(8)	—
Natural gas and other fuel purchase contracts	—	—	—	(8)
Total Gain (Loss)	$ 6	$ (23)	$ (8)	$ (15)

Derivatives designated as hedging instruments

The effect of derivatives in cash flow hedging relationships on accumulated OCI and income for the years ended December 31, 2019, 2018 and 2017 consisted of:

Year Ended December 31,	(Loss) Gain Recognized in OCI on Derivatives (a)	Location of Gain Reclassified from Accumulated OCI into Income	Loss (Gain) Reclassified from Accumulated OCI into Income	Total amount per Income Statement
(Millions)				
2019				
Commodity contracts	$ (5)	Operating revenues	$ 3	$ 6,338
2018				
Commodity contracts	$ (11)	Operating revenues	$ (22)	$ 6,478
2017				
Commodity contracts	$ 41	Operating revenues	$ 14	$ 5,963

(a) Changes in OCI are reported on a pre-tax basis.

Amounts are reclassified from accumulated OCI into income in the period during which the transaction being hedged affects earnings or when it becomes probable that a forecasted transaction being hedged would not occur. Notwithstanding future changes in prices, approximately $6 million of loss included in accumulated OCI at December 31, 2019 is expected to be reclassified into earnings within the next 12 months. We recorded immaterial amounts of net derivative losses related to discontinued cash flow hedges for the years ended December 31, 2019, 2018 and 2017.

(c) Interest rate swaps

AVANGRID uses financial derivative instruments from time to time to alter its fixed and floating rate debt balances or to hedge fixed rates in anticipation of future fixed rate issuances. In May 2019, we settled interest rate swaps designated as cash flow hedges related to the issuance of the $750 million in debt described in Note 10. The net loss in accumulated OCI related to these interest rate swaps is $38 million as of December 31, 2019. We amortized into income $2 million of the loss related to the settled interest rate swaps for the year ended December 31, 2019. We will amortize into income approximately $4 million of the net loss on the interest rate swaps during 2020.

The table below presents our interest rate swap derivative positions as of December 31, 2019 and 2018, respectively, including the location of the net derivative positions on our consolidated balance sheets:

As of December 31, 2019	Current Liabilities
(Millions)	
Designated as hedging instruments	
Derivative liabilities	$ —
As of December 31, 2018	
(Millions)	
Designated as hedging instruments	
Derivative liabilities	$ (16)

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The effect of derivatives in cash flow hedging relationships on accumulated OCI for the years ended December 31, 2019 and 2018, respectively, consisted of:

Years Ended December 31,	(Loss) Recognized in OCI on Derivatives (a)	Location of Loss Reclassified from Accumulated OCI into Income	Loss Reclassified from Accumulated OCI into Income	Total amount per Income Statement
(Millions)				
2019				
Interest rate contracts	$ (24)	Interest expense	$ 2	$ 306
2018				
Interest rate contracts	$ (16)	Interest expense	$ —	$ 303

(a) Changes in OCI are reported on a pre-tax basis. The amount in accumulated OCI is being reclassified into earnings over the underlying debt maturity period which ends in 2029.

On January 31, 2020, AVANGRID entered into two forward interest rate swaps, with a total notional amount of $600 million, to hedge the issuance of forecasted fixed rate debt in the first quarter of 2020. The forward interest rate swaps are designated and qualify as cash flow hedges, have mandatory termination dates of March 31, 2020, and are expected to be settled upon the forecasted debt issuance. The gains or losses on the interest rate swap derivatives will be reported as a component of accumulated OCI and reclassified into earnings in the period or periods during which the related interest expense of the forecasted debt is incurred.

(d) Counterparty credit risk management

NYSEG and RG&E face risks related to counterparty performance on hedging contracts due to counterparty credit default. We have developed a matrix of unsecured credit thresholds that are applicable based on the respective counterparty's or the counterparty guarantor's credit rating, as provided by Moody's or Standard & Poor's. When our exposure to risk for a counterparty exceeds the unsecured credit threshold, the counterparty is required to post additional collateral or we will no longer transact with the counterparty until the exposure drops below the unsecured credit threshold.

The wholesale power supply agreements of UI contain default provisions that include required performance assurance, including certain collateral obligations, in the event that UI's credit rating on senior debt were to fall below investment grade. If such an event had occurred as of December 31, 2019, UI would have had to post an aggregate of approximately $18 million in collateral.

We have various master netting arrangements in the form of multiple contracts with various single counterparties that are subject to contractual agreements that provide for the net settlement of all contracts through a single payment. Those arrangements reduce our exposure to a counterparty in the event of a default on or termination of any single contract. For financial statement presentation purposes, we offset fair value amounts recognized for derivative instruments and fair value amounts recognized for the right to reclaim or the obligation to return cash collateral arising from derivative instruments executed with the same counterparty under a master netting arrangement. The amount of cash collateral under master netting arrangements that has not been offset against net derivative positions was $21 million and $26 million as of December 31, 2019 and 2018, respectively. Derivative instruments settlements and collateral payments are included throughout the "Changes in operating assets and liabilities" section of operating activities in the consolidated statements of cash flows.

Certain of our derivative instruments contain provisions that require us to maintain an investment grade credit rating on our debt from each of the major credit rating agencies. If our debt were to fall below investment grade, we would be in violation of those provisions and the counterparties to the derivative instruments could request immediate payment or demand immediate and ongoing full overnight collateralization on derivative instruments in net liability positions. The aggregate fair value of all derivative instruments with credit risk related contingent features that are in a liability position as of December 31, 2019 is $28 million, for which we have posted collateral.

Note 13. Leases

We have operating leases for office buildings, facilities, vehicles and certain equipment. Our finance leases are primarily related to electric generation, and certain buildings, vehicles and equipment. Certain of our lease agreements include rental payments adjusted periodically for inflation or are based on other periodic input measures. Our leases do not contain any material residual value guarantees or material restrictive covenants. Our leases have remaining lease terms of 1 year to 64 years, some of which may include options to extend the leases for up to 40 years, and some of which may include options to terminate. We consider extension or termination options in the lease term if it is reasonably certain we will exercise the option.

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The components of lease cost for the year ended December 31, 2019 were as follows:

For the Year Ended December 31,	2019
(Millions)	
Lease cost	
Finance lease cost	
Amortization of right-of-use assets	$ 12
Interest on lease liabilities	3
Total finance lease cost	15
Operating lease cost	18
Short-term lease cost	5
Variable lease cost	2
Total lease cost	$ 40

Balance sheet and other information for the year ended December 31, 2019 was as follows:

As of December 31,	2019
(Millions, except lease term and discount rate)	
Operating Leases	
Operating lease right-of-use assets	$ 70
Operating lease liabilities, current	12
Operating lease liabilities, long-term	65
Total operating lease liabilities	$ 77
Finance Leases	
Other assets	$ 133
Other current liabilities	9
Other non-current liabilities	54
Total finance lease liabilities	$ 63
Weighted-average Remaining Lease Term (years)	
Finance leases	7.59
Operating leases	12.98
Weighted-average Discount Rate	
Finance leases	5.35%
Operating leases	3.62%

For the year ended December 31, 2019, supplemental cash flow information related to leases was as follows:

For the Year Ended December 31,	2019
(Millions)	
Cash paid for amounts included in the measurement of lease liabilities:	
Operating cash flows from operating leases	$ 13
Operating cash flows from finance leases	$ 3
Financing cash flows from finance leases	$ 27
Right-of-use assets obtained in exchange for lease obligations:	
Finance leases	$ 1
Operating leases	$ 3

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As of December 31, 2019, maturities of lease liabilities were as follows:

(Millions)	Finance Leases	Operating Leases
Year ending December 31,		
2020	$ 10	$ 14
2021	7	13
2022	3	10
2023	50	7
2024	—	6
Thereafter	2	51
Total lease payments	72	101
Less: imputed interest	(9)	(24)
Total	$ 63	$ 77

Renewables has a sale-leaseback arrangement (as a seller-lessee) on a solar generation facility. The finance lease liability outstanding (including the current portion thereof) was $50 million and $52 million at December 31, 2019 and December 31, 2018, respectively. In 2013, Renewables sold the generation facility to a consortium of buyers (referred to as "Trusts") and simultaneously entered into an agreement with the Trusts for the right to use the facility for up to 15 years with an early buyout option in year 10. The gain on the sale of the generation facility was deferred and is being amortized to depreciation expense over the 25-year life of the facility.

Most of our leases do not provide an implicit rate in the lease; thus we use our incremental borrowing rate based on the information available at the commencement date in determining the present value of lease payments. We used the incremental borrowing rate on January 1, 2019, for operating leases that commenced prior to that date.

Comparative 2018 and 2017 Leases Disclosures

The following are the 2018 annual lease disclosures, presented in accordance with ASC 840.

Operating lease expense relating to operational facilities, office building leases and vehicle and equipment leases was $59 million, $72 million and $71 million for the years ended December 31, 2018, 2017 and 2016, respectively. Amounts related to contingent payments predominantly linked to electricity generation at the respective facilities were $11 million, $19 million and $22 million for the years ended December 31, 2018, 2017 and 2016, respectively. Leases for most of the land on which wind farm facilities are located have various renewal and termination clauses.

On January 16, 2014, as required by the NYPSC, NYSEG renewed a Reliability Support Services Agreement (RSS Agreement) with Cayuga Operating Company, LLC (Cayuga) for Cayuga to provide reliability support services to maintain necessary system reliability through June 2017. Cayuga owns and operates the Cayuga Generating Facility (Facility), a coal-fired generating station that includes two generating units. Cayuga operates and maintains the RSS units and manages and complies with scheduling deadlines and requirements for maintaining the Facility and the RSS units as eligible energy and capacity providers and complies with dispatch instructions. NYSEG paid Cayuga a monthly fixed price and also paid for capital expenditures for specified capital projects. NYSEG was entitled to a share of any capacity and energy revenues earned by Cayuga. We accounted for this arrangement as an operating lease. The net expense incurred under this operating lease was $18 million for the year ended December 31, 2017, and $38 million for the year ended December 31, 2016.

On October 21, 2015, RG&E, GNPP and multiple intervenors filed a joint proposal with the regulator for approval of the modified RSS Agreement for the continued operation of the Ginna Facility. On February 23, 2016, the NYPSC unanimously adopted the joint proposal, which provided for a term of the RSSA from April 1, 2015, through March 31, 2017 and RG&E monthly payments to GNPP in the amount of $15 million. RG&E was entitled to 70% of revenues from GNPP's sales into the energy and capacity markets, while GNPP was entitled to 30% of such revenues. We accounted for this arrangement as an operating lease. The net expense incurred under this operating lease was $6 million for the year ended December 31, 2017, and $115 million for the year ended December 31, 2016.

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Total future minimum lease payments as of December 31, 2018 consisted of:

Year	Operating Leases	Capital Leases	Total
		(Millions)	
2019	$ 31	$ 30	$ 61
2020	39	10	49
2021	38	7	45
2022	35	2	37
2023	33	50	83
Thereafter	735	2	737
Total	**$ 911**	**$ 101**	**$ 1,012**

Note 14. Commitments and Contingent Liabilities

We are party to various legal disputes arising as part of our normal business activities. We assess our exposure to these matters and record estimated loss contingencies when a loss is likely and can be reasonably estimated. We do not provide for accrual of legal costs expected to be incurred in connection with a loss contingency.

Transmission - ROE Complaint – CMP and UI

On September 30, 2011, the Massachusetts Attorney General, DPU, PURA, New Hampshire Public Utilities Commission, Rhode Island Division of Public Utilities and Carriers, Vermont Department of Public Service, numerous New England consumer advocate agencies and transmission tariff customers collectively filed a joint complaint with the FERC, pursuant to sections 206 and 306 of the Federal Power Act, against several New England Transmission Owners (NETOs) claiming that the approved base ROE of 11.14% used by NETOs in calculating formula rates for transmission service under the ISO-New England Open Access Transmission Tariff (OATT) was not just and reasonable and seeking a reduction of the base ROE with refunds to customers for the 15-month refund periods beginning October 1, 2011 (Complaint I), December 27, 2012 (Complaint II), July 31, 2014 (Complaint III) and April 29, 2016 (Complaint IV).

On October 16, 2014, the FERC issued its decision in Complaint I setting the base ROE at 10.57% and a maximum total ROE of 11.74% (base plus incentive ROEs) for the October 2011 – December 2012 period as well as prospectively from October 16, 2014. On March 3, 2015, the FERC upheld its decision and further clarified that the 11.74% ROE cap will be applied on a project specific basis and not on a transmission owner's total average transmission return. The complaints were consolidated and the administrative law judge issued an initial decision on March 22, 2016. The initial decision determined that, (1) for the fifteen month refund period in Complaint II, the base ROE should be 9.59% and that the ROE Cap (base ROE plus incentive ROEs) should be 10.42% and (2) for the fifteen month refund period in Complaint III and prospectively, the base ROE should be 10.90% and that the ROE Cap should be 12.19%. The initial decision in Complaints II and III is the administrative law judge's recommendation to the FERC Commissioners.

CMP and UI reserved for refunds for Complaints I, II and III consistent with the FERC's March 3, 2015 decision in Complaint I. Refunds were provided to customers for Complaint I. The CMP and UI total reserve associated with Complaints II and III is $25 million and $7 million, respectively, as of December 31, 2019, which has not changed since December 31, 2018, except for the accrual of carrying costs. If adopted as final by the FERC, the impact of the initial decision by the FERC administrative law judge would be an additional aggregate reserve for Complaints II and III of $17 million, which is based upon currently available information for these proceedings.

Following various intermediate hearings, orders and appellate decisions, on October 16, 2018, the FERC issued an order directing briefs and proposing a new methodology to calculate the NETOs ROE that is contained in NETOs' transmission formula rate on file at the FERC (the October 2018 Order). The FERC proposes to use this new methodology to resolve Complaints I, II, III and IV filed by the New England state consumer advocates.

The new proposed ROE methodology set forth in the October 2018 Order considers more than just the two-step discounted cash flow (DCF) analysis adopted in the FERC order on Complaint I vacated by the Court. The new proposed ROE methodology uses three financial analyses (i.e., DCF, the capital-asset pricing model and the expected earnings analysis) to produce a range of returns to narrow the zone of reasonableness when assessing whether a complainant has met its initial burden of demonstrating that the utility's existing ROE is unjust and unreasonable. The new proposed ROE methodology establishes a range of just and reasonable ROEs of 9.60% to 10.99% and proposes a just and reasonable base ROE of 10.41% with a new ROE cap of 13.08%. Pursuant to the October 2018 Order, the NETOs filed initial briefs on the proposed methodology in all four Complaints on January 11, 2019 and replied to the initial briefs on March 8, 2019. On November 21, 2019, the FERC issued rulings on two complaints challenging

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the base return on equity for Midcontinent Independent System Operator, or MISO transmission owners. These rulings established a new zone of reasonableness based on equal weighting of the DCF and capital-asset pricing model for establishing the base return on equity. This resulted in a base return on equity of 9.88% as the midpoint of the zone of reasonableness. Various parties have requested rehearing on this decision. We cannot predict the outcome of this proceeding, and the potential impact it may have in establishing a precedent for our pending four Complaints.

California Energy Crisis Litigation

Two California agencies brought a complaint in 2001 against a long-term PPA entered into by Renewables, as seller, to the California Department of Water Resources, as purchaser, alleging that the terms and conditions of the PPA were unjust and unreasonable. The FERC dismissed Renewables from the proceedings; however, the Ninth Circuit Court of Appeals reversed the FERC's dismissal of Renewables from the proceeding.

Joining with two other parties, Renewables filed a petition for certiorari in the United States Supreme Court on May 3, 2007. In an order entered on June 27, 2008, the Supreme Court granted Renewables' petition for certiorari, vacated the appellate court's judgment, and remanded the case to the appellate court for further consideration in light of the Supreme Court's decision in a similar case. In light of the Supreme Court's order, on December 4, 2008, the Ninth Circuit Court of Appeals vacated its prior opinion and remanded the complaint proceedings to the FERC for further proceedings consistent with the Supreme Court's rulings. In 2014, the FERC assigned an administrative law judge to conduct evidentiary hearings. Following discovery, the FERC trial staff recommended that the complaint against Renewables be dismissed.

A hearing was held before a FERC administrative law judge in November and early December 2015. A preliminary proposed ruling by the administrative law judge was issued on April 12, 2016. The proposed ruling found no evidence that Renewables had engaged in any unlawful market conduct that would justify finding the Renewables PPAs unjust and unreasonable. However, the proposed ruling did conclude that the price of the PPAs imposed an excessive burden on customers in the amount of $259 million. Renewables position, as presented at hearings and agreed by the FERC trial staff, is that Renewables entered into bilateral power purchase contracts appropriately and complied with all applicable legal standards and requirements. The parties have submitted briefs on exceptions to the administrative law judge's proposed ruling to the FERC. There is no specific timetable for the FERC's ruling. In April 2018, Renewables requested, based on the nearly two years of delay from the preliminary proposed ruling and the Supreme Court precedent, that the FERC issue a final decision expeditiously. We cannot predict the outcome of this proceeding.

New York State Department of Public Service Investigation of the Preparation for and Response to the March 2018 Winter Storms

In March 2018, following two severe winter storms that impacted more than a million electric utility customers in New York, including 520,000 NYSEG and RG&E customers, the New York State Department of Public Service (NYDPS) commenced a comprehensive investigation of the preparation and response to those events by New York's major electric utility companies. The investigation was expanded in the spring of 2018 to include other 2018 New York spring storm events.

On April 18, 2019, the NYDPS staff issued a report (the 2018 Staff Report) of the findings from their investigation. The 2018 Staff Report identified 94 recommendations for corrective actions to be implemented in the utilities Emergency Response Plans, or ERPs. The report also identified potential violations by several of the utilities, including NYSEG and RG&E.

Also on April 18, 2019, the NYPSC issued an Order Instituting Proceeding and to Show Cause directed to all major electric utilities in New York, including NYSEG and RG&E. The order directs the utilities, including NYSEG and RG&E, to show cause why the NYPSC should not pursue civil and/or administrative penalties for the apparent failure to follow their respective ERPs as approved and mandated by the NYPSC. The NYPSC also directs the utilities, within 30 days, to address whether the NYPSC should mandate, reject or modify in whole or in part, the 94 recommendations contained in the 2018 Staff Report. On May 20, 2019, NYSEG and RG&E responded to the portion of the Order to Show Cause with respect to the recommendations contained in the 2018 Staff Report. The Commission granted the companies a series of extensions to respond to the portion of the Order to Show Cause with respect to why the Commission should not pursue a penalty action. A petition requesting Commission approval of a joint settlement agreement was filed with the Commission on December 17, 2019. On February 6, 2020, the Commission approved the joint settlement agreement, which allows the companies to avoid litigation and provides for payment by the companies of penalty of $10.5 million.

NYPSC directs Counsel to commence Judicial Enforcement Proceeding against NYSEG

On April 18, 2019, the NYPSC issued an Order Directing Counsel to the Commission to commence a special proceeding or an action in New York State Supreme Court to stop and prevent ongoing future violations by NYSEG of NYPSC regulations and orders. On December 24, 2019, the Commission filed a verified petition to commence the action against NYSEG. At the same time, NYSEG and the Commission settled the causes of action asserted in the verified petition and entered into a consent and

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stipulation and also submitted a joint motion to the court requesting that the court approve and enter a consent order and judgment reflecting the settlement. The consent order and judgment was issued by the court on January 24, 2020.

Class Actions Regarding LDC Gas Transportation Service on Algonquin Gas Transmission

Breiding et al. v. Eversource and Avangrid - Class Action. On November 16, 2017, a class action lawsuit was filed in the U.S. District Court for the District of Massachusetts on behalf of customers in New England against the Company and Eversource alleging that certain of their respective subsidiaries that take gas transportation service over the Algonquin Gas Transmission (AGT), which for AVANGRID would be its indirect subsidiaries SCG and CNG, engaged in pipeline capacity scheduling practices on AGT that resulted in artificially increased electricity prices in New England. These allegations were based on the conclusions of a whitepaper issued by the Environmental Defense Fund (EDF), an environmental advocacy organization, on October 10, 2017, purporting to analyze the relationship between the New England electricity market and the New England local gas distribution companies. The plaintiffs assert claims under federal antitrust law, state antitrust, unfair competition and consumer protection laws, and under the common law of unjust enrichment. They seek damages, disgorgement, restitution, injunctive relief and attorney fees and costs. On February 27, 2018, the FERC released the results of a FERC staff inquiry into the pipeline capacity scheduling practices on the AGT. The inquiry arose out of the allegations made by the EDF in its whitepaper. The FERC announced that, based on an extensive review of public and non-public data, it had determined that the EDF study was flawed and led to incorrect conclusions. FERC also stated that the staff inquiry revealed no evidence of anticompetitive withholding of natural gas pipeline capacity on the AGT and that it would take no further action on the matter. On April 27, 2018, the Company filed a Motion to Dismiss all of the claims based on federal preemption and lack of any evidence of antitrust behavior, citing, among other reasons, the results of the FERC staff inquiry conclusion. The plaintiffs filed opposition to the motion to dismiss on May 25, 2018. On September 11, 2018, the District Court granted the Company's Motion and dismissed all claims. On January 29, 2019, the plaintiffs filed a brief in support of appeal and on April 26, 2019, the Company and Eversource filed a joint brief in opposition. On May 17, 2019, the plaintiffs filed a reply to the opposition. On September 18, 2019, the First Circuit Court of Appeals affirmed the district court's dismissal of the plaintiff's claims. The plaintiffs filed a motion seeking en banc review on October 16, 2019. On November 15, 2019, the First Circuit Court of Appeals denied the motion.

PNE Energy Supply LLC v. Eversource Energy and Avangrid, Inc. - Class Action. On August 10, 2018, PNE Energy Supply LLC, a competitive energy supplier located in New England that purchases electricity in the day-ahead and real time wholesale electric market, filed a civil antitrust action, on behalf of itself and those similarly situated, against the Company and Eversource alleging that their respective gas subsidiaries illegally manipulated the supply of pipeline capacity in the "secondary capacity market" in order to artificially inflate New England natural gas and electricity prices. These allegations were also based on the conclusions of the whitepaper issued by EDF. The plaintiff claims to represent entities who purchased electricity directly in the wholesale electricity market that it claims was targeted by the alleged anticompetitive conduct of Eversource and the Company. On September 28, 2018, the Company filed a Motion to Dismiss all of the claims based on federal preemption and lack of any evidence of antitrust behavior, citing, among other reasons, the results of the FERC staff inquiry and the dismissal of the related case, *"Breiding et al. v. Eversource and Avangrid,"* by the same court in September. The plaintiffs filed opposition to the motion to dismiss on October 26, 2018 and the Company filed a reply on November 15, 2018. The district court heard oral arguments on the motion to dismiss on January 18, 2019. On April 26, 2019, the Company filed a brief in support of its motion to dismiss, and on June 7, 2019, the district court granted the Company's Motion to Dismiss and dismissed all claims. On July 3, 2019, the plaintiffs filed notice of appeal in the U.S. Court of Appeals for the First Circuit and, on October 18, 2019, filed a brief in support of appeal. We cannot predict the outcome of this class action lawsuit.

Yankee Nuclear Spent Fuel Disposal Claim

CMP has an ownership interest in Maine Yankee Atomic Power Company, Connecticut Yankee Atomic Power Company and Yankee Atomic Electric Company (the Yankee Companies), three New England single-unit decommissioned nuclear reactor sites, and UI has an ownership interest in Connecticut Yankee Atomic Power Company. Pursuant to the statute of limitations, the Yankee Companies file a lawsuit periodically to recover damages from the Department of Energy (DOE) for breach of the Nuclear Spent Fuel Disposal Contract to remove spent nuclear fuel and greater than class C waste as required by contract.

On May 22, 2017, the Yankee Companies filed a next case in the Federal Court of Claims (Court), seeking damages for the period from January 1, 2013 through December 31, 2016. The Court issued its decision on the trial on February 21, 2019, awarding the Yankee Companies a combined $103 million (Connecticut Yankee $41 million, Maine Yankee $34 million and Yankee Atomic $28 million) and on April 23, 2019, the award became final. The damage awards are returned to customers either through customer refunds or by reducing future costs. Refunds or reductions in costs are reflected in the Yankee Companies billings to shareholders, including CMP and UI. CMP and UI received their proportionate share of the awards, based on percentage of ownership, totaling $8 million which will be returned to customers.

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Gas Storage Indemnification Claims

On May 1, 2018, ARHI closed a transaction to sell our gas storage business to Amphora Gas Storage USA, LLC. On October 30, 2019, ARHI received notice of a claim for indemnification from Amphora Gas Storage USA, LLC under the purchase agreement with respect to such sale in the amount of approximately $20 million related to, among other things, certain alleged violations of occupational, health and safety requirements, the condition and sufficiency of assets and a third party intellectual property infringement claim. Pursuant to the terms of the purchase agreement, the aggregate amount for which ARHI may be responsible to indemnify Amphora Gas Storage USA, LLC for all claims arising under the purchase agreement, other than those related to certain fundamental representations, tax matters and claims involving fraud, shall not exceed 15% of the purchase price, or approximately $10 million. We cannot predict the outcome of this matter.

Power, Gas and Other Arrangements

Power and Gas Supply Arrangements – Networks

NYSEG and RG&E are the providers of last resort for customers. As a result, the companies buy physical energy and capacity from the NYISO. In accordance with the NYPSC's February 26, 2008 Order, NYSEG and RG&E are required to hedge on behalf of non-demand billed customers. The physical electric capacity purchases we make from parties other than the NYISO are to comply with the hedge requirement for electric capacity. The companies enter into financial swaps to comply with the hedge requirement for physical electric energy purchases. Other purchases, from some Independent Power Producers (IPPs) and NYPA are from contracts entered into many years ago when the companies made purchases under contract as part of their supply portfolio to meet their load requirement. More recent IPP purchases are required to comply with the companies' Public Utility Regulatory Policies Act (PURPA) purchase obligation.

NYSEG, RG&E, SCG, CNG and BGC (collectively, the Regulated Gas Companies) satisfy their natural gas supply requirements through purchases from various producers and suppliers, withdrawals from natural gas storage, capacity contracts and winter peaking supplies and resources. The Regulated Gas Companies operate diverse portfolios of gas supply, firm transportation capacity, gas storage and peaking resources. Actual gas costs incurred by each of the Regulated Gas Companies are passed through to customers through state regulated purchased gas adjustment mechanisms, subject to regulatory review.

The Regulated Gas Companies purchase the majority of their natural gas supply at market prices under seasonal, monthly or mid-term supply contracts and the remainder is acquired on the spot market. The Regulated Gas Companies diversify their sources of supply by amount purchased and location and primarily acquire gas at various locations in the U.S. Gulf of Mexico region, in the Appalachia region and in Canada.

The Regulated Gas Companies acquire firm transportation capacity on interstate pipelines under long-term contracts and utilize that capacity to transport both natural gas supply purchased and natural gas withdrawn from storage to the local distribution system.

The Regulated Gas Companies acquire firm underground natural gas storage capacity using long-term contracts and fill the storage facilities with gas in the summer months for subsequent withdrawal in the winter months.

Winter peaking resources are primarily attached to the local distribution systems and are either owned or are contracted for by the Regulated Gas Companies, each of which is a Local Distribution Company. Each Regulated Gas Company owns or has rights to the natural gas stored in an LNG facility directly attached to its distribution system.

Other arrangements include contractual obligations for property, plant and equipment, material and services on order but not yet delivered at December 31, 2019.

Power, Gas and Other Arrangements – Renewables

Gas purchase commitments consist of firm transport capacity to fuel the Cogen and Peaking gas generators. Power purchase commitments include the following: (i) a 55 MW Biomass PPA for 12 years (two years remaining) with a guaranteed output of 34.4 MW flat and a schedule of fixed price rates depending on season and time of day, (ii) long-term firm transmission agreements with fixed monthly capacity payments that allow the delivery of electricity from wind and thermal generation sources to various customers and (iii) a 95.6 MW (average) three-year purchase of hydro capacity and energy to provide balancing services to the NW wind assets that has monthly fixed payments (beginning in 2019 and expiring in 2021) and (iv) a five-year purchase of 52 MW (average) hydro capacity and energy to provide balancing services to the NW wind assets that has monthly fixed payments (beginning in 2019 and expiring in 2023). Power sales commitments include: (i) a 55 MW Biomass off-take agreement for 12 years (two years remaining) with guaranteed annual production of 34.4 MW flat with a schedule of fixed price rates depending on season and time of day, (ii) a retail renewable power sales agreement for 12 MW (average) expiring in 2026, (iii) fixed price, fixed volume power sales off the Klamath Cogen facility, (iv) a seasonal tolling arrangement off the Klamath peaking facility with fixed capacity charges through 2024; (v) fixed price, fixed volume renewable energy credit sales off merchant wind facilities, (vi)

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sales of merchant wind farm capacity to various ISOs and sales of ancillary services (e.g., regulation and frequency response, generator imbalance, etc.) to third parties from Renewables' Balancing Authority.

Renewables has easement contracts which are no longer considered leases under ASC 842 (see Note 3 for further details). These easement contracts still represent contractual obligations and are now included in the table below.

Forward purchases and sales commitments under power, gas and other arrangements as of December 31, 2019 consisted of:

Year	Purchases	Sales
	(Millions)	
2020	$ 1,396	$ 192
2021	177	138
2022	87	72
2023	68	52
2024	44	39
Thereafter	830	87
Totals	**$ 2,602**	**$ 580**

Guarantee Commitments to Third Parties

As of December 31, 2019, we had approximately $474 million of standby letters of credit, surety bonds, guarantees and indemnifications outstanding. These instruments provide financial assurance to the business and trading partners of AVANGRID and its subsidiaries in their normal course of business. The instruments only represent liabilities if AVANGRID or its subsidiaries fail to deliver on contractual obligations. We therefore believe it is unlikely that any material liabilities associated with these instruments will be incurred and, accordingly, as of December 31, 2019, neither we nor our subsidiaries have any liabilities recorded for these instruments.

Note 15. Environmental Liabilities

Environmental laws, regulations and compliance programs may occasionally require changes in our operations and facilities and may increase the cost of electric and natural gas service. We do not provide for accruals of legal costs expected to be incurred in connection with loss contingencies.

Waste sites

The Environmental Protection Agency and various state environmental agencies, as appropriate, have notified us that we are among the potentially responsible parties that may be liable for costs incurred to remediate certain hazardous substances at twenty-five waste sites, which do not include sites where gas was manufactured in the past. Seventeen of the twenty-five sites are included in the New York State Registry of Inactive Hazardous Waste Disposal Sites; six sites are included in Maine's Uncontrolled Sites Program and one site is included on the Massachusetts Non-Priority Confirmed Disposal Site list. The remaining sites are not included in any registry list. Finally, seven of the twenty-five sites are also included on the National Priorities list. Any liability may be joint and several for certain sites.

We have recorded an estimated liability of $5 million related to ten of the twenty-five sites. We have paid remediation costs related to the remaining fifteen sites and do not expect to incur additional liabilities. Additionally, we have recorded an estimated liability of $8 million related to another eleven sites where we believe it is probable that we will incur remediation and/or monitoring costs, although we have not been notified that we are among the potentially responsible parties or that we are regulated under State Resource Conservation and Recovery Act programs. It is possible the ultimate cost to remediate these sites may be significantly more than the accrued amount. Our estimate for costs to remediate these sites ranges from $12 million to $21 million as of December 31, 2019. Factors affecting the estimated remediation amount include the remedial action plan selected, the extent of site contamination and the allocation of the clean-up costs.

Manufactured Gas Plants

We have a program to investigate and perform necessary remediation at our fifty-three sites where gas was manufactured in the past (Manufactured Gas Plants, or MGPs). Eight sites are included in the New York State Registry; three sites are included in the New York State Department of Environmental Conservation Multi-Site Order on Consent; three sites are part of Maine's Voluntary Response Action Program with two such sites part of Maine's Uncontrolled Sites Program. The remaining sites are not included in any registry list. We have entered into consent orders with various environmental agencies to investigate and, where necessary, remediate forty-one of the fifty-three sites.

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Our estimate for all costs related to investigation and remediation of the fifty-three sites ranges from $164 million to $430 million as of December 31, 2019. Our estimate could change materially based on facts and circumstances derived from site investigations, changes in required remedial actions, changes in technology relating to remedial alternatives and changes to current laws and regulations.

Certain of our Connecticut and Massachusetts regulated gas companies own or have previously owned properties where MGPs had historically operated. MGP operations have led to contamination of soil and groundwater with petroleum hydrocarbons, benzene and metals, among other things, at these properties, the regulation and cleanup of which is regulated by the federal Resource Conservation and Recovery Act as well as other federal and state statutes and regulations. Each of the companies has or had an ownership interest in one or more such properties contaminated as a result of MGP-related activities. Under the existing regulations, the cleanup of such sites requires state and at times, federal, regulators' involvement and approval before cleanup can commence. In certain cases, such contamination has been evaluated, characterized and remediated. In other cases, the sites have been evaluated and characterized, but not yet remediated. Finally, at some of these sites, the scope of the contamination has not yet been fully characterized; no liability was recorded related to these sites as of December 31, 2019 and no amount of loss, if any, can be reasonably estimated at this time. In the past, the companies have received approval for the recovery of MGP-related remediation expenses from customers through rates and will seek recovery in rates for ongoing MGP-related remediation expenses for all of their MGP sites.

As of December 31, 2019 and 2018, the liability associated with our MGP sites in Connecticut, the remediation costs of which could be significant and will be subject to a review by PURA as to whether these costs are recoverable in rates, was $97 million and $99 million, respectively.

Our total recorded liability to investigate and perform remediation at all known inactive MGP sites discussed above and other sites was $349 million and $366 million as of December 31, 2019 and 2018, respectively. We recorded a corresponding regulatory asset, net of insurance recoveries and the amount collected from FirstEnergy, as described below, because we expect to recover the net costs in rates. Our environmental liability accruals are recorded on an undiscounted basis and are expected to be paid through the year 2057.

FirstEnergy

NYSEG sued FirstEnergy under the Comprehensive Environmental Response, Compensation, and Liability Act to recover environmental cleanup costs at sixteen former MGP sites, which are included in the discussion above. In July 2011, the District Court issued a decision and order in NYSEG's favor, requiring FirstEnergy to pay NYSEG approximately $60 million for past and future clean-up costs at the sixteen sites in dispute. On September 9, 2011, FirstEnergy paid NYSEG $30 million, representing their share of past costs of $27 million and pre-judgment interest of $3 million.

FirstEnergy appealed the decision to the Second Circuit Court of Appeals. On September 11, 2014, the Second Circuit Court of Appeals affirmed the District Court's decision in NYSEG's favor, but modified the decision for nine sites, reducing NYSEG's damages for incurred costs from $27 million to $22 million, excluding interest, and reducing FirstEnergy's allocable share of future costs at these sites. NYSEG refunded FirstEnergy the excess $5 million in November 2014.

FirstEnergy remains liable for a substantial share of clean up expenses at nine MGP sites. Based on current projections, FirstEnergy's share is estimated at approximately $21 million. This amount is being treated as a contingent asset and has not been recorded as either a receivable or a decrease to the environmental provision. Any recovery will be flowed through to NYSEG customers.

English Station

In January 2012, Evergreen Power, LLC (Evergreen Power) and Asnat Realty LLC (Asnat), then owners of a former generation site on the Mill River in New Haven (the English Station site) that UI sold to Quinnipiac Energy in 2000, filed a lawsuit in federal district court in Connecticut related to environmental remediation at the English Station site. This proceeding was stayed in 2014 pending resolutions of other proceedings before the DEEP concerning the English Station site. In December 2016, the court administratively closed the file without prejudice to reopen upon the filing of a motion to reopen by any party.

In December 2013, Evergreen Power and Asnat filed a subsequent lawsuit related to the English Station site. On April 16, 2018, the plaintiffs filed a revised complaint alleging fraud and unjust enrichment against UIL and UI and adding former UIL officers as named defendants alleging fraud. On February 21, 2019, the court granted our Motion to Strike with respect to all counts except for the count against UI for unjust enrichment. The counts stricken include all counts against the individual defendants as well as against UIL. The plaintiffs have appealed the court's decision to strike. We cannot predict the outcome of this matter.

On April 8, 2013, DEEP issued an administrative order addressed to UI, Evergreen Power, Asnat and others, ordering the parties to take certain actions related to investigating and remediating the English Station site. This proceeding was stayed while DEEP

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and UI continue to work through the remediation process pursuant to the consent order described below. Status reports are periodically filed with DEEP.

On August 4, 2016, DEEP issued a partial consent order (the consent order), that, subject to its terms and conditions, requires UI to investigate and remediate certain environmental conditions within the perimeter of the English Station site. Under the consent order, to the extent that the cost of this investigation and remediation is less than $30 million, UI will remit to the State of Connecticut the difference between such cost and $30 million to be used for a public purpose as determined in the discretion of the Governor of the State of Connecticut, the Attorney General of the State of Connecticut and the Commissioner of DEEP. UI is obligated to comply with the terms of the consent order even if the cost of such compliance exceeds $30 million. Under the terms of the consent order, the state will discuss options with UI on recovering or funding any cost above $30 million such as through public funding or recovery from third parties; however, it is not bound to agree to or support any means of recovery or funding. UI has initiated its process to investigate and remediate the environmental conditions within the perimeter of the English Station site pursuant to the consent order.

As of December 31, 2019 and 2018, the amount reserved for this matter was $16 million and $20 million, respectively. We cannot predict the outcome of this matter.

Note 16. Income Taxes

Upon enactment of the Tax Act, the Company remeasured its existing deferred income tax balances as of December 31, 2017 to reflect the decrease in the corporate income tax rate from 35% to 21%, which resulted in a material decrease to its net deferred income tax liability balances based on reasonable estimates that could be determined at that time. The Company's non-regulatory businesses recorded a corresponding net increase or decrease to income tax expense, while the utility operations recorded corresponding regulatory liabilities or assets to the extent that such amounts are probable of settlement or recovery through customer rates. The amount and timing of potential settlements of the established net regulatory liabilities are determined by the regulated utilities' respective rate regulators and IRS Normalization rules. As of December 31, 2018, the Company has completed the measurement and accounting of certain effects of the Tax Act which have been reflected in the consolidated financial statements.

Current and deferred taxes charged to expense (benefit) for the years ended December 31, 2019, 2018 and 2017 consisted of:

Years Ended December 31,	2019	2018	2017
(Millions)			
Current			
Federal	$ 11	$ 17	$ (20)
State	(6)	2	12
Current taxes charged to expense (benefit)	**5**	**19**	**(8)**
Deferred			
Federal	152	233	(124)
State	44	(12)	(73)
Deferred taxes charged to expense (benefit)	**196**	**221**	**(197)**
Production tax credits	(57)	(68)	(53)
Investment tax credits	(1)	(2)	(1)
Total Income Tax Expense (Benefit)	**$ 143**	**$ 170**	**$ (259)**

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The differences between tax expense per the statements of income and tax expense at the 21% statutory federal tax rate for the years ended December 31, 2019 and 2018 and 35% statutory federal tax rate for the year ended December 31, 2017 consisted of:

Years Ended December 31, (Millions)	2019	2018	2017
Tax expense at federal statutory rate	$ 172	$ 161	$ 43
Depreciation and amortization not normalized	(23)	(5)	9
Investment tax credit amortization	(1)	(2)	(1)
Tax return related adjustments	(2)	(6)	7
Production tax credits	(57)	(68)	(53)
Tax equity financing arrangements	8	—	(10)
Federal tax rate impact on held for sale classification	—	21	82
State tax expense (benefit), net of federal benefit	30	(8)	(40)
Tax Act - remeasurement	—	46	(328)
Other, net	16	31	32
Total Income Tax Expense (Benefit)	**$ 143**	**$ 170**	**$ (259)**

Deferred tax assets and liabilities as of December 31, 2019 and 2018 consisted of:

As of December 31, (Millions)	2019	2018
Deferred Income Tax Liabilities (Assets)		
Property related	$ 4,007	$ 3,787
Unfunded future income taxes	101	107
Federal and state tax credits	(632)	(691)
Federal and state NOL's	(989)	(993)
Joint ventures/partnerships	136	132
Nontaxable grant revenue	(335)	(354)
Pension and other post-retirement benefits	43	8
Tax Act - tax on regulatory remeasurement	(409)	(393)
Valuation allowance	33	23
Other	(141)	(102)
Deferred Income Tax Liabilities	**1,814**	**1,524**
Classified as regulatory assets	—	(6)
Total Deferred Income Tax Liabilities	**$ 1,814**	**$ 1,530**
Deferred tax assets	$ 2,506	$ 2,533
Deferred tax liabilities	4,320	4,057
Net Accumulated Deferred Income Tax Liabilities	**$ 1,814**	**$ 1,524**

As of December 31, 2019, we had gross federal tax net operating losses of $3.6 billion, federal renewable energy and investment tax credits, federal R&D tax credits and other federal credits of $600 million, state tax effected net operating losses of $289 million in several jurisdictions and miscellaneous state tax credits of $142 million available to carry forward and reduce future income tax liabilities. We recognized a valuation allowance of $33 million. The federal net operating losses begin to expire in 2028, while the federal tax credits begin to expire in 2023. The more significant state net operating losses begin to expire in 2021.

Valuation allowances are recorded to reduce deferred tax assets when it is more likely than not that all or a portion of a tax benefit will not be realized. The valuation allowance for deferred tax assets as of December 31, 2019 and 2018 was $33 million and $23 million, respectively. Valuation allowances have been established on various federal tax credits, state net operating losses and state tax credit carryforwards. The Company has recorded a federal valuation allowance on its federal tax credit carryforwards of $4 million and has recorded a state valuation allowance on its state net operating losses and state tax credit carryforwards of $29 million. The $10 million increase in valuation allowance from 2018 to 2019 includes an increase of $4 million for additional valuation allowance on Federal tax credit carryforwards and an increase of $6 million on state net operating losses and state tax credits.

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The reconciliation of unrecognized income tax benefits for the years ended December 31, 2019, 2018 and 2017 consisted of:

Years ended December 31, (Millions)	2019	2018	2017
Beginning Balance	$ 153	$ 45	$ 40
Increases for tax positions related to prior years	14	111	23
Increases for tax positions related to current year	16	—	—
Decreases for tax positions related to prior years	(18)	(3)	(16)
Reduction for tax position related to settlements with taxing authorities	(17)	—	(2)
Ending Balance	**$ 148**	**$ 153**	**$ 45**

Unrecognized income tax benefits represent income tax positions taken on income tax returns but not yet recognized in the consolidated financial statements. The accounting guidance for uncertainty in income taxes provides that the financial effects of a tax position shall initially be recognized when it is more likely than not based on the technical merits the position will be sustained upon examination, assuming the position will be audited and the taxing authority has full knowledge of all relevant information.

Accruals for interest and penalties on tax reserves were immaterial for the years ended December 31, 2019, 2018 and 2017. If recognized, $98 million of the total gross unrecognized tax benefits would affect the effective tax rate.

It is estimated that no unrecognized tax benefits are anticipated to result in a net increase or decrease within twelve months of December 31, 2019.

AVANGRID and its subsidiaries, without ARHI, have been audited for the federal tax years 1998 through 2009. The results of these audits, net of reserves already provided, were immaterial. Tax years 2010 and forward are open for potential federal adjustments. All New York state returns, which were filed without ARHI, are closed through 2011 and Maine state returns are closed through 2015.

All federal tax returns filed by ARHI from the periods ended March 31, 2004, to December 31, 2009, are closed for adjustment. All New York combined state returns are closed for adjustment through 2011. Generally, the adjustment period for the individual states we filed in is at least as long as the federal period.

As of December 31, 2019, UIL is subject to audit of its federal tax return for years 2014 through its short period 2015. UIL income tax years 2011 through its short period in 2015 are open and subject to Connecticut and Massachusetts audit.

Note 17. Post-retirement and Similar Obligations

Networks has funded noncontributory defined benefit pension plans that cover eligible Networks employees and retirees. The plans provide defined benefits based on years of service and final average salary for employees hired before 2002. Most employees hired in 2002, or later based upon the plan, are covered under a cash balance plan or formula where their benefit accumulates based on a percentage of annual salary and credited interest. During 2013, Networks announced that they would discontinue, effective December 31, 2013, the cash balance accruals for all non-union employees covered under the cash balance plans or formula. At the same time, the plans were closed to newly-hired non-union employees. The plans had been closed to newly-hired union employees in prior years. CMP's unionized employees covered under a cash balance plan ceased to receive accruals as of December 31, 2014. NYSEG's unionized employees covered under the cash balance plans ceased to receive accruals as of December 31, 2015. Their earned balances will continue to accrue interest but will no longer be increased by a flat dollar amount or percentage of pay, as defined by the plan. Instead, they will receive a contribution to their account under their respective company's defined contribution plan. There was no change to the defined benefit plans for employees covered under the plans that provide defined benefits based on years of service and final average salary. Employees not participating in a defined benefit plan are eligible to receive an enhanced or core 401(k) Company matching contribution, depending on whether they are union or non-union employees, respectively.

Networks has other postretirement health care benefit plans that cover eligible employees and retirees. The plans were closed to newly-hired non-union employees at the end of 2010. The plans had been closed to union employees in prior years. The pre-Medicare-eligible healthcare plans are contributory and participants' contributions are adjusted annually. Networks average contribution to these plans is limited at a level determined in prior periods. Except for a small group of "grandfathered" retirees, all Medicare eligible retirees that choose to participate are provided with a subsidy through a Health Reimbursement Account (HRA) to purchase coverage on the individual market.

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With the acquisition of UIL, Networks also includes pension and other postretirement plans of UIL operating utility companies. The UI pension plans cover about one half of employees of UIL. The plan was closed to newly-hired employees in 2005. UI also has a non-qualified supplemental pension plan for certain employees.

The Regulated Gas Companies in Connecticut and Massachusetts have multiple qualified pension plans covering eligible union and management employees and retirees. The union plans are all closed to new hires, and the non-union plans were closed as of December 31, 2017. These entities also have non-qualified supplemental pension plans for certain employees and retirees. The qualified pension plans are traditional defined benefit plans or cash balance plans for those hired on or after specified dates. In some cases, neither of these plans is offered to new employees and have been replaced with enhanced 401(k) plans for those hired on or after specified dates. Employees not participating in a defined benefit plan are eligible to receive an enhanced or core 401(k) Company matching contribution.

In addition to providing pension benefits, UI also provides other postretirement benefits, consisting principally of health care and life insurance benefits, for retired employees and their dependents. The plans were closed to newly-hired non-union employees at the end of April 2005 and to newly-hired union employees at the end of March 2005. The healthcare plans are contributory and participants' contributions are adjusted annually. For Medicare eligible non-union retirees, UI provides a subsidy through an HRA for retirees to purchase coverage on the individual market. Medicare eligible union retirees have the option of receiving a subsidy through an HRA or paying contributions and participating in company-sponsored retiree health plans.

SCG and CNG also have plans providing other postretirement benefits for eligible employees and retirees. The SCG plans were closed to newly-hired non-union employees at the end of 1995, the SCG plans were closed to newly-hired union employees by the end of March 2010 and to newly-hired CNG union employees by end of March 2011. These benefits consist primarily of health care, prescription drug and life insurance benefits for retired employees and their dependents. For Medicare eligible non-union retirees, SCG and CNG provide a subsidy through an HRA for retirees to purchase coverage on the individual market. Medicare eligible union retirees have the option of receiving a subsidy through an HRA or paying contributions and participating in company-sponsored retiree health plans.

ARHI has a funded defined benefit pension plan for eligible employees hired prior to January 1, 2008. The benefit is based on the participant's age, service and five years average pay at the time of the freeze date of April 30, 2011. ARHI has other postretirement health care benefit plans covering eligible retirees and employees hired prior to January 1, 2008. Health and life insurance rates are based on age and service points at the time of retirement. Effective July 1, 2019, all Medicare eligible ARHI retirees that choose to participate are provided with a subsidy through a Health Reimbursement Account (HRA) to purchase coverage on the individual market.

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Obligations and funded status of Networks and ARHI as of December 31, 2019 and 2018 consisted of:

As of December 31,	Pension Benefits		Postretirement Benefits	
	2019	2018	2019	2018
(Millions)				
Change in benefit obligation				
Benefit obligation as of January 1,	**$ 3,374**	**$ 3,593**	**$ 425**	**$ 491**
Service cost	41	44	3	4
Interest cost	130	128	16	19
Plan participants' contributions	—	—	—	9
Plan Amendments	(2)	—	—	(3)
Actuarial loss (gain)	347	(159)	26	(55)
Benefits paid	(221)	(237)	(31)	(41)
Reclassified from held for sale	—	5	—	1
Benefit Obligation as of December 31,	**3,669**	**3,374**	**439**	**425**
Change in plan assets				
Fair value of plan assets as of January 1,	**2,544**	**2,865**	**148**	**165**
Actual return (loss) on plan assets	460	(135)	22	(5)
Employer contributions	65	48	16	20
Plan participants' contributions	—	—	—	9
Benefits paid	(221)	(237)	(31)	(41)
Reclassified from held for sale	—	3	—	—
Fair Value of Plan Assets as of December 31,	**2,848**	**2,544**	**155**	**148**
Funded Status as of December 31,	**$ (821)**	**$ (830)**	**$ (284)**	**$ (277)**

Amounts recognized as of December 31, 2019 and 2018 consisted of:

As of December 31,	Pension Benefits		Postretirement Benefits	
	2019	2018	2019	2018
(Millions)				
Current liabilities	$ —	$ —	$ (5)	$ (5)
Non-current liabilities	(821)	(830)	(279)	(272)
Total	**$ (821)**	**$ (830)**	**$ (284)**	**$ (277)**

Amounts recognized in OCI for ARHI for the years ended December 31, 2019, 2018 and 2017, consisted of:

Years Ended December 31,	Pension Benefits			Postretirement Benefits		
	2019	2018	2017	2019	2018	2017
(Millions)						
Net loss (gain)	$ 23	$ 24	$ 25	$ (8)	$ (7)	$ (4)

We have determined that all Networks' regulated operating companies are allowed to defer as regulatory assets or regulatory liabilities items that would have otherwise been recorded in accumulated OCI pursuant to the accounting requirements concerning defined benefit pension and other postretirement plans.

Amounts recognized as regulatory assets or regulatory liabilities for Networks for the years ended December 31, 2019, 2018 and 2017 consisted of:

Years Ended December 31,	Pension Benefits			Postretirement Benefits		
	2019	2018	2017	2019	2018	2017
(Millions)						
Net loss (gain)	$ 706	$ 762	$ 737	$ 13	$ (8)	$ 35
Prior service cost (credit)	$ 4	$ 4	$ 6	$ (21)	$ (25)	$ (31)

Our accumulated benefit obligation (ABO) for all defined benefit pension plans of Networks and ARHI was $3,451 million and $3,174 million as of December 31, 2019 and 2018, respectively. CMP's and NYSEG's postretirement benefits were partially funded as of December 31, 2019 and 2018.

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The projected benefit obligation (PBO) and the ABO exceeded the fair value of pension plan assets for all plans of Networks and ARHI as of December 31, 2019 and 2018.

The aggregate PBO and ABO and the fair value of plan assets for underfunded plans of Networks and ARHI as of December 31, 2019 and 2018 consisted of:

	PBO in excess of plan assets	
As of December 31,	**2019**	**2018**
(Millions)		
Projected benefit obligation	$ 3,669	$ 3,374
Fair value of plan assets	$ 2,848	$ 2,544

	ABO in excess of plan assets	
As of December 31,	**2019**	**2018**
(Millions)		
Accumulated benefit obligation	$ 3,451	$ 3,174
Fair value of plan assets	$ 2,848	$ 2,544

Components of Networks' net periodic benefit cost and other changes in plan assets and benefit obligations recognized in income and regulatory assets and liabilities for the years ended December 31, 2019, 2018 and 2017 consisted of:

(Millions)	**Pension Benefits**			**Postretirement Benefits**		
For the years ended December 31,	**2019**	**2018**	**2017**	**2019**	**2018**	**2017**
Net Periodic Benefit Cost:						
Service cost	$ 41	$ 44	$ 42	$ 3	$ 4	$ 5
Interest cost	128	126	137	16	18	21
Expected return on plan assets	(190)	(199)	(195)	(7)	(8)	(8)
Amortization of prior service (benefit) cost	(1)	1	2	(10)	(9)	(9)
Amortization of net loss	113	149	126	1	6	5
Net Periodic Benefit Cost	**91**	**121**	**112**	**3**	**11**	**14**
Other changes in plan assets and benefit obligations recognized in regulatory assets and regulatory liabilities:						
Net loss (gain)	80	175	3	13	(37)	(5)
Amortization of net loss	(113)	(149)	(126)	(1)	(6)	(5)
Current year prior service cost	(2)	—	—	—	(3)	—
Amortization of prior service benefit (cost)	1	(1)	(2)	10	9	9
Total Other Changes	**(34)**	**25**	**(125)**	**22**	**(37)**	**(1)**
Total Recognized	**$ 57**	**$ 146**	**$ (13)**	**$ 25**	**$ (26)**	**$ 13**

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Components of ARHI's net periodic benefit cost and other changes in plan assets and benefit obligations recognized in income and OCI for the years ended December 31, 2019, 2018 and 2017 consisted of:

(Millions)	Pension Benefits			Postretirement Benefits		
For the years ended December 31,	2019	2018	2017	2019	2018	2017
Net Periodic Benefit Cost:						
Service cost	$ 1	$ —	$ —	$ —	$ —	$ —
Interest cost	2	2	2	—	1	1
Expected return on plan assets	(2)	(2)	(2)	—	—	—
Amortization of net loss (gain)	1	1	1	(1)	—	—
Settlement charge	—	1	—	—	—	—
Net Periodic Benefit Cost	**2**	**2**	**1**	**(1)**	**1**	**1**
Other Changes in plan assets and benefit obligations recognized in OCI:						
Net loss (gain)	—	1	2	—	(3)	(1)
Amortization of net (loss) gain	(1)	(1)	(1)	1	—	—
Amortization of prior service cost	—	—	—	(2)	—	—
Total Other Changes	**(1)**	**—**	**1**	**(1)**	**(3)**	**(1)**
Total Recognized	**$ 1**	**$ 2**	**$ 2**	**$ (2)**	**$ (2)**	**$ —**

The net periodic benefit cost for postretirement benefits represents the amount expensed for providing health care benefits to retirees and their eligible dependents. We include the service cost component in other operating expenses net of capitalized portion and include the components of net periodic benefit cost other than the service cost component in other expense.

Amounts expected to be amortized from regulatory assets or liabilities into net periodic benefit cost for the year ending December 31, 2020 consist of:

(Millions)	Pension Benefits	Postretirement Benefits
Estimated net loss	$ 123	$ 2
Estimated prior service cost (benefit)	$ 1	$ (9)

Amounts expected to be amortized from OCI into net periodic benefit cost for the year ending December 31, 2020 consist of:

(Millions)	Pension Benefits	Postretirement Benefits
Estimated net loss (gain)	$ 2	$ (1)

We expect that no pension benefit or postretirement benefit plan assets will be returned to us during the year ending December 31, 2020.

The weighted-average assumptions used to determine benefit obligations for Networks and ARHI as of December 31, 2019 and 2018 consisted of:

	Pension Benefits		Postretirement Benefits	
As of December 31,	2019	2018	2019	2018
Discount rate - Networks	2.93% / 3.19%	3.93% / 4.09%	2.93% / 3.19%	3.93% / 4.09%
Discount rate - ARHI	3.10%	4.09%	3.10%	4.09%
Rate of compensation increase - Networks	3.00% - 6.50%	3.50% - 4.20%	—	—

The discount rate is the rate at which the benefit obligations could presently be effectively settled. We determined the discount rates by developing yield curves derived from a portfolio of high grade noncallable bonds with yields that closely match the duration of the expected cash flows of our benefit obligations.

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The weighted-average assumptions used to determine net periodic benefit cost for Networks and ARHI for the years ended December 31, 2019, 2018 and 2017 consisted of:

	Pension Benefits			Postretirement Benefits		
Years Ended December 31,	**2019**	**2018**	**2017**	**2019**	**2018**	**2017**
Discount rate - Networks	3.93% / 4.09%	3.63% / 3.80%	4.12% / 4.24%	3.93% / 4.09%	3.63% / 3.80%	4.12% / 4.24%
Discount rate - ARHI	4.09%	3.80%	3.81%	4.09%	3.80%	3.81%
Expected long-term return on plan assets - Networks	7.00% / 7.40%	7.00% / 7.40%	7.00% / 7.50%	4.90% - 7.00%	6.13%	6.13%
Expected long-term return on plan assets - ARHI	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%
Expected long-term return on plan assets - nontaxable trust - Networks	—	—	—	6.40%	6.40%	6.50%
Expected long-term return on plan assets - taxable trust - Networks	—	—	—	4.20%	4.20%	4.25%
Rate of compensation increase - Networks	3.50%-4.20%	3.50% - 4.20%	3.50% - 4.20%	—	—	—

We developed our expected long-term rate of return on plan assets assumption based on a review of long-term historical returns for the major asset classes, the target asset allocations, and the effect of rebalancing of plan assets discussed below. Our analysis considered current capital market conditions and projected conditions. NYSEG, RG&E and UIL amortize unrecognized actuarial gains and losses over ten years from the time they are incurred as required by the NYPSC, PURA and DPU. Our other companies use the standard amortization methodology under which amounts in excess of ten-percent of the greater of the projected benefit obligation or market related value are amortized over the plan participants' average remaining service to retirement.

Assumed health care cost trend rates used to determine benefit obligations as of December 31, 2019 and 2018 consisted of:

As of December 31,	**2019**	**2018**
Health care cost trend rate assumed for next year - Networks	7.00%/7.75%	7.50%/8.50%
Health care cost trend rate assumed for next year - ARHI	6.75% / 7.50%	7.00%/7.75%
Rate to which cost trend rate is assumed to decline (ultimate trend rate) - Networks	4.50%	4.50%
Rate to which cost trend rate is assumed to decline (ultimate trend rate) - ARHI	4.50%	4.50%
Year that the rate reaches the ultimate trend rate - Networks	2029 / 2027	2030 / 2028
Year that the rate reaches the ultimate trend rate - ARHI	2029 / 2027	2029 / 2027

The effects of a one-percent change in the assumed health care cost trend rates would have the following effects:

	1% Increase	1% Decrease
(Millions)		
Effect on total of service and interest cost	$ 1	$ —
Effect on postretirement benefit obligation	$ 12	$ (11)

Contributions

We make annual contributions in accordance with our funding policy of not less than the minimum amounts as required by applicable regulations. Networks expects to contribute $82 million to the pension benefit plans during 2020.

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Estimated Future Benefit Payments

Expected benefit payments and Medicare Prescription Drug, Improvement and Modernization Act of 2003 subsidy receipts reflecting expected future service for Networks and ARHI as of December 31, 2019 consisted of:

(Millions)	Pension Benefits	Postretirement Benefits	Medicare Act Subsidy Receipts
2020	$ 209	$ 32	$ 1
2021	$ 210	$ 32	$ 1
2022	$ 216	$ 31	$ —
2023	$ 217	$ 30	$ —
2024	$ 219	$ 29	$ —
2025 - 2028	$ 1,097	$ 134	$ 2

Non-Qualified Pension Plans

Networks and ARHI also sponsor various unfunded pension plans for certain current employees, former employees and former directors. The total liability for these plans, which is included in Other current and Other non-current liabilities on our consolidated balance sheets, was $56 million and $54 million at December 31, 2019 and 2018, respectively.

Plan Assets

Our pension benefits plan assets for Networks and ARHI were consolidated from three legacy master trusts to one new master trust in 2019. A consolidated trust provides for a uniform investment manager lineup and an efficient, cost effective means of allocating expenses and investment performance to each plan. Our primary investment objective is to ensure that current and future benefit obligations are adequately funded and with volatility commensurate with our risk tolerance. Preservation of capital and achievement of sufficient total return to fund accrued and future benefits obligations are of highest concern. Our primary means for achieving capital preservation is through diversification of the trusts' investments while avoiding significant concentrations of risk in any one area of the securities markets. Further diversification is achieved within each asset group through utilizing multiple asset managers and systematic allocation to various asset classes and providing broad exposure to different segments of the equity, fixed income and alternative investment markets.

The asset allocation policy is the most important consideration in achieving our objective of superior investment returns while minimizing risk. Networks and ARHI have established target asset allocation policies within allowable ranges for their pension benefits plan assets within broad categories of asset classes made up of Return-Seeking investments and Liability-Hedging investments. Networks currently has target allocations ranging from 35%-70% for Return-Seeking assets and 34%-65% for Liability-Hedging assets. ARHI currently has a target allocation of 60% for Return-Seeking assets and 40% for Liability-Hedging assets. Return-Seeking assets also include investments in real estate, global asset allocation strategies and hedge funds. Liability-Hedging investments generally consist of long-term corporate bonds, annuity contracts, long-term treasury STRIPS and opportunistic fixed income investments. Systematic rebalancing within the target ranges increases the probability that the annualized return on the investments will be enhanced, while realizing lower overall risk, should any asset categories drift outside their specified ranges.

The fair values of pension benefits plan assets, by asset category, as of December 31, 2019, consisted of:

As of December 31, 2019		Fair Value Measurements		
(Millions)	Total	Level 1	Level 2	Level 3
Asset Category				
Cash and cash equivalents	$ 42	$ —	$ 42	$ —
U.S. government securities	87	87	—	—
Registered investment companies	464	464	—	—
Corporate bonds	458	—	458	—
Preferred stocks	1	1	—	—
Common collective trusts	572	—	572	—
Other, principally annuity, fixed income	84	—	84	—
	$ 1,708	**$ 552**	**$ 1,156**	**$ —**
Other investments measured at net asset value	1,140			
Total	**$ 2,848**			

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The fair values of pension benefits plan assets, by asset category, as of December 31, 2018 (a), consisted of:

As of December 31, 2018		Fair Value Measurements		
(Millions)	Total	Level 1	Level 2	Level 3
Asset Category				
Cash and cash equivalents	$ 52	$ —	$ 52	$ —
U.S. government securities	15	15	—	—
Registered investment companies	424	421	3	—
Corporate bonds	413	—	413	—
Preferred stocks	3	—	3	—
Common collective trusts	634	—	634	—
Other, principally annuity, fixed income	71	—	71	—
	$ 1,612	**$ 436**	**$ 1,176**	**$ —**
Other investments measured at net asset value	932			
Total	**$ 2,544**			

(a) Certain amounts have been reclassified within this table to conform to the 2019 presentation.

Valuation Techniques

We value our pension benefits plan assets as follows:

- Cash and cash equivalents – Level 1: at cost, plus accrued interest, which approximates fair value. Level 2: proprietary cash associated with other investments, based on yields currently available on comparable securities of issuers with similar credit ratings.
- U.S. government securities – at the closing price reported in the active market in which the security is traded.
- Corporate bonds – based on yields currently available on comparable securities of issuers with similar credit ratings.
- Preferred stocks – at the closing price reported in the active market in which the individual investment is traded.
- Common collective trusts/Registered investment companies – Level 1: at the closing price reported in the active market in which the individual investment is traded. Level 2 - the fair value is primarily derived from the quoted prices in active markets of the underlying securities. Because the fund shares are offered to a limited group of investors, they are not considered to be traded in an active market.
- Other investments, principally annuity and fixed income – based on yields currently available on comparable securities of issuers with similar credit ratings.
- Other investments measured at net asset value (NAV) – fund shares offered to a limited group of investors and alternative investments, such as private equity and real estate oriented investments, partnership/joint ventures and hedge funds are valued using the NAV as a practical expedient.

Our postretirement benefits plan assets are held with trustees in multiple voluntary employees' beneficiary association (VEBA) and 401(h) arrangements and are invested among and within various asset classes to achieve sufficient diversification in accordance with our risk tolerance. This is achieved for our postretirement benefits plan assets through the utilization of multiple institutional mutual and money market funds, providing exposure to different segments of the fixed income, equity and short-term cash markets. Approximately 37% of the postretirement benefits plan assets are invested in VEBA and 401(h) arrangements that are not subject to income taxes with the remainder being invested in arrangements subject to income taxes.

Networks has established a target asset allocation policy within allowable ranges for postretirement benefits plan assets of 45%-65% for equity securities, 25%-45% for fixed income and 5%-25% for all other investment types. ARHI's asset allocation policy has a target allocation of 45% in equity securities, 50% in fixed income and 5% for cash and cash equivalents investments. Equity investments are diversified across U.S. and non-U.S. stocks, investment styles, and market capitalization ranges. Fixed income investments are primarily invested in U.S. bonds and may also include some non-U.S. bonds. Other asset classes, including alternative investments, are used to enhance long-term returns while improving portfolio diversification. We primarily minimize the risk of large losses through diversification but also through monitoring and managing other aspects of risk through quarterly investment portfolio reviews. Systematic rebalancing within target ranges increases the probability that the annualized return on investments will be enhanced, while realizing lower overall risk, should any asset categories drift outside their specified ranges.

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The fair values of other postretirement benefits plan assets, by asset category, as of December 31, 2019 consisted of:

As of December 31, 2019		Fair Value Measurements		
(Millions)	Total	Level 1	Level 2	Level 3
Asset Category				
Cash and cash equivalents	$ 31	$ —	$ 31	$ —
Common stocks	16	16	—	—
Registered investment companies	98	98	—	—
Corporate bonds	2	—	2	—
Other, principally annuity, fixed income	8	—	8	—
Total	**$ 155**	**$ 114**	**$ 41**	**$ —**

The fair values of other postretirement benefits plan assets, by asset category, as of December 31, 2018 (a) consisted of:

As of December 31, 2018		Fair Value Measurements		
(Millions)	Total	Level 1	Level 2	Level 3
Asset Category				
Cash and cash equivalents	$ 9	$ 5	$ 4	$ —
Common stocks	15	15	—	—
Registered investment companies	115	115	—	—
Corporate bonds	2	—	2	—
Other, principally annuity, fixed income	7	—	7	—
Total	**$ 148**	**$ 135**	**$ 13**	**$ —**

(a) Certain amounts have been reclassified within this table to conform to the 2019 presentation.

Valuation Techniques

We value our postretirement benefits plan assets as follows:

- Cash and cash equivalents – Level 1: at cost, plus accrued interest, which approximates fair value. Level 2: proprietary cash associated with other investments, based on yields currently available on comparable securities of issuers with similar credit ratings.
- Common stocks and registered investment companies – at the closing price reported in the active market in which the individual investment is traded.
- Corporate bonds – based on yields currently available on comparable securities of issuers with similar credit ratings.
- Other investments, principally annuity and fixed income – based on yields currently available on comparable securities of issuers with similar credit ratings.

Pension and postretirement benefit plan equity securities did not include any Iberdrola common stock as of both December 31, 2019 and 2018.

Defined contribution plans

We also have defined contribution plans defined as 401(k)s for all eligible AVANGRID employees. There are various match formulas depending on years of service, age, and pension plan closure/freeze date. The annual contributions made through these plans for AVANGRID amounted to $40 million, $37 million and $36 million for 2019, 2018 and 2017 respectively.

Note 18. Equity

As of December 31, 2019, our share capital consisted of 500,000,000 shares of common stock authorized, 309,752,140 shares issued and 309,005,272 shares outstanding, 81.5% of which are owned by Iberdrola, each having a par value of $0.01, for a total value of common stock of $3 million and additional paid in capital of $13,660 million. As of December 31, 2018, our share capital consisted of 500,000,000 shares of common stock authorized, 309,752,140 shares issued and 309,005,272 shares outstanding, 81.5% of which were owned by Iberdrola, each having a par value of $ $0.01, for a total value of common stock capital of $3 million and additional paid in capital of $13,657 million. We had 485,810 shares of common stock held in trust and no convertible preferred shares outstanding as of both December 31, 2019 and December 31, 2018. During the year ended December 31, 2019, we issued no shares of common stock and released no shares of common stock held in trust each having a par value of $0.01.

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During the year ended December 31, 2018, we issued 81,208 shares of common stock and released no shares of common stock held in trust, each having a par value of $0.01.

We maintain a repurchase agreement with J.P. Morgan Securities, LLC. (JPM), pursuant to which JPM will, from time to time, acquire, on behalf of AVANGRID, shares of common stock of AVANGRID. The purpose of the stock repurchase program is to allow AVANGRID to maintain the relative ownership percentage of Iberdrola at 81.5%. The stock repurchase program may be suspended or discontinued at any time upon notice. Out of a total of 261,058 treasury shares of common stock of AVANGRID as of December 31, 2019, 115,831 shares were repurchased during 2016, 64,019 shares were repurchased in May 2017 and 81,208 shares were repurchased in May 2018, all in the open market. The total cost of repurchases, including commissions, was $12 million as of December 31, 2019.

Accumulated OCI (Loss)

Accumulated OCI (Loss) for the years ended December 31, 2019, 2018 and 2017 consisted of:

Accumulated Other Comprehensive Income (Loss)	As of December 31, 2016	2017 Change	As of December 31, 2017	Adoption of new accounting standard	2018 Change	As of December 31, 2018	Adoption of new accounting standard	2019 Change	As of December 31, 2019
(Millions)									
Change in revaluation of defined benefit plans, net of income tax expense (benefit) of $1.1 for 2018 and $(0.3) for 2019	$ (14)	$ —	$ (14)	$ —	$ 3	$ (11)	$ (2)	$ 1	$ (12)
Loss (gain) for nonqualified pension plans, net of income tax expense (benefit) of $0.2 for 2017, $0.3 for 2018 and $(1.0) for 2019	(7)	1	(6)	(1)	1	(6)	—	(1)	(7)
Unrealized (loss) gain on derivatives qualifying as cash flow hedges:									
Unrealized gain (loss) during period on derivatives qualifying as cash flow hedges, net of income tax expense (benefit) of $15.2 for 2017, $(6.6) for 2018 and $(8.6) for 2019	5	25	30	—	(21)	9	—	(22)	(13)
Reclassification to net income of losses (gains) on cash flow hedges, net of income tax expense (benefit) of $9.3 for 2017, $(6.5) for 2018 and $2.7 for 2019 (a)	(70)	14	(56)	—	(8)	(64)	(10)	11	(63)
Gain (loss) on derivatives qualifying as cash flow hedges	(65)	39	(26)	—	(29)	(55)	(10)	(11)	(76)
Accumulated Other Comprehensive (Loss) Income	**$ (86)**	**$ 40**	**$ (46)**	**$ (1)**	**$ (25)**	**$ (72)**	**$ (12)**	**$ (11)**	**$ (95)**

(a) Reclassification is reflected in the operating expenses line item in the consolidated statements of income.

Note 19. Earnings Per Share

Basic earnings per share is computed by dividing net income attributable to AVANGRID by the weighted-average number of shares of our common stock outstanding. In 2019, 2018 and 2017, while we did have securities that were dilutive, these securities did not result in a change to our earnings per share calculations for the years ended December 31, 2019, 2018 and 2017.

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The calculations of basic and diluted earnings per share attributable to AVANGRID for the years ended December 31, 2019, 2018 and 2017, consisted of:

Years Ended December 31,	2019	2018	2017
(Millions, except for number of shares and per share data)			
Numerator:			
Net income attributable to AVANGRID	$ 700	$ 595	$ 381
Denominator:			
Weighted average number of shares outstanding - basic	309,491,082	309,503,319	309,502,861
Weighted average number of shares outstanding - diluted	309,514,910	309,712,628	309,661,883
Earnings per share attributable to AVANGRID			
Earnings Per Common Share, Basic	$ 2.26	$ 1.92	$ 1.23
Earnings Per Common Share, Diluted	$ 2.26	$ 1.92	$ 1.23

Note 20. Variable Interest Entities

We participate in certain partnership arrangements that qualify as VIEs. These arrangements consist of tax equity financing arrangements (TEFs) and partnerships in which an investor holds a noncontrolling interest and does not have substantive kick-out or participating rights.

The sale of a membership interest in the TEFs represents the sale of an equity interest in a structure that is considered a sale of non-financial assets. Under the sale of non-financial assets, the membership interests in the TEFs we sell to third-party investors are reflected as noncontrolling interest on our consolidated balance sheets valued based on an HLBV model. Earnings from the TEFs are recognized in net income attributable to noncontrolling interests in our consolidated statements of income. We consolidate the entities that have TEFs based on being the primary beneficiary for these VIEs.

On June 28, 2019, we acquired Patriot Wind Farm LLC and associated entities (Patriot) which have constructed a 226 MW wind farm in Nueces County, Texas for a total purchase price of $317 million. The wind farm constitutes substantially all of the value of the consideration paid to the seller; therefore, the purchase was accounted for as an asset acquisition. We allocated the purchase price to property, plant and equipment of $344 million, derivative liabilities of $26 million and other liabilities of $1 million. In conjunction with the purchase, we entered into a TEF with a third-party investor at a sale price of $128 million.

The assets and liabilities of the VIEs totaled approximately $806 million and $29 million, respectively, at December 31, 2019. As of December 31, 2018 the assets and liabilities of VIEs totaled approximately $876 million and $50 million, respectively. At both December 31, 2019 and 2018, the assets and liabilities of the VIEs consisted primarily of property, plant and equipment and equity method investments. At December 31, 2019 and 2018, equity method investments of VIEs were approximately $0 and $101 million, respectively.

Wind power generation is subject to certain favorable tax treatments in the U.S. In order to monetize the tax benefits, we have entered into these structured institutional partnership investment transactions related to certain wind farms. Under these structures, we contribute certain wind assets, relating both to existing wind farms and wind farms that are being placed into operation at the time of the relevant transaction, and other parties invest in the share equity of the limited liability holding company. As consideration for their investment, the third parties make either an upfront cash payment or a combination of upfront cash and payments over time. We retain a class of membership interest and day-to-day operational and management control, subject to investor approval of certain major decisions. The third-party investors do not receive a lien on any assets and have no recourse against us for their upfront cash payments.

The partnerships generally involve disproportionate allocations of profit or loss, cash distributions and tax benefits resulting from the wind farm energy generation between the investor and sponsor until the investor recovers its investment and achieves a cumulative annual after-tax return. Once this target return is met, the relative sharing of profit or loss, cash distributions and taxable income or loss between the Company and the third party investor flips, with the sponsor generally receiving higher percentages thereafter. We also have a call option to acquire the third party investors' membership interest within a defined time period after this target return is met.

On September 30, 2019, Renewables contributed $50 million to Aeolus Wind Power II LLC (Aeolus), including $31 million to third party investors, to accelerate the third-party investors recovering their investment and achieving their cumulative after-tax return. On December 13 2019, we repurchased the remaining 4.4% of Aeolus we did not control from the third-party investors. The difference between the amount paid of $14 million and the noncontrolling interest balance of $10 million was recorded as an adjustment to equity because there was no change in control as a result of the transaction. After the transaction, Aeolus is no longer considered a VIE. At December 31, 2019, we consider El Cabo Wind, LLC (El Cabo) and Patriot to be VIEs.

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Our El Cabo and Patriot interests are not subject to any rights of investors that may restrict our ability to access or use the assets or to settle any existing liabilities associated with the interests.

In February 2020, tax equity financing agreements were executed for a portfolio of three newly-constructed wind farms and one repowering of an existing wind farm. The portfolio company, named Aeolus Wind Power VII LLC, will be comprised of Karankawa Wind, LLC, Montague Wind Power Facility, LLC, Otter Creek Wind Farm LLC, and Mountain View Power Partners III, LLC (collectively "Aeolus VII"), and will total 681 MW of wind power. We received $237 million from two tax equity investors on March 2, 2020, which represents their investment in the first two of these wind farms that have reached commercial operations. The third facility will be transacted once it reaches commercial operations later in 2020.

Note 21. Grants, Government Incentives and Deferred Income

The changes in deferred income as of December 31, 2019 and 2018 consisted of:

(Millions)	Government grants	Other deferred income	Total
As of December 31, 2017	**$ 1,427**	**$ 19**	**$ 1,446**
Additions	9	—	9
Recognized in income	(69)	(1)	(70)
As of December 31, 2018	**1,367**	**18**	**1,385**
Disposals	(3)	—	(3)
Derecognition due to sale (a)	(38)	—	(38)
Recognized in income	(68)	(2)	(70)
As of December 31, 2019	**$ 1,258**	**$ 16**	**$ 1,274**

(a) Grants no longer controlled by us due to the 2019 sale of a 50% interest in the Poseidon projects. See Note 22 for further information.

Within deferred income, we classify grants we received under Section 1603 of the American Recovery and Reinvestment Act of 2009, where the United States Department of Treasury (DOT) provides eligible parties the option of claiming grants for specified energy property in lieu of tax credits, which we claimed for the majority of our qualifying properties. Deferred income has been recorded for the grant amounts and is amortized as an offset against depreciation expense using the straight-line method over the estimated useful life of the associated property to which the grants apply. We recognize a net deferred tax asset for the book to tax basis differences related to the property for income tax purposes within the nontaxable grant revenue deferred income tax liabilities (see Note 16 – Income Taxes).

We are required to comply with certain terms and conditions applicable to each grant and, if a disqualifying event should occur as specified in the grant's terms and conditions, we are required to repay the grant funds to the DOT. We believe we are in compliance with each grant's terms and conditions as of December 31, 2019 and 2018.

Note 22. Equity Method Investments

On December 13, 2019, Renewables transferred a 50% ownership in a wind farm and a solar project located in Arizona (Poseidon) to an unaffiliated third party involving total consideration of $112 million, excluding closing costs, and recognized a gain of $96 million, net of tax. The pre-tax gain of $134 million is included in "Other income (expense)" in our consolidated statements of income. The net gain includes $50 million related to the remeasurement of our retained investment in Poseidon which was valued based on the consideration received in the transaction. The transaction was accounted for as the sale of a business and resulted in a loss of control. The retained 50% ownership is accounted for as an equity method investment. As of December 31, 2019, the carrying value of Poseidon was $111 million.

In August 2018, we acquired the remaining 50% ownership of a joint venture, which owns and operates a 162 MW wind farm located in Southeast Colorado (Colorado Wind Ventures LLC), which commenced operations in January 2004. The wind farm, being a single asset, constituted substantially all of the fair value of the gross assets acquired and, therefore, the transaction was considered an asset acquisition. We accounted for this venture under the equity method of accounting through the date of the asset acquisition. During the year ended December 31, 2017, we recorded an OTTI of $49 million on this investment. The fair value for OTTI calculation purposes was determined using Level 3 inputs and was estimated based on a discounted cash flows valuation technique utilizing the net amount of estimated future cash inflows and outflows related to the respective PPA.

In December 2018, we sold 80% of our wholly owned subsidiary, Coyote Ridge Wind, LLC (Coyote Ridge), including substantially all of the related tax benefits, to WEC Infrastructure in exchange for $144 million of total proceeds with $84 million received in 2019 to complete the transaction. We recorded a gain of $4 million and $10 million from this transaction in "Other expense" in

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our consolidated statements of income for the years ended December 31, 2019 and 2018, respectively. We account for the remaining 20% membership interest under the equity method of accounting. The carrying amount of our investment was $14 million and $5 million as of December 31, 2019 and 2018.

We have two 50-50 joint ventures with Horizon Wind Energy, LLC, which own and operate the Flat Rock Windpower LLC and the Flat Rock Wind Power II LLC wind farms located in upstate New York. Flat Rock Wind Power LLC, which commenced operations in January 2006, has a 231 MW capacity. Flat Rock Wind Power II LLC commenced operations in September 2007 and has a 91 MW capacity. We account for the Flat Rock joint ventures under the equity method of accounting. The carrying amount of these investments was $105 million and $114 million for Flat Rock Wind Power LLC, and $49 million and $53 million for Flat Rock Wind Power II LLC, as of December 31, 2019 and 2018, respectively.

We hold a 50% voting interest in Vineyard Wind, LLC (Vineyard Wind), a joint venture with Copenhagen Infrastructure Partners. Vineyard Wind acquired an easement from the U.S. Bureau of Ocean Energy Management containing rights to develop offshore wind generation in a 260-square mile area located southeast of Martha's Vineyard. The area subject to easement has the capacity for siting up to approximately 3,000 MW. In May 2018, Vineyard Wind was selected by the Massachusetts Electric Distribution Companies (EDCs) to construct and operate Vineyard Wind's proposed 800 MW wind farm and electricity transmission project pursuant to the Massachusetts Green Communities Act Section 83C RFP for offshore wind energy projects. During 2019, contributions were made to a new offshore development project of $106 million to enter into the easement contract. In December 2019, DEEP selected Vineyard Wind to provide 804 MW of offshore wind through the development of its Park City Wind Project.

As of December 31, 2019, Renewables has contributed $120 million to Vineyard Wind under the provisions of the LLC agreement. In January 2020, Renewables contributed an additional $13 million to Vineyard Wind. We expect to provide additional capital contributions. There was $5 million and $0 receivable from Vineyard Wind as of December 31, 2019 and 2018, respectively. Renewables, through its joint venture in Vineyard Wind, was awarded a second Massachusetts offshore easement. We account for this venture under the equity method of accounting. The carrying amount of this investment was $227 million and $52 million as of December 31, 2019 and 2018, respectively.

Through UI, we are party to a 50-50 joint venture with Clearway Energy, Inc. in GenConn, which operates two peaking generation plants in Connecticut. The investment in GenConn is being accounted for as an equity investment, the carrying value of which was $113 million and $119 million as of December 31, 2019 and 2018, respectively.

Networks holds an approximate 20% ownership interest in New York TransCo. Through New York TransCo, Networks has formed a partnership with Central Hudson Gas and Electric Corporation, Consolidated Edison, Inc., National Grid, plc and Orange and Rockland Utilities, Inc. to develop a portfolio of interconnected transmission lines and substations to fulfill the objectives of the New York energy highway initiative, which is a proposal to install up to 3,200 MW of new electric generation and transmission capacity in order to deliver more power generated from upstate New York power plants to downstate New York. On April 8, 2019, New York Transco was selected as the developer for Segment B of the AC Transmission Public Policy Project by the NYISO. The selected project, New York Energy Solution (NYES), replaces nearly 80-year old transmission assets located in the upper to mid-Hudson Valley with streamlined, modernized technology, to enable surplus clean energy resources in upstate New York and help achieve the State's energy goals. The total project cost is $600 million plus interconnection costs. NYSEG's contribution as 20% co-owner is $120 million. As of December 31, 2019 and 2018, the amount receivable from New York TransCo was $0 and $1 million, respectively. The investment in New York TransCo is being accounted for as an equity investment, the carrying value of which was $26 million and $23 million, as of December 31, 2019 and 2018, respectively. New York Transco is subject to regulatory approval of its rates, terms, and conditions with the FERC.

None of our joint ventures have any contingent liabilities or capital commitments. Distributions received from equity method investments amounted to $17 million, $18 million and $20 million for the years ended December 31, 2019, 2018 and 2017 respectively, which are reflected as either distributions of earnings or as returns of capital in the operating and investing sections of the consolidated statements of cash flows, respectively. In addition, during the years ended December 31, 2019 and 2018, we received $9 million and $8 million of distributions in RECs from our equity method investments. As of December 31, 2019, there was an immaterial amount of undistributed earnings from our equity method investments. Capitalized interest costs related to equity method investments were $7 million and $0 for the years ended December 31, 2019 and 2018, respectively.

Note 23. Other Financial Statements Items

Loss from assets held for sale

In connection with the 2018 sale of our gas trading and storage businesses, we recorded a loss from held for sale measurement of $16 million and $642 million, respectively, for the years ended December 31, 2018 and 2017, which is included in "Loss from assets held for sale" in our consolidated statements of income.

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Other income (expense)

Other income (expense) for the years ended December 31, 2019, 2018 and 2017 consisted of:

Years ended December 31,	2019	2018	2017
(Millions)			
Gain on sale of assets (a)	$ 148	$ 10	$ —
Allowance for funds used during construction	46	30	36
Carrying costs on regulatory assets	21	21	11
Non-service component of net periodic benefit cost	(79)	(128)	(120)
Other	(17)	1	11
Total Other Income (Expense)	**$ 119**	**$ (66)**	**$ (62)**

(a) 2019 includes a $134 million gain from the sale of 50% of our interest in the Poseidon projects, and 2018 includes a $10 million gain from the sale of our interest in Coyote Ridge (see Note 22).

Accounts Receivable

Accounts receivable as of December 31, 2019 and 2018 consisted of:

As of December 31,	2019	2018
(Millions)		
Trade receivables	$ 1,151	$ 1,204
Allowance for bad debts	(69)	(62)
Total Accounts Receivable	**$ 1,082**	**$ 1,142**

The allowance for bad debts relates entirely to gas and electricity consumers and comprises an amount that has been reserved following historical averages of loss percentages.

The change in the allowance for bad debts as of December 31, 2019 and 2018 consisted of:

(Millions)	
As of December 31, 2016	**$ 64**
Current period provision	69
Write-off as uncollectible	(69)
As of December 31, 2017	**$ 64**
Current period provision	74
Write-off as uncollectible	(76)
As of December 31, 2018	**$ 62**
Current period provision	92
Write-off as uncollectible	(85)
As of December 31, 2019	**$ 69**

DPA receivable balances were $65 million and $62 million as of December 31, 2019 and 2018, respectively.

Prepayments and Other Current Assets

Prepayments and other current assets as of December 31, 2019 and 2018 consisted of:

As of December 31,	2019	2018
(Millions)		
Prepaid other taxes	$ 123	$ 137
Broker margin and collateral accounts	33	37
Other pledged deposits	3	6
Prepaid expenses	34	43
Other	6	6
Total	**$ 199**	**$ 229**

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Other current liabilities

Other current liabilities as of December 31, 2019 and 2018 consisted of:

As of December 31, (Millions)	2019	2018
Advances received	$ 140	$ 129
Accrued salaries	89	81
Short-term environmental provisions	40	60
Collateral deposits received	44	42
Pension and other postretirement	5	5
Finance leases	9	—
Other	7	10
Total	**$ 334**	**$ 327**

Note 24. Segment Information

Our segment reporting structure uses our management reporting structure as its foundation to reflect how AVANGRID manages the business internally and is organized by type of business. We report our financial performance based on the following two reportable segments:

- Networks: includes all of the energy transmission and distribution activities, any other regulated activity originating in New York and Maine and regulated electric distribution, electric transmission and gas distribution activities originating in Connecticut and Massachusetts. The Networks reportable segment includes eight rate regulated operating segments. These operating segments generally offer the same services distributed in similar fashions, have the same types of customers, have similar long-term economic characteristics and are subject to similar regulatory requirements, allowing these operations to be aggregated into one reportable segment.
- Renewables: activities relating to renewable energy, mainly wind energy generation and trading related with such activities.

The chief operating decision maker evaluates segment performance based on segment adjusted net income defined as net income adjusted to exclude restructuring charges, mark-to-market earnings from changes in the fair value of derivative instruments, loss from held for sale measurement, accelerated depreciation derived from repowering of wind farms, OTTI on equity method investment, impact of the Tax Act and adjustments for the non-core Gas storage business.

Products and services are sold between reportable segments and affiliate companies at cost. Segment income, expense and assets presented in the accompanying tables include all intercompany transactions that are eliminated in our consolidated financial statements. Refer to Note 4 - Revenue for more detailed information on revenue by segment.

Segment information as of and for the year ended December 31, 2019 consisted of:

For the year ended December 31, 2019 (Millions)	Networks	Renewables	Other(a)	AVANGRID Consolidated
Revenue - external	$ 5,150	$ 1,186	$ 2	$ 6,338
Revenue - intersegment	14	—	(14)	—
Depreciation and amortization	550	383	1	934
Operating income	893	95	15	1,003
Earnings (losses) from equity method investments	11	(8)	—	3
Interest expense, net of capitalization	269	10	27	306
Income tax expense (benefit)	153	4	(14)	143
Capital expenditures	1,612	1,125	3	2,740
Adjusted net income	466	223	(15)	673
As of December 31, 2019				
Property, plant and equipment	15,840	9,368	10	25,218
Equity method investments	139	506	—	645
Total assets	$ 23,250	$ 13,163	$ (1,997)	$ 34,416

(a) Includes Corporate and intersegment eliminations.

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Segment information as of and for the year ended December 31, 2018 consisted of:

For the year ended December 31, 2018 (Millions)	Networks	Renewables	Other(a)	AVANGRID Consolidated
Revenue - external	$ 5,304	$ 1,137	$ 37	$ 6,478
Revenue - intersegment	6	2	(8)	—
Loss from assets held for sale	—	—	16	16
Depreciation and amortization	503	352	—	855
Operating income	975	136	16	1,127
Earnings (losses) from equity method investments	13	(3)	—	10
Interest expense, net of capitalization	260	33	10	303
Income tax expense (benefit)	169	(31)	32	170
Capital expenditures	1,377	410	—	1,787
Adjusted net income	486	185	13	684
As of December 31, 2018				
Property, plant and equipment	14,754	8,697	8	23,459
Equity method investments	142	224	—	366
Total assets	$ 22,239	$ 10,703	$ (775)	$ 32,167

(a) Includes Corporate, Gas and intersegment eliminations.

Segment information for the year ended December 31, 2017 consisted of:

For the year ended December 31, 2017 (Millions)	Networks	Renewables	Other (a)	AVANGRID Consolidated
Revenue - external	$ 4,950	$ 1,038	$ (25)	$ 5,963
Revenue - intersegment	11	9	(20)	—
Loss from assets held for sale	—	—	642	642
Depreciation and amortization	474	325	25	824
Operating income (loss)	1,114	92	(701)	505
Earnings (losses) from equity method investments	15	(55)	—	(40)
Interest expense, net of capitalization	244	28	8	280
Income tax expense (benefit)	316	(320)	(255)	(259)
Capital expenditures	1,305	1,097	14	2,416
Adjusted net income	$ 507	$ 120	$ 55	$ 682

(a) Includes Corporate, Gas and intersegment eliminations.

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Reconciliation of Adjusted Net Income to Net Income attributable to AVANGRID for the years ended December 31, 2019, 2018 and 2017 is as follows:

Years Ended December 31, (Millions)	2019	2018	2017
Adjusted Net Income Attributable to Avangrid, Inc.	**$ 673**	**$ 684**	**$ 682**
Adjustments:			
Impairment of equity method and other investment (1)	—	—	(49)
Restructuring charges (2)	(6)	(4)	(20)
Mark-to-market adjustments - Renewables (3)	76	(25)	(15)
Loss from held for sale measurement (4)	—	(16)	(642)
Impact of the Tax Act (5)	—	(46)	328
Accelerated depreciation from repowering (6)	(33)	(3)	—
Income tax impact of adjustments	(10)	(6)	162
Gas Storage, net of tax (7)	—	11	(64)
Net Income Attributable to Avangrid, Inc.	**$ 700**	**$ 595**	**$ 381**

(1) Represents OTTI on equity method investment recorded in 2017.
(2) Restructuring and severance related charges relate to costs resulted from restructuring actions involving initial targeted voluntary workforce reductions and related costs in our plan to vacate a lease, predominantly within the Networks segment and costs to implement an initiative to mitigate costs and achieve sustainable growth (See Note 27 - Restructuring and Severance Related Expenses – for further details).
(3) Mark-to-market earnings relates to earnings impacts from changes in the fair value of Renewables' derivative instruments associated with electricity and natural gas.
(4) Represents loss from measurement of assets and liabilities held for sale in connection with the committed plan to sell the gas trading and storage businesses.
(5) Represents the impact from measurement of deferred income tax balances as a result of the Tax Act enacted by the U.S. federal government on December 22, 2017.
(6) Represents the amount of accelerated depreciation derived from repowering wind farms in Renewables.
(7) Removal of the impact from Gas activity in the reconciliation to AVANGRID Net Income.

Note 25. Related Party Transactions

We engage in related party transactions that are generally billed at cost and in accordance with applicable state and federal commission regulations.

Related party transactions for the years ended December 31, 2019, 2018 and 2017, respectively, consisted of:

Years Ended December 31,	2019		2018		2017	
(Millions)	Sales To	Purchases From	Sales To	Purchases From	Sales To	Purchases From
Iberdrola Canada Energy Services, Ltd	$ —	$ —	$ —	$ (5)	$ —	$ (33)
Iberdrola Renovables Energia, S.L.	$ —	$ (9)	$ —	$ (14)	$ —	$ (9)
Iberdrola, S.A.	$ 1	$ (42)	$ 1	$ (38)	$ 1	$ (36)
Iberdrola Financiación, S.A.	$ —	$ (3)	$ —	$ (3)	$ —	$ (2)
Iberdrola Energia Monterrey, S.A. de C.V.	$ —	$ —	$ 3	$ —	$ 46	$ —
Vineyard Wind	$ 13	$ —	$ 3	$ —	$ —	$ —
Other	$ 2	$ (3)	$ 2	$ (5)	$ 1	$ (1)

In addition to the statements of income items above, we made purchases of turbines for wind farms from Siemens-Gamesa, in which Iberdrola has an 8.1% ownership. The amounts capitalized for these transactions were $18 million and $6 million for the years ended December 31, 2019 and 2018, respectively. In February 2020, Iberdrola sold its entire ownership share in Siemens-Gamesa; therefore, future transactions will not be considered related party.

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Related party balances as of December 31, 2019 and 2018, respectively, consisted of:

As of December 31,	2019		2018	
(Millions)	Owed By	Owed To	Owed By	Owed To
Siemens-Gamesa	$ —	$ (18)	$ —	$ (14)
Iberdrola, S.A.	$ 1	$ (42)	$ 1	$ (40)
Iberdrola Renovables Energía, S.L.	$ —	$ —	$ 4	$ —
Vineyard Wind	$ 5	$ —	$ —	$ —
Other	$ 4	$ (4)	$ 1	$ (4)

Transactions with Iberdrola, our majority shareholder, relate predominantly to the provision and allocation of corporate services and management fees. All costs that can be specifically allocated, to the extent possible, are charged directly to the company receiving such services. In situations when Iberdrola corporate services are provided to two or more companies of AVANGRID, any costs remaining after direct charges are allocated using agreed upon cost allocation methods designed to allocate such costs. We believe that the allocation method used is reasonable.

Transactions with Iberdrola Canada Energy Services (ICES) predominantly relate to the purchase of gas for ARHI's gas-fired cogeneration facility in Klamath, Oregon. There are no notes payable amounts owed to ICES as of both December 31, 2019 and December 31, 2018.

Transactions with Iberdrola Energia Monterrey predominantly relate to the sale of gas by Enstor Gas for the power generation plant in Monterrey, Mexico.

There have been no guarantees provided or received for any related party receivables or payables. These balances are unsecured and are typically settled in cash. Interest is not charged on regular business transactions but is charged on outstanding loan balances. There have been no impairments or provisions made against any affiliated balances.

Refer to Note 22 - Equity Method Investments for information on transactions with our equity method investees.

AVANGRID manages its overall liquidity position as part of the Iberdrola Group and is a party to a liquidity agreement with a financial institution, along with certain members of the Iberdrola Group. Cash surpluses remaining after meeting the liquidity requirements of AVANGRID and its subsidiaries may be deposited at the financial institution. Deposits, or credit balances, serve as collateral against the debit balances of other parties to the liquidity agreement. The balance at December 31, 2019 and 2018 was $150 million and $0, respectively.

AVANGRID has a credit facility with Iberdrola Financiacion, S.A.U., a company of the Iberdrola Group. The facility has a limit of $500 million and matures on June 18, 2023. AVANGRID pays a facility fee of 10.5 basis points annually on the facility. As of both December 31, 2019 and 2018, there were no amounts outstanding under this credit facility.

Note 26. Stock-Based Compensation

Under the Avangrid, Inc. Omnibus Incentive Plan, 1,298,683 performance stock units (PSUs) were granted to certain officers and employees of AVANGRID in July 2016. In 2017, 2018 and 2019, an additional 85,759, 75,350 and 3,881 PSUs, respectively, were granted to officers and employees of AVANGRID under this plan. The PSUs will vest upon achievement of certain performance and market-based metrics related to the 2016 through 2019 plan and will be payable in three equal installments in 2020, 2021 and 2022. As of December 31, 2019, the total number of shares authorized for stock-based compensation plans was 2,500,000.

The fair value of the PSUs on the grant date was $31.80 per share, which is expensed on a straight-line basis over the requisite service period of approximately seven years based on expected achievement. The fair value of the PSUs was determined using valuation techniques to forecast possible future stock prices, applying a weighted average historical stock price volatility of AVANGRID and industry companies, a risk-free rate of interest that is equal, as of the grant date, to the yield of the zero-coupon U.S. Treasury bill and a reduction for the respective dividend yield calculated based on the most recent quarterly dividend payment and the stock price as of the grant date.

In June and October 2018, pursuant to the Avangrid, Inc. Omnibus Incentive Plan two restricted stock units (RSUs) awards of 60,000 and 8,000 RSUs, respectively, were granted to certain officers of AVANGRID. The RSUs vest in full in one installment in June and December 2020, respectively for each award, provided that the award holders remain continuously employed with AVANGRID through such dates. The fair value on the grant date was determined based on a price of $50.40 and $47.59 per share, respectively, for June and October 2018 awards.

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The total stock-based compensation expense, which is included in "Operations and maintenance" of our consolidated statements of income for the years ended December 31, 2019, 2018 and 2017 was $3 million, $2 million and $1 million, respectively. The total income tax benefit recognized for stock-based compensation arrangements for each of the years ended December 31, 2019, 2018 and 2017, was $1 million.

A summary of the status of the AVANGRID's nonvested PSUs and RSUs as of December 31, 2019, and changes during the fiscal year ended December 31, 2019, is presented below:

	Number of PSUs	Weighted Average Grant Date Fair Value
Nonvested Balance – December 31, 2018	1,268,722	$ 32.80
Granted	6,284	$ 38.78
Forfeited	(726)	$ 31.80
Nonvested Balance – December 31, 2019	1,274,280	$ 32.83

As of December 31, 2019, total unrecognized costs for non-vested PSUs and RSUs were $3 million. The weighted-average period over which the PSU and RSUs costs will be recognized is approximately 2 years.

The weighted-average grant date fair value of PSUs and RSUs granted during the year was $38.78 per share for the year ended December 31, 2019.

Note 27. Restructuring and Severance Related Expenses

In 2017, we announced initial targeted voluntary workforce reductions predominantly within the Networks segment. Those actions primarily include: reducing our workforce through voluntary programs in various areas to better align our people resources with business demands and priorities; reorganizing our human resources function to substantially consolidate in Connecticut, as well as related costs to vacate a lease and relocate employees; and reducing our information technology (IT) workforce to make increasing use of external services for operations, support, and development of systems. In 2019, we also announced changes across the Company aimed to mitigate costs and deliver sustainable growth, including among others, outsourcing and insourcing of certain areas of the Company and technology initiatives that help improve efficiency and reduce costs. For the years ended December 31, 2019, 2018 and 2017, those decisions and transactions resulted in restructuring charges of $4 million, $3 million and $15 million, respectively, for severance expenses and $4 million for lease termination expenses in 2017, which are included in “Operations and maintenance” in the consolidated statements of income and approximately $1 million of accelerated amortization of leasehold improvements, which are included in “Depreciation and amortization” in the consolidated statements of income for the year ended December 31, 2017. The remaining costs for severance agreements are being accrued ratably over the remaining service periods, which span intermittent periods through December 2019. For the year ended December 31, 2019, the severance and lease restructuring charges reserves, which are recorded in “Other current liabilities” and “Other liabilities”, consisted of:

For the Year Ended December 31,	2019
	(Millions)
Beginning Balance	$ 4
Restructuring and severance related expenses	4
Payments	(3)
Ending Balance	$ 5

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Note 28. Quarterly financial data (unaudited)

Selected quarterly financial data for 2019 and 2018 are set forth below:

(Millions, except per share data)	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2019				
Operating revenues	$ 1,842	$ 1,400	$ 1,487	$ 1,609
Operating Income	$ 341	$ 207	$ 239	$ 216
Net Income	$ 216	$ 105	$ 139	$ 216
Net Income attributable to Avangrid, Inc.	$ 217	$ 110	$ 150	$ 223
Earnings Per Common Share, Basic and Diluted: (1)	$ 0.70	$ 0.36	$ 0.48	$ 0.72
2018				
Operating revenues	$ 1,865	$ 1,402	$ 1,546	$ 1,665
Operating Income	$ 403	$ 222	$ 253	$ 249
Net Income	$ 238	$ 110	$ 134	$ 116
Net Income attributable to Avangrid, Inc.	$ 244	$ 107	$ 125	$ 119
Earnings Per Common Share, Basic and Diluted: (1)	$ 0.79	0.35/0.34	$ 0.40	$ 0.38

(1) Based on 309.5 million weighted average number of shares outstanding each quarter in both 2019 and 2018 for basic and diluted earnings per share.

The third and fourth quarters of 2019 include, respectively, a gain of $43 million ($32 million after income tax) from liquidation of a portion of wholesale electricity sales contracts and a gain of $134 million ($96 million after income tax) from the sale of 50% of our interest in the Poseidon projects.

The first and second quarters of 2018 include a loss of $5 million and $10 million, respectively, associated with measurement of held for sale assets of gas trading and storage business, $14 million and $17 million after income taxes. Additionally, the second and fourth quarters of 2018 include the impacts of $7 million and $39 million, respectively, from the measurement of deferred income tax balances as a result of the Tax Act enacted on December 22, 2017 by the U.S. federal government.

Note 29. Subsequent events

On February 19, 2020 the board of directors of AVANGRID declared a quarterly dividend of $0.44 per share on its common stock. This dividend is payable on April 1, 2020 to shareholders of record at the close of business on March 6, 2020.

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Schedule I –Financial Statements of Parent

AVANGRID, INC. (PARENT)
CONDENSED FINANCIAL INFORMATION OF PARENT
STATEMENTS OF INCOME
FOR THE YEARS ENDED December 31, 2019, 2018 AND 2017
(Millions)

Years Ended December 31,	2019	2018	2017
Operating Revenues	$ —	$ —	$ —
Operating Expenses			
Operating expense	3	3	3
Taxes other than income taxes	(12)	(11)	5
Total Operating Expenses	(9)	(8)	8
Operating Income (Loss)	9	8	(8)
Other Income			
Other income	59	48	58
Equity earnings of subsidiaries	711	604	312
Interest expense	(93)	(56)	(29)
Income Before Income Tax	686	604	333
Income tax (benefit) expense	(14)	9	(48)
Net Income	**$ 700**	**$ 595**	**$ 381**

See accompanying notes to Schedule I.

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Schedule I –Financial Statements of Parent

AVANGRID, INC. (PARENT)
CONDENSED FINANCIAL INFORMATION OF PARENT
STATEMENTS OF COMPREHENSIVE INCOME
FOR THE YEARS ENDED December 31, 2019, 2018, AND 2017
(Millions)

Years Ended December 31,	2019	2018	2017
Net Income	$ 700	$ 595	$ 381
Other comprehensive (loss) income of subsidiaries	(11)	(25)	40
Comprehensive Income	**$ 689**	**$ 570**	**$ 421**

See accompanying notes to Schedule I.

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Schedule I –Financial Statements of Parent

AVANGRID, INC. (PARENT)
CONDENSED FINANCIAL INFORMATION OF PARENT
BALANCE SHEETS
AS OF December 31, 2019 AND 2018
(Millions)

As of December 31,	2019	2018
Assets		
Current Assets		
Cash and cash equivalents	$ 146	$ —
Accounts receivable from subsidiaries	22	306
Notes receivable from subsidiaries	2,529	666
Prepayments and other current assets	—	21
Total current assets	2,697	993
Investments in subsidiaries	16,859	16,067
Other assets		
Deferred income taxes	374	312
Other	3	1
Total other assets	377	313
Total Assets	**$ 19,933**	**$ 17,373**
Liabilities		
Current Liabilities		
Current portion of debt	$ 456	$ 8
Notes payable	561	588
Notes payable to subsidiaries	1,674	456
Accounts payable and accrued liabilities	2	10
Accounts payable to subsidiaries	7	9
Interest accrued	10	7
Interest accrued subsidiaries	18	6
Dividends payable	136	136
Taxes accrued	24	—
Total current liabilities	2,888	1,220
Non-current debt	1,808	1,049
Total Liabilities	4,696	2,269
Equity		
Stockholders' Equity:		
Common stock	3	3
Additional paid-in capital	13,660	13,657
Treasury Stock	(12)	(12)
Retained earnings	1,681	1,528
Accumulated other comprehensive loss	(95)	(72)
Total Equity	15,237	15,104
Total Liabilities and Equity	**$ 19,933**	**$ 17,373**

See accompanying notes to Schedule I.

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AVANGRID, INC. (PARENT)
CONDENSED FINANCIAL INFORMATION OF PARENT
STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED December 31, 2019, 2018, AND 2017
(Millions)

Years Ended December 31,	2019	2018	2017
Net Cash used in Operating Activities	**$ (1,299)**	**$ (323)**	**$ (1)**
Cash Flow from Investing Activities			
Notes receivable from subsidiaries	633	462	(532)
Investments in subsidiaries	(399)	(48)	—
Return of capital from investments in subsidiaries	433	116	308
Net Cash (used in) provided by Investing Activities	667	530	(224)
Cash Flow from Financing Activities			
Receipts (repayments) of short-term notes payable from subsidiaries, net	107	246	(246)
(Repayments) receipts of short-term notes payable	(27)	82	357
Proceeds of non-current debt	1,243	—	594
Repurchase of common stock	—	(4)	(3)
Issuance of common stock	—	(2)	(1)
Dividends paid	(545)	(537)	(535)
Net Cash provided by (used in) Financing Activities	778	(215)	166
Net Increase (Decrease) in Cash and Cash Equivalents	146	(8)	(59)
Cash and Cash Equivalents, Beginning of Year	—	8	67
Cash and Cash Equivalents, End of Year	$ 146	$ —	$ 8
Supplemental Cash Flow Information			
Cash paid for interest	$ 85	$ 55	$ 52
Cash paid (refunded) payment for income taxes	$ 43	$ 55	$ (8)

See accompanying notes to Schedule I.

Note 1. Basis of Presentation

Avangrid, Inc. (AVANGRID), formerly Iberdrola USA, Inc., is a holding company and conducts substantially all of its business through its subsidiaries. Substantially all of its consolidated assets are held by such subsidiaries. Accordingly, its cash flow and its ability to meet its obligations are largely dependent upon the earnings of these subsidiaries and the distribution of other payment of such earnings to in the form of dividends, loans or advances or repayment of loans and advances from it. These condensed financial statements and related footnotes have been prepared in accordance with regulatory statute 210.12-04 of Regulation S-X. These statements should be read in conjunction with the consolidated financial statements and notes thereto of AVANGRID and subsidiaries (AVANGRID Group).

AVANGRID indirectly or directly owns all of the ownership interests of its significant subsidiaries. AVANGRID relies on dividends or loans from its subsidiaries to fund dividends to its primary shareholder.

AVANGRID's significant accounting policies are consistent with those of the AVANGRID Group. For the purposes of these condensed financial statements, AVANGRID's wholly owned and majority owned subsidiaries are recorded based upon its proportionate share of the subsidiaries net assets.

AVANGRID will file a consolidated federal income tax return that includes the taxable income or loss of all its subsidiaries for the 2019 tax period. Each subsidiary company is treated as a member of the consolidated group and determines its current and deferred taxes separately and settles its current tax liability or benefit each year directly with AVANGRID pursuant to a tax sharing agreement between AVANGRID and its members.

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Note 2. Common Stock

As of December 31, 2019, AVANGRID share capital consisted of 500,000,000 shares of common stock authorized, 309,752,140 shares issued and 309,005,272 shares outstanding, 81.5% of which are owned by Iberdrola, each having a par value of $0.01, for a total value of common stock of $3 million and additional paid in capital of $13,660 million. As of December 31, 2018, AVANGRID share capital consisted of 500,000,000 shares of common stock authorized, 309,752,140 shares issued and 309,005,272 shares outstanding, 81.5% of which were owned by Iberdrola, each having a par value of $ $0.01, for a total value of common stock capital of $3 million and additional paid in of $13,657 million. AVANGRID had 485,810 shares of common stock held in trust and no convertible preferred shares outstanding as of both December 31, 2019 and 2018. During the year ended December 31, 2019, AVANGRID issued no shares of common stock and released no shares of common stock held in trust. During the year ended December 31, 2018, AVANGRID issued 81,208 shares of common stock and released 0 shares of common stock held in trust each having a par value of $0.01.

AVANGRID has a repurchase agreement with J.P. Morgan Securities, LLC. (JPM), pursuant to which JPM will, from time to time, acquire, on behalf of AVANGRID, shares of common stock of AVANGRID. The purpose of the stock repurchase program is to allow AVANGRID to maintain the relative ownership percentage of Iberdrola at 81.5%. The stock repurchase program may be suspended or discontinued at any time upon notice. Out of 261,058 treasury shares of common stock of AVANGRID as of December 31, 2019, 115,831 shares were repurchased during 2018, 64,019 shares were repurchased in May 2017 and 81,208 shares were repurchased in May 2018, all in the open market. The total cost of repurchase, including commissions, was $12 million as of December 31, 2019.

On February 19, 2020 the board of directors of AVANGRID declared a quarterly dividend of $0.44 per share on its common stock. This dividend is payable on April 1, 2020 to shareholders of record at the close of business on March 6, 2020.

Note 3. Debt

Supplemental Indenture

On December 19, 2016, AVANGRID, its subsidiary, UIL, and The Bank of New York Mellon, entered into a supplemental indenture, pursuant to which AVANGRID assumed from UIL all the obligations under the indenture dated as of October 7, 2010 between UIL and The Bank of New York Mellon and all obligations relating to $450 million in aggregate principal amount of 4.625% notes due 2020 issued by UIL in 2010 prior to the merger. For the purpose of the supplemental indenture, a capital contribution of $483 million was made by AVANGRID to UIL in December 2016.

On November 21, 2017, AVANGRID issued $600 million aggregate principal amount of its 3.150% notes maturing in 2024. Proceeds of the offering were used to reduce short-term debt incurred to fund capital expenditures associated with development of renewable energy generation facilities. Net proceeds of the offering after the price discount and issuance-related expenses were $594 million.

On May 16, 2019, AVANGRID issued $750 million aggregate principal amount of its 3.80% notes maturing in 2029. Proceeds of the offering were used to finance and/or refinance, in whole or in part, one or more eligible renewable energy generation facilities. Net proceeds of the offering after the price discount and issuance-related expenses were $743 million.

On December 31, 2019, we entered into a $500 million term loan credit agreement with two financial institutions. The agreement expires on June 30, 2021 and has a floating interest rate which was 2.40% as of December 31, 2019.

Note 4. Cash Dividends Paid by Subsidiaries

Cash dividends paid by subsidiary are as follows:

Years ended December 31,	2019	2018	2017
(millions)			
AVANGRID Networks	$ 433	$ 116	$ 308

In 2019, AVANGRID made capital contributions of $108 million and $50 million, respectively, to its subsidiaries, UI and NYSEG. In 2018, AVANGRID made a capital contribution of $50 million to its subsidiary, UI. During 2019 and 2018, AVANGRID recorded a net non-cash contribution and dividend of $219 million and $1,515 million, respectively, to and from its subsidiaries to zero out their account balances of notes receivables and payables.

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Item 9. ***Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.***

None.

Item 9A. ***Controls and Procedures.***

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer, or CEO, and our Chief Financial Officer, or CFO, has evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended, or the Exchange Act), as of the end of the period covered by this Annual Report on Form 10-K. Based on such evaluation, our CEO and CFO have concluded that as of such date, our disclosure controls and procedures were effective to provide reasonable assurance that information required to be disclosed by the Company in reports that it files or submits under the Exchange Act is (i) recorded, processed, summarized and reported within the time periods specified in the SEC rules and forms and (ii) accumulated and communicated to the Company's management, including its CEO and CFO, as appropriate to allow timely decisions regarding required disclosure.

Report of Management on Internal Control Over Financial Reporting

The management of AVANGRID is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. AVANGRID's internal control system over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles. AVANGRID's internal control over financial reporting includes those policies and procedures that:

(i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company;

(ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with U.S. generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and

(iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the company's assets that could have a material effect on the financial statements.

Because of inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation. Also, projections of any evaluation of effectiveness to future periods are subject to risk that controls may become inadequate because of changes in condition, or that the degree of compliance with the policies or procedures may deteriorate.

AVANGRID's management assessed the effectiveness of AVANGRID's internal control over financial reporting as of December 31, 2019. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) ("COSO") in Internal Control-Integrated Framework. Based on this assessment, management determined that our internal control over financial reporting was effective as of December 31, 2019.

Our independent registered public accounting firm, KPMG LLP, has issued an audit report on the Company's internal control over financial reporting, which appears in Part II, Item 8 of this Form 10-K.

Changes in Internal Control

There were no changes in our internal control over financial reporting identified in connection with the evaluation required by Rules 13a-15(d) and 15d-15(d) of the Exchange Act during the quarter ended December 31, 2019 that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. ***Other Information.***

None.

PUBLIC

PART III

Item 10. ***Directors, Executive Officers and Corporate Governance.***

For information regarding our executive officers, see Part I of this Annual Report on Form 10-K. Additional information required by this item is incorporated by reference to our Proxy Statement for the 2020 Annual Meeting of Shareholders to be filed with the SEC within 120 days of the fiscal year ended December 31, 2019.

Item 11. ***Executive Compensation.***

The information required by this item is incorporated by reference to our Proxy Statement for the 2020 Annual Meeting of Shareholders to be filed with the SEC within 120 days of the fiscal year ended December 31, 2019.

Item 12. ***Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.***

The information required by this item is incorporated by reference to our Proxy Statement for the 2020 Annual Meeting of Shareholders to be filed with the SEC within 120 days of the fiscal year ended December 31, 2019.

Item 13. ***Certain Relationships and Related Transactions, and Director Independence.***

The information required by this item is incorporated by reference to our Proxy Statement for the 2020 Annual Meeting of Shareholders to be filed with the SEC within 120 days of the fiscal year ended December 31, 2019.

Item 14. ***Principal Accountant Fees and Services.***

The information required by this item is incorporated by reference to our Proxy Statement for the 2020 Annual Meeting of Shareholders to be filed with the SEC within 120 days of the fiscal year ended December 31, 2019.

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Part IV

Item 15. ***Exhibits and Financial Statement Schedules.***

a) The following documents are made a part of this Annual Report on Form 10-K:

1. Financial Statements—Our consolidated financial statements are set forth under Part II, Item 8 "Financial Statements and Supplementary Data."

2. Financial Statement Schedules—Our financial statement schedules are set forth under Part II, Item 8 "Financial Statements and Supplementary Data."

3. Exhibits—The following instruments and documents are included as exhibits to this report.

Exhibit Number	Exhibit Description
2.1	Agreement and Plan of Merger, dated as of February 25, 2015, by and among Avangrid, Inc. (formerly Iberdrola USA, Inc.), Green Merger Sub, Inc. and UIL Holdings Corporation (incorporated herein by reference to Annex A to the proxy statement/prospectus included as Exhibit 2.1 in our Registration Statement on Form S-4 filed with the Securities and Exchange Commission on July 17, 2015).
3.1	Certificate of Incorporation of Avangrid, Inc. (incorporated herein by reference to Exhibit 3.2 to Form 8-K filed with the Securities and Exchange Commission on December 18, 2015).
3.2	Amended and Restated Bylaws of Avangrid, Inc. (incorporated herein by reference to Exhibit 3.1 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended June 30, 2017).
4.1	Specimen Common Stock Certificate (incorporated herein by reference to Exhibit 4.1 to Form S-4/A filed with the Securities and Exchange Commission on October 21, 2015).
4.2	Senior Indenture, dated as of October 7, 2010, between UIL Holdings Corporation and The Bank of New York Mellon, as trustee (incorporated herein by reference to Exhibit 4.1 of UIL Holdings Corporation's Current Report on Form 8-K filed with the Securities and Exchange Commission on October 7, 2010).
4.3	First Supplemental Indenture, dated as of October 7, 2010, between UIL Holdings Corporation and The Bank of New York Mellon, as trustee (incorporated herein by reference to Exhibit 4.2 of UIL Holdings Corporation's Current Report on Form 8-K filed with the Securities and Exchange Commission on October 7, 2010).
4.4	Second Supplemental Indenture, dated as of December 16, 2015, among UIL Holdings Corporation, Green Merger Sub, Inc. and The Bank of New York Mellon, as trustee (incorporated herein by reference to Exhibit 4.2 to Form 8-K filed with the Securities and Exchange Commission on December 18, 2015).
4.5	Third Supplemental Indenture, dated as of December 19, 2016, among Avangrid, Inc., UIL Holdings Corporation and The Bank of New York Mellon, as trustee (incorporated herein by reference to Exhibit 4.5 of AVANGRID's Annual Report on Form 10-K filed with the SEC for the fiscal year ended December 31, 2016).
4.6	Indenture, dated as of November 21, 2017, between the Company and The Bank of New York Mellon, as trustee (incorporated herein by reference to Exhibit 4.1 to Form 8-K filed with the Securities and Exchange Commission on November 21, 2017).
4.7	First Supplemental Indenture, dated November 21, 2017, between the Company and The Bank of New York Mellon, as trustee (incorporated herein by reference to Exhibit 4.2 to Form 8-K filed with the Securities and Exchange Commission on November 21, 2017).
4.8	Form of Global Note Representing the Notes (incorporated herein by reference to Exhibit 4.3 to Form 8-K filed with the Securities and Exchange Commission on November 21, 2017).
4.9	Description of Avangrid, Inc.'s Securities Registered Pursuant to Section 12 of the Securities. Exchange Act of 1934.*

PUBLIC

Exhibit Number	Exhibit Description
10.1	Shareholder Agreement, dated as of December 16, 2015, by and between Avangrid, Inc. and Iberdrola, S.A. (incorporated herein by reference to Exhibit 4.1 to Form 8-K filed with the Securities and Exchange Commission on December 18, 2015).
10.2	Service Agreement, dated January 1, 2014, between Iberdrola USA, Inc. Management Corporation and Avangrid, Inc. (formerly Iberdrola USA, Inc.) (incorporated herein by reference to Exhibit 10.2 to Form S-4 filed with the Securities and Exchange Commission on July 17, 2015).
10.3	Accession Agreement, dated September 16, 2011, between Iberdrola Renewables Holdings, Inc. and Bank Mendes Gans N.V. (incorporated herein by reference to Exhibit 10.14 to Form S-4 filed with the Securities and Exchange Commission on July 17, 2015).
10.4	Guarantee and Support Agreement, dated April 3, 2008, between Iberdrola, S.A. and ScottishPower Holdings, Inc. (incorporated herein by reference to Exhibit 10.15 to Form S-4 filed with the Securities and Exchange Commission on July 17, 2015).
10.5	Amendment No. 1 to Guarantee and Support Agreement, dated May 27, 2010, between Iberdrola, S.A. and Iberdrola Renewables Holdings, Inc. (formerly known as ScottishPower Holdings, Inc.) (incorporated herein by reference to Exhibit 10.16 to Form S-4 filed with the Securities and Exchange Commission on July 17, 2015).
10.6	English Translation of Regulations for the "2014-2016 Strategic Bonus" for Senior Officers and Officers of Iberdrola, S.A. and Its Group of Companies (incorporated herein by reference to Exhibit 10.19 to Form S-4/A filed with the Securities and Exchange Commission on September 9, 2015).†
10.7	Provisions to be Applied to U.S. Participants in Relation to the Regulations for the "2014-2016 Strategic Bonus" for Senior Officers and Officers of Iberdrola, S.A. and Its Group of Companies (incorporated herein by reference to Exhibit 10.20 to Form S-4/A filed with the Securities and Exchange Commission on September 9, 2015). †
10.8	Employment Agreement dated October 1, 2010 among Robert Daniel Kump, Iberdrola USA Networks, Inc. (formerly Iberdrola USA, Inc.) and Iberdrola USA Management Corporation (incorporated herein by reference to Exhibit 10.23 to Form S-4/A filed with the Securities and Exchange Commission on September 9, 2015). †
10.9	Service Contract dated January 16, 2014 between Robert Daniel Kump and Avangrid, Inc. (incorporated herein by reference to Exhibit 10.24 to Form S-4/A filed with the Securities and Exchange Commission on September 9, 2015). †
10.10	Employment Agreement dated March 1, 2008 between R. Scott Mahoney and Iberdrola USA Management Corporation (formerly Energy East Management Corporation) (incorporated herein by reference to Exhibit 10.27 to Form S-4/A filed with the Securities and Exchange Commission on September 9, 2015).†
10.11	Framework Agreement for the Provision of Corporate Services for Iberdrola and the Companies of its Group, and the Declaration of Acceptance, dated July 16, 2015 (incorporated herein by reference to Exhibit 10.28 to Form S-4 filed with the Securities and Exchange Commission on July 17, 2015).
10.12	Equipment Supply Agreement dated December 28, 2014 between Iberdrola Renewables, LLC and Gamesa Wind US, LLC (incorporated herein by reference to Exhibit 10.29 to Form S-4/A filed with the Securities and Exchange Commission on November 6, 2015).
10.13	Agreement and Release dated September 25, 2009 between Robert Daniel Kump and Iberdrola USA Management Corporation (formerly Energy East Management Corporation) (incorporated herein by reference to Exhibit 10.31 to Form S-4/A filed with the Securities and Exchange Commission on September 9, 2015). †

PUBLIC

Exhibit Number	Exhibit Description
10.14	Form of Indemnification Agreement between Avangrid, Inc. (formerly Iberdrola USA, Inc.) and its directors and officers (incorporated herein by reference to Exhibit 10.32 to Form S-4/A filed with the Securities and Exchange Commission on October 21, 2015).†
10.15	UIL Holdings Corporation 2008 Stock and Incentive Compensation Plan as Amended and Restated May 14, 2013 (incorporated herein by reference to Exhibit 99.1 to Form S-8 filed with the Securities and Exchange Commission on December 16, 2015).†
10.16	UIL Holdings Corporation Deferred Compensation Plan Grandfathered Benefits Provisions, dated August 4, 2008 (incorporated herein by reference to Exhibit 99.2 to Form S-8 filed with the Securities and Exchange Commission on December 16, 2015).†
10.17	UIL Holdings Corporation Deferred Compensation Plan Non-Grandfathered Benefits Provisions, as amended and restated effective dated January 1, 2013 (incorporated herein by reference to Exhibit 99.3 to Form S-8 filed with the Securities and Exchange Commission on December 16, 2015).†
10.18	Amended and Restated UIL Holdings Corporation Change In Control Severance Plan II, dated August 4, 2008 (incorporated herein by reference to Exhibit 10.28a of UIL Holdings Corporation's Quarterly Report on Form 10-Q for the quarter ended June 30, 2008).†
10.19	Employment Agreement, dated as of January 1, 2016, among Avangrid, Inc., Avangrid Service Company and James P. Torgerson (incorporated herein by reference to Exhibit 10.1 to AVANGRID's Current Report on Form 8-K filed with the SEC on April 22, 2016).†
10.20	Commercial Paper/Certificates of Deposit Issuing and Paying Agent Agreement dated May 13, 2016 among Avangrid, Inc., as Issuer, and Bank of America, National Association, as Issuing and paying Agent (incorporated herein by reference to Exhibit 10.1 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended June 30, 2016).
10.21	Form of Commercial Paper Dealer Agreement among Avangrid, Inc., as Issuer, and various Dealers (incorporated herein by reference to Exhibit 10.2 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended June 30, 2016).
10.22	Form of Performance Stock Unit Grant Agreement (incorporated herein by reference to Exhibit 10.1 to AVANGRID's Current Report on Form 8-K filed with the SEC on July 19, 2016).†
10.23	Avangrid, Inc. Omnibus Incentive Plan (incorporated herein by reference to Form S-8 filed with the SEC on July 21, 2016).†
10.24	Uncommitted Line of Credit for Standby Letters of Credit Agreement, dated as of December 2, 2016, between Avangrid, Inc. and Crédit Agricole Corporate (incorporated herein by reference to Exhibit 10.44 of AVANGRID's Annual Report on Form 10-K filed with the SEC for the fiscal year ended December 31, 2016).
10.25	Substitution Agreement, dated as of December 19, 2016, between UIL Holdings Corporation and Avangrid, Inc. (incorporated herein by reference to Exhibit 10.45 of AVANGRID's Annual Report on Form 10-K filed with the SEC for the fiscal year ended December 31, 2016).
10.26	Amended and Restated Avangrid, Inc. Omnibus Incentive Plan (incorporated herein by reference to Exhibit 10.1 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended March 31, 2017).†
10.27	Customer Liquidity Agreement, dated December 1, 2017, between Avangrid, Inc., Bank of America, National Association, Iberdrola, S.A., Iberdrola Mexico, S.A. de C.V., and Scottish Power Ltd.
10.28	Underwriting Agreement, dated November 16, 2017, by and among the Avangrid, Inc., BBVA Securities Inc., BNP Paribas Securities Corp., Citigroup Global Markets Inc., and Wells Fargo Securities, LLC (incorporated herein by reference to Exhibit 1.1 to Form 8-K filed with the Securities and Exchange Commission on November 21, 2017).

PUBLIC

Exhibit Number	Exhibit Description
10.29	Purchase Agreement, dated January 31, 2018, between Avangrid Renewables Holdings, Inc. and CCI U.S. Asset Holdings LLC (incorporated herein by reference to Exhibit 10.1 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended March 31, 2018).
10.30	Purchase Agreement, dated February 16, 2018, between Avangrid Renewables Holdings, Inc. and Amphora Gas Storage USA, LLC (incorporated herein by reference to Exhibit 10.2 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended March 31, 2018).
10.31	Restricted Stock Unit Grant Notice and Agreement dated June 7, 2018, between Avangrid, Inc. and James P. Torgerson (incorporated herein by reference to Exhibit 10.1 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended June 30, 2018).†
10.32	Transmission Service Agreement, dated June 13, 2018, between Central Maine Power Company and NSTAR Electric Company (d/b/a Eversource) (incorporated herein by reference to Exhibit 10.2 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended June 30, 2018).
10.33	Transmission Service Agreement, dated June 13, 2018, among Central Maine Power Company, Massachusetts Electric Company (d/b/a National Grid), and Nantucket Electric Company (d/b/a National Grid) (incorporated herein by reference to Exhibit 10.3 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended June 30, 2018).
10.34	Transmission Service Agreement, dated June 13, 2018, between Central Maine Power Company and Fitchburg Gas & Electric Light Company (d/b/a Unitil) (incorporated herein by reference to Exhibit 10.4 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended June 30, 2018).
10.35	Transmission Service Agreement, dated June 13, 2018, between Central Maine Power Company and H.Q. Energy Services (U.S.) Inc. (incorporated herein by reference to Exhibit 10.5 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended June 30, 2018).
10.36	Transmission Service Agreement, dated June 13, 2018, between Central Maine Power Company and H.Q. Energy Services (U.S.) Inc. (incorporated herein by reference to Exhibit 10.6 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended June 30, 2018).
10.37	Transmission Service Agreement, dated June 13, 2018, between Central Maine Power Company and H.Q. Energy Services (U.S.) Inc. (incorporated herein by reference to Exhibit 10.7 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended June 30, 2018).
10.38	Transmission Service Agreement, dated June 13, 2018, between Central Maine Power Company and H.Q. Energy Services (U.S.) Inc. (incorporated herein by reference to Exhibit 10.8 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended June 30, 2018).
10.39	Revolving Credit Agreement, dated as of June 29, 2018, among Avangrid, Inc., New York State Electric & Gas Corporation, Rochester Gas and Electric Corporation, Central Maine Power Company, The United Illuminating Company, Connecticut Natural Gas Corporation, The Southern Connecticut Gas Company, The Berkshire Gas Company, the several lenders from time to time parties thereto, JPMorgan Chase Bank, N.A., as Administrative Agent, MUFG Bank, LTD. and Santander Bank, N.A., as Co-Documentation Agents, Bank of America, N.A., as Syndication Agent, Banco Bilbao Vizcaya Argentaria, S.A. New York Branch, as Sustainability Agent, and JPMorgan Chase Bank, N.A., Merrill Lynch, Pierce, Fenner & Smith Incorporated, , MUFG Bank, LTD., Santander Bank, N.A., and BBVA Securities, as Joint Lead Arrangers and Joint Bookrunners (incorporated herein by reference to Exhibit 10.1 to AVANGRID's Current Report on Form 8-K filed with the SEC on June 29, 2018).
10.40	Employment Agreement, effective as of July 8, 2018, between Douglas K. Stuver and Avangrid Management Company, LLC (incorporated herein by reference to Exhibit 10.1 to AVANGRID's Current Report on Form 8-K filed with the SEC on July 20, 2018).†
10.41	Employment Agreement, effective September 27, 2018, between Peter Church and Avangrid Management Company, LLC (incorporated herein by reference to Exhibit 10.44 of AVANGRID's Annual Report on Form 10-K for the year ended December 31, 2018).†

PUBLIC

Exhibit Number	Exhibit Description
10.42	Restricted Stock Unit Grant Notice and Agreement dated October 29, 2018, between Avangrid, Inc. and Peter Church (incorporated herein by reference to Exhibit 10.45 of AVANGRID's Annual Report on Form 10-K for the year ended December 31, 2018).†
10.43	Executive Variable Pay Plan (incorporated by reference to Exhibit 10.1 to AVANGRID's Current Report on Form 8-K filed with the SEC on February 21, 2018).†
10.44	First Amendment to Transmission Service Agreement dated October 9, 2018 by and between Central Maine Power Company and NSTAR Electric Company (d/b/a Eversource) (incorporated herein by reference to Exhibit 10.1 to Form 8-K filed with the SEC on October 15, 2018).
10.45	First Amendment to Transmission Service Agreement dated October 9, 2018 by and among Central Maine Power Company, Massachusetts Electric Company (d/b/a National Grid) and Nantucket Electric Company (d/b/a National Grid) (incorporated herein by reference to Exhibit 10.2 to Form 8-K filed with the SEC on October 15, 2018).
10.46	First Amendment to Transmission Service Agreement dated October 9, 2018 by and between Central Maine Power Company and Fitchburg Gas and Electric Light Company (d/b/a Unitil) (incorporated herein by reference to Exhibit 10.3 to Form 8-K filed with the SEC on October 15, 2018).
10.47	Amended and Restated Executive Variable Pay Plan (incorporated by reference to Exhibit 10.1 to AVANGRID's Current Report on Form 8-K filed with the SEC on February 20, 2019).†
10.48	Underwriting Agreement, dated May 14, 2019, by and among the Avangrid, Inc., Credit Agricole Securities (USA) Inc, MUFG Securities Americas Inc., Citigroup Global Markets Inc., and Wells Fargo Securities, LLC (incorporated herein by reference to Exhibit 1.1 to Form 8-K filed with the Securities and Exchange Commission on May 16, 2019).
10.49	Second Supplemental Indenture, dated as of May 16, 2019, among Avangrid, Inc. and The Bank of New York Mellon, as trustee (incorporated herein by reference to Exhibit 4.2 to Form 8-K filed with the Securities and Exchange Commission on May 16, 2019).
10.50	Term Loan Credit Agreement, dated December 31, 2019, among Avangrid, Inc., The Several Lenders, Mizuho Bank, LTD and The Bank of Nova Scotia (incorporated herein by reference to Exhibit 10.1 to Form 8-K filed with the Securities and Exchange Commission on January 7, 2020).
10.51	Employment Agreement, dated March 30, 2004 between Anthony Marone III and The United Illuminating Company.†*
10.52	First Amendment to Employment Agreement, dated as of November 18, 2004, between Anthony Marone III and The United Illuminating Company.†*
10.53	Second Amendment to Employment Agreement, dated as of August 4, 2008, between Anthony Marone III and The United Illuminating Company.†*
10.54	Letter Agreement, dated September 20, 2016, between Anthony Marone III and Avangrid, Inc.†*
10.55	Employment Agreement, dated May 18, 2017, between Laura Beane and Avangrid Renewables, LLC.†*
10.56	Letter Agreement, dated September 30, 2019, between Laura Beane and Avangrid, Inc.†*
21.1	Significant subsidiaries of the Registrant.*
23.1	Consent of KPMG LLP, independent registered public accounting firm of Avangrid, Inc.*
31.1	Chief Executive Officer Certification Pursuant to Rule 13a-14(a) and 15d-14(a), As Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.*

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Exhibit Number	Exhibit Description
31.2	Chief Financial Officer Certification Pursuant to Rule 13a-14(a) and 15d-14(a), As Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.*
32	Chief Executive Officer and Chief Financial Officer Certification Pursuant to 18 United States Code Section 1350, As Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.*
101.INS	Inline XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
101.SCH	Inline XBRL Taxonomy Extension Schema Document.*
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document.*
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document.*
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document.*
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document.*
104	The cover page from the Company's Annual Report on Form 10-K for the year ended December 31, 2019, formatted as Inline XBRL and contained in Exhibit 101.

* Filed herewith.

† Compensatory plan or agreement.

— Confidential treatment has been requested for portions of this document. The omitted portions of this document have been submitted separately to the Securities and Exchange Commission.

The foregoing list of exhibits does not include instruments defining the rights of the holders of certain long-term debt of Avangrid, Inc. and its subsidiaries where the total amount of securities authorized to be issued under the instrument does not exceed ten percent (10%) of the total assets of Avangrid, Inc. and its subsidiaries on a consolidated basis; and Avangrid, Inc. hereby agrees to furnish a copy of each such instrument to the SEC on request.

Item 16. ***Form 10-K Summary.***

None.

PUBLIC

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Avangrid, Inc.

Date: March 2, 2020

By: /s/ James P. Torgerson
James P. Torgerson
Director and Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ James P. Torgerson James P. Torgerson	Director and Chief Executive Officer (Principal Executive Officer)	March 2, 2020
/s/ Douglas K. Stuver Douglas K. Stuver	Chief Financial Officer (Principal Financial Officer)	March 2, 2020
/s/ Scott M. Tremble Scott M. Tremble	Controller (Principal Accounting Officer)	March 2, 2020
/s/ Ignacio Sánchez Galán Ignacio Sánchez Galán	Chairman of the Board	March 2, 2020
/s/ John E. Baldacci John E. Baldacci	Director	March 2, 2020
/s/ Pedro Azagra Blázquez Pedro Azagra Blázquez	Director	March 2, 2020
/s/ Robert Duffy Robert Duffy	Director	March 2, 2020
/s/ Teresa Herbert Teresa Herbert	Director	March 2, 2020
/s/ Patricia Jacobs Patricia Jacobs	Director	March 2, 2020
/s/ John L. Lahey John L. Lahey	Director	March 2, 2020
/s/ Santiago Martinez Garrido Santiago Martinez Garrido	Director	March 2, 2020
/s/ Sonsoles Rubio Reinoso Sonsoles Rubio Reinoso	Director	March 2, 2020
/s/ José Sáinz Armada José Sáinz Armada	Director	March 2, 2020
/s/ Alan D. Solomont Alan D. Solomont	Director	March 2, 2020
/s/ Elizabeth Timm Elizabeth Timm	Director	March 2, 2020

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VINEYARD WIND

ATTACHMENT TO SECTION 5

Attachment 5.6-20: Avangrid Annual Report 2020

PUBLIC

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 10-K

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2020

Or

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from to

Commission File No. 001-37660

Avangrid, Inc.

(Exact name of registrant as specified in its charter)

Securities registered pursuant to Section 12(b) of the Act:

New York	**14-1798693**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
180 Marsh Hill Road	
Orange, Connecticut	**06477**
(Address of principal executive offices)	**(Zip Code)**

Registrant's telephone number, including area code: (207) 629-1190

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol	Name of exchange on which registered
Common Stock, par value $0.01 per share	AGR	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☒ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Exchange Act. Yes ☐ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large Accelerated Filer	☒	Accelerated Filer	☐
Non-accelerated Filer	☐	Smaller Reporting Company	☐
Emerging Growth Company	☐		

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☒

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

The aggregate market value of the Avangrid, Inc.'s voting stock held by non-affiliates, computed by reference to the price at which the common equity was last sold as of the last business day of Avangrid, Inc.'s most recently completed second fiscal quarter (June 30, 2020) was $2,374 million based on a closing sales price of $41.98 per share.

Indicate the number of shares outstanding of each of the registrant's classes of common stock, as of the latest practicable date: 309,371,591 shares of common stock, par value $0.01, were outstanding as of February 26, 2021.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the documents listed below have been incorporated by reference into the indicated parts of this report, as specified in the responses to the item numbers involved.

Designated portions of the Proxy Statement relating to the 2021 Annual Meeting of the Shareholders are incorporated by reference into Part III to the extent described therein.

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GLOSSARY OF TERMS AND ABBREVIATIONS

Unless the context indicates otherwise, references in this Annual Report on Form 10-K to "AVANGRID," the "Company," "we," "our," and "us" refer to Avangrid, Inc. and its consolidated subsidiaries.

2016 Joint Proposal	Joint proposal of NYSEG and RG&E and certain other signatory parties approved by the NYPSC on June 15, 2016, for a three-year rate plan for electric and gas service commencing May 1, 2016.
2020 Joint Proposal	Joint proposal of NYSEG and RG&E and certain other signatory parties approved by the NYPSC on November 19, 2020, for a three-year rate plan for electric and gas service commencing December 1, 2020.
AMI	Automated Metering Infrastructure
AOCI	Accumulated other comprehensive income
ARHI	Avangrid Renewables Holdings, Inc.
ARP	Alternative Revenue Programs
ASC	Accounting Standards Codification
Asnat	Asnat Realty, LLC
Army Corps	U.S. Army Corps of Engineers
ARO	Asset retirement obligation
AVANGRID	Avangrid, Inc.
Bcf	One billion cubic feet
BGC	The Berkshire Gas Company
BGEPA	Bald and Golden Eagle Protection Act
BLM	U.S. Bureau of Land Management
BOEM	U.S. Bureau of Ocean Energy Management
CfDs	Contracts for Differences
CFTC	Commodity Futures Trading Commission
CFIUS	Committee on Foreign Investment in the United States
CL&P	The Connecticut Light and Power Company
CLCPA	Climate Leadership and Community Protection Act
CMP	Central Maine Power Company
CNG	Connecticut Natural Gas Corporation
CPCN	Certificate of Public Convenience and Necessity
CSC	Connecticut Siting Council
DCF	Discounted cash flow
DEEP	Connecticut Department of Energy and Environmental Protection
DE&I	Diversity, Equity and Inclusion
DIMP	Distribution Integrity Management Program
DER	Distributed energy resources
Dodd-Frank Act	Dodd-Frank Wall Street Reform and Consumer Protection Act
DOE	Department of Energy
DOER	Massachusetts Department of Energy Resources
DOJ	Department of Justice
DPA	Deferred Payment Arrangements
DPU	Massachusetts Department of Public Utilities
DSIP	Distributed System Implementation Plan
DTh	Dekatherm
EAM	Earnings adjustment mechanism
EDC	Massachusetts electric distribution companies
English Station	Former generation site on the Mill River in New Haven, Connecticut
EPA	Environmental Protection Agency

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EPAct 2005	Energy Policy Act of 2005
ERCOT	Electric Reliability Council of Texas
ESA	Endangered Species Act
ESC	Energy Smart Community
ESM	Earnings sharing mechanism
Evergreen Power	Evergreen Power III, LLC
Exchange Act	The Securities Exchange Act of 1934, as amended
FASB	Financial Accounting Standards Board
FCC	Federal Communications Commission
FERC	Federal Energy Regulatory Commission
FirstEnergy	FirstEnergy Corp.
FPA	Federal Power Act
Gas	Enstor Gas, LLC
GE	General Electric
GenConn	GenConn Energy LLC
GenConn Devon	GenConn's peaking generating plant in Devon, Connecticut
GenConn Middletown	GenConn's peaking generating plant in Middletown, Connecticut
HLBV	Hypothetical Liquidation at Book Value
HQUS	H.Q. Energy Services (U.S) Inc.
Iberdrola	Iberdrola, S.A., which owns 81.5% of the outstanding shares of Avangrid, Inc.
Iberdrola Group	The group of companies controlled by Iberdrola, S.A.
Installed capacity	The production capacity of a power plant or wind farm based either on its rated (nameplate) capacity or actual capacity
IRS	Internal Revenue Service
ISO	Independent system operator
ISO-NE	ISO New England, Inc.
ITC	Investment Tax Credit
Klamath Plant	The Klamath gas-fired cogeneration facility located in the city of Klamath, Oregon
kV	Kilovolts
kWh	Kilowatt-hour
LDC	Local distribution company
LIBOR	London Interbank Offer Rate
LNG	Liquefied natural gas
LUPC	Maine Land Use Planning Commission
MBTA	Migratory Bird Treaty Act
MDEP	Maine Department of Environmental Protection
MEPCO	Maine Electric Power Corporation
Merger	The merger of PNMR with and into Merger Sub on the terms and subject to the conditions set forth in the Merger Agreement, with PNMR continuing as the surviving corporation and as a wholly-owned subsidiary of AVANGRID.
Merger Agreement	Agreement and Plan of Merger, dated as of October 20, 2020, among AVANGRID, PNMR and Merger Sub.
Merger Sub	NM Green Holdings, Inc., a New Mexico corporation and wholly-owned subsidiary of AVANGRID.
MGP	Manufactured gas plants
MHI	Mitsubishi Heavy Industries
MISO	Midcontinent Independent System Operator
MNG	Maine Natural Gas Corporation
MPRP	Maine Power Reliability Program

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MPUC	Maine Public Utilities Commission
MtM	Mark-to-market
MW	Megawatts
MWh	Megawatt-hours
NAV	Net asset value
NECEC	New England Clean Energy Connect
NEPA	National Environmental Policy Act
NERC	North American Electric Reliability Corporation
NETOs	New England Transmission Owners
Networks	Avangrid Networks, Inc.
New York TransCo	New York TransCo, LLC.
NGA	Natural Gas Act of 1938
NMPRC	New Mexico Public Regulation Commission
NOL	Net operating loss
Non-GAAP	Financial measures that are not prepared in accordance with U.S. GAAP, including adjusted net income and adjusted earnings per share
NRC	Nuclear Regulatory Commission
NYISO	New York Independent System Operator, Inc.
NYPSC	New York State Public Service Commission
NYSE	New York Stock Exchange
NYSEG	New York State Electric & Gas Corporation
NYSERDA	New York State Energy Research and Development Authority
OATT	Open Access Transmission Tariff
OCI	Other comprehensive income
OSHA	Occupational Safety and Health Act, as amended
PA	Connecticut Public Act
PCB	Polychlorinated Biphenyls
PJM	PJM Interconnection, L.L.C.
PNMR	PNM Resources, Inc.
PPA	Power purchase agreement
PTC	Production tax credit
PUCT	Public Utility Commission of Texas
PUHCA 2005	Public Utility Holding Company Act of 2005
PURA	Connecticut Public Utilities Regulatory Authority
RAM	Rate Adjustment Mechanism
RCRA	Resource Conservation and Recovery Act
RDM	Revenue decoupling mechanism
REC	Renewable Energy Certificate
Renewables	Avangrid Renewables, LLC
REV	Reforming the Energy Vision
RFP	Request for Proposals
RG&E	Rochester Gas and Electric Corporation
ROE	Return on equity
ROU	Right-of-use
RPS	Renewable Portfolio Standards
RTO	Regional transmission organization
SCG	The Southern Connecticut Gas Company
SEC	United States Securities and Exchange Commission
SOX	Sarbanes-Oxley Act
Tax Act	Tax Cuts and Jobs Act of 2017 enacted by the U.S. federal government on December 22, 2017

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TEF	Tax equity financing arrangements
TSA	Transmission Service Agreement
UI	The United Illuminating Company
UIL	UIL Holdings Corporation
U.S. GAAP	Generally accepted accounting principles for financial reporting in the United States.
VaR	Value-at-risk
VIEs	Variable interest entities
WECC	Western Electricity Coordinating Council

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CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains a number of forward-looking statements. Forward-looking statements may be identified by the use of forward-looking terms such as “may,” “will,” “should,” “would,” “could,” “can,” “expect(s),” “believe(s),” “anticipate(s),” “intend(s),” “plan(s),” “estimate(s),” “project(s),” “assume(s),” “guide(s),” “target(s),” “forecast(s),” “are (is) confident that” and “seek(s)” or the negative of such terms or other variations on such terms or comparable terminology. Such forward-looking statements include, but are not limited to, statements about our plans, objectives and intentions, outlooks or expectations for earnings, revenues, expenses or other future financial or business performance, strategies or expectations, or the impact of legal or regulatory matters on business, results of operations or financial condition of the business and other statements that are not historical facts. Such statements are based upon the current reasonable beliefs, expectations and assumptions of our management and are subject to significant risks and uncertainties that could cause actual outcomes and results to differ materially. Important factors that could cause actual results to differ materially from those indicated by such forward-looking statements include, without limitation:

- the future financial performance, anticipated liquidity and capital expenditures;
- actions or inactions of local, state or federal regulatory agencies;
- success in retaining or recruiting our officers, key employees or directors;
- changes in amount, timing or ability to complete capital projects;
- adverse developments in general market, business, economic, labor, regulatory and political conditions;
- fluctuations in weather patterns;
- technological developments;
- the impact of extraordinary external events, such as any cyber breaches or other incidents, grid disturbances, acts of war or terrorism, civil or social unrest, natural disasters, pandemic health events or other similar occurrences;
- the impact of any change to applicable laws and regulations affecting operations including those relating to the environment and climate change, taxes, price controls, regulatory approval and permitting;
- our ability to close the proposed Merger (as defined below), the anticipated timing and terms of the proposed Merger, our ability to realize the anticipated benefits of the proposed Merger and our ability to manage the risks of the proposed Merger;
- the COVID-19 pandemic and its impact on business and economic conditions;
- the implementation of changes in accounting standards; and
- other presently unknown unforeseen factors.

Additional risks and uncertainties are set forth under Part I, Item 1A, “Risk Factors” in this Annual Report on Form 10-K. Should one or more of these risks or uncertainties materialize, or should any of the underlying assumptions prove incorrect, actual results may vary in material respects from those expressed or implied by these forward-looking statements. You should not place undue reliance on these forward-looking statements. We do not undertake any obligation to update or revise any forward-looking statements to reflect events or circumstances after the date of this report, whether as a result of new information, future events or otherwise, except as may be required under applicable securities laws. Other risk factors are detailed from time to time in our reports filed with the Securities and Exchange Commission, or SEC, and we encourage you to consult such disclosures.

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PART I

Item 1. *Business*

Overview

AVANGRID is one of the leading sustainable energy companies in the United States. Our purpose is to work every day to deliver a more accessible clean energy model that promotes healthier, more sustainable communities. A commitment to sustainability is firmly entrenched in the values and principles that guide AVANGRID, with environmental, social, governance and financial sustainability key priorities driving our business strategy.

AVANGRID has approximately $38 billion in assets and operations in 24 states concentrated in our two primary lines of business - Avangrid Networks and Avangrid Renewables. Avangrid Networks owns eight electric and natural gas utilities, serving approximately 3.3 million customers in New York and New England. Avangrid Renewables owns and operates 8.5 gigawatts of electricity capacity, primarily through wind and solar power, with a presence in 22 states across the United States. AVANGRID supports the achievement of the Sustainable Development Goals approved by the member states of the United Nations, and was named among the World's Most Ethical companies in 2019 and 2020 by the Ethisphere Institute. AVANGRID employs approximately 7,000 people and is listed by Forbes and JUST Capital as one of the 2021 JUST 100, an annual ranking of the most just U.S. public companies. Iberdrola S.A., a corporation *(sociedad anónima)* organized under the laws of the Kingdom of Spain, a worldwide leader in the energy industry, directly owns 81.5% of the outstanding shares of AVANGRID common stock. AVANGRID's primary businesses are described below.

Our direct, wholly-owned subsidiaries include Avangrid Networks, Inc., or Networks, and Avangrid Renewables Holdings, Inc., or ARHI. ARHI in turn holds subsidiaries including Avangrid Renewables, LLC, or Renewables. Networks owns and operates our regulated utility businesses through its subsidiaries, including electric transmission and distribution and natural gas distribution, transportation and sales. Renewables operates a portfolio of renewable energy generation facilities primarily using onshore wind power and also solar, biomass and thermal power. The following chart depicts our current organizational structure.

Through Networks, we own electric generation, transmission and distribution companies and natural gas distribution, transportation and sales companies in New York, Maine, Connecticut and Massachusetts, delivering electricity to approximately 2.3 million electric utility customers and delivering natural gas to approximately 1.0 million natural gas utility customers as of December 31, 2020. The interstate transmission and wholesale sale of electricity by these regulated utilities is regulated by the Federal Energy Regulatory Commission, or FERC, under the Federal Power Act, or FPA, including with respect to transmission rates. Further, Networks' electric and gas distribution utilities in New York, Maine, Connecticut and Massachusetts are subject to regulation by the New York State Public Service Commission, or NYPSC; the Maine Public Utilities Commission, or MPUC; the Connecticut Public Utilities Regulatory Authority, or PURA; and the Massachusetts Department of Public Utilities, or DPU, respectively. Networks strives to be a leader in safety, reliability and quality of service to its utility customers.

Through Renewables, we had a combined wind, solar and thermal installed capacity of 8,499 megawatts, or MW, as of December 31, 2020, including Renewables' share of joint projects, of which 7,734 MW was installed wind capacity. As of December 31, 2020, approximately 67% of the capacity was contracted, for an average period of 9.0 years, and 18% of installed capacity was hedged. Renewables is among the top three largest wind operators in the United States based on installed capacity as of December 31, 2020 and strives to lead the transformation of the U.S. energy industry to a sustainable, competitive, clean

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energy future. Renewables' installed capacity includes 65 wind farms and four solar facilities in 21 states across the United States.

On October 20, 2020, AVANGRID, PNM Resources, Inc., a New Mexico corporation, or PNMR, and NM Green Holdings, Inc., a New Mexico corporation and wholly-owned subsidiary of AVANGRID, or Merger Sub, entered into an Agreement and Plan of Merger, or Merger Agreement, pursuant to which Merger Sub is expected to merge with and into PNMR, with PNMR surviving the Merger as a direct wholly-owned subsidiary of AVANGRID, or the Merger. Pursuant to the Merger Agreement, each issued and outstanding share of the common stock of PNMR (other than (i) the issued shares of PNMR common stock that are owned by AVANGRID, Merger Sub, PNMR or any wholly-owned subsidiary of AVANGRID or PNMR, which will be automatically cancelled at the time the Merger is consummated and (ii) shares of PNMR common stock held by a holder who has not voted in favor of, or consented in writing to, the Merger who is entitled to, and who has demanded, payment for fair value of such shares) will be converted, at the time the merger is consummated, into the right to receive $50.30 in cash, or Merger Consideration, or approximately $4.3 billion in aggregate consideration. In connection with the Merger, Iberdrola, S.A. has provided the Iberdrola Funding Commitment Letter, pursuant to which Iberdrola has unilaterally agreed to provide to AVANGRID, or arrange the provision to AVANGRID of, funds to the extent necessary for AVANGRID to consummate the Merger, including the payment of the aggregate Merger Consideration. On February 12, 2021, the shareholders of PNMR approved the proposed Merger. The Merger is expected to be consummated in the second half of 2021 and is subject to certain conditions including certain regulatory approvals and entry into agreements providing for, and to making filings required to, exit from all ownership interests in the Four Corners Power Plant and certain other customary closing conditions. For additional information, see Note 1 to our consolidated financial statements contained in this Annual Report on Form 10-K.

Further information regarding the amount of revenues from external customers, including revenues by products and services, a measure of profit or loss and total assets for each segment for each of the last three fiscal years is provided in Note 24 to our consolidated financial statements contained in this Annual Report on Form 10-K.

See “Item 7. *Management’s Discussion and Analysis of Financial Condition and Results of Operations*” in this Annual Report for further details.

History

We were incorporated in 1997 as a New York corporation and named Energy East Corporation. In 2008, Iberdrola acquired Energy East Corporation and we changed our name to Iberdrola USA, Inc. In 2013, we completed an internal corporate reorganization to create a unified corporate presence for the Iberdrola brand in the United States, bringing all of its U.S. energy companies under Iberdrola USA, Inc. The internal reorganization resulted in the concentration of our principal businesses in two major subsidiaries: Networks, which holds all of our regulated utilities; and Renewables, which holds our renewable and thermal generation businesses.

On December 16, 2015, we completed the acquisition of UIL Holdings Corporation, or UIL, and changed our name to Avangrid, Inc. Immediately following the completion of the acquisition, former UIL shareowners owned 18.5% of the outstanding shares of common stock of AVANGRID, and Iberdrola owned the remaining shares.

Networks

Overview

Networks, a Maine corporation, holds our regulated utility businesses, including electric generation, transmission and distribution and natural gas distribution, transportation and sales. Networks serves as a super-regional energy services and delivery company through the eight regulated utilities it owns directly:

- New York State Electric & Gas Corporation, or NYSEG, which serves electric and natural gas customers across more than 40% of the upstate New York geographic area;
- Rochester Gas and Electric Corporation, or RG&E, which serves electric and natural gas customers within a nine-county region in western New York, centered around Rochester;
- The United Illuminating Company, or UI, which serves electric customers in southwestern Connecticut;
- Central Maine Power Company, or CMP, which serves electric customers in central and southern Maine;
- SCG, which serves natural gas customers in Connecticut;
- CNG, which serves natural gas customers in Connecticut;
- BGC, which serves natural gas customers in western Massachusetts; and
- Maine Natural Gas Corporation, or MNG, which serves natural gas customers in several communities in central and southern Maine.

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The demand for electric power and natural gas is affected by seasonal differences in the weather. Demand for electricity in each of the states in which Networks operates tends to increase during the summer months to meet cooling load or in winter months for heating load while statewide demand for natural gas tends to increase during the winter to meet heating load.

The following table sets forth certain information relating to the rate base, number of customers and the amount of electricity or natural gas provided by each of Networks' regulated utilities as of and for the year ended December 31, 2020:

Utility	Rate Base(1) (in billions)	Electricity Customers	Electricity Delivered (in MWh)	Natural Gas Customers	Natural Gas Delivered (in DTh)
NYSEG	$ 3.1	907,336	15,209,000	270,204	53,381,000
RG&E	$ 2.1	385,925	6,911,000	319,737	56,165,000
CMP	$ 2.4	646,818	9,046,000	—	—
MNG	$ 0.1	—	—	5,201	1,568,000
UI	$ 1.8	341,269	4,812,000	—	—
SCG	$ 0.6	—	—	206,096	33,434,000
CNG	$ 0.5	—	—	183,446	35,342,000
BGC	$ 0.1	—	—	40,637	9,788,000
Total	**$ 10.7**	**2,281,348**	**35,978,000**	**1,025,321**	**189,678,000**

(1) "Rate base" means the net assets upon which a utility can receive a specified return, based on the carrying value of such assets. The rate base is set by the relevant regulatory authority and typically represents the value of specified property, such as plants, facilities and other investments of the utility. These rate base values have been calculated using the best estimates as of December 31, 2020.

During the last five years, Networks has invested $7.2 billion enhancing its delivery network with greater capacity and improved reliability, environmental security and sustainability, efficiency and automation. Networks continuously improves its grid to accommodate new requirements for advanced metering, demand response and enhanced outage management, while improving its flexibility for the integration and management of distributed energy resources, or DER.

New York

In 2020, the nine hydroelectric plants owned by NYSEG and RG&E generated approximately 120 million kilowatt-hours, or kWh, of clean hydropower, which is enough energy to power approximately 17,000 homes across New York State, assuming an average electricity consumption of 600 kWh per month per customer. See "—Properties—Networks" for more information regarding Networks' electric generation plants.

Networks also holds an approximate 20% ownership interest in the regulated New York TransCo, LLC, or New York TransCo. Through New York TransCo, Networks has formed a partnership with affiliates of Central Hudson Gas and Electric Corporation, Consolidated Edison, Inc., National Grid, plc, and Orange and Rockland Utilities, Inc. to develop a portfolio of interconnected transmission lines and substations to fulfill the objectives of the New York energy highway initiative, a proposal to install up to 3,200 MW of new electric generation and transmission capacity in order to deliver more power generated from upstate New York power plants to downstate New York.

Maine

CMP owns 78% of the Maine Electric Power Corporation, or MEPCO, a single-asset 182-mile 345kV electric transmission line from the Maine/New Brunswick border to Wiscasset, Maine.

In 2018, the New England Clean Energy Connect, or NECEC, transmission project, a joint bid proposed by CMP and Hydro-Québec, was selected by the Massachusetts electric utilities and the Massachusetts Department of Energy Resources, or DOER, in the Commonwealth of Massachusetts's 83D clean energy Request for Proposal, or RFP. The proposed NECEC transmission project includes a 145-mile transmission line linking the electrical grids in Québec, Canada and New England. The project, which has an estimated cost of approximately $1.0 billion, would add 1,200 MW of transmission capacity to supply Maine and the rest of New England with power from reliable hydroelectric generation. As of December 31, 2020, we have spent approximately $180 million on the NECEC project. For further discussion of the NECEC project, see "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" in this Annual Report.

Connecticut

UI is a party to a joint venture with Clearway Energy, Inc., which is an affiliate of Global Infrastructure Partners, pursuant to which UI holds 50% of the membership interests in GCE Holding LLC, whose wholly-owned subsidiary, GenConn

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Energy LLC, or GenConn, operates peaking generation plants in Devon, Connecticut, or GenConn Devon, and Middletown, Connecticut, or GenConn Middletown.

Rate Base

The below rate base values were calculated using the best estimates as of December 31, 2020, 2019 and 2018. The rate base of Networks' regulated utilities for the years indicated below were as follows:

Rate base	2020	2019	2018
		(in millions)	
NYSEG Electric	$ 2,408	$ 2,250	$ 2,067
NYSEG Gas	703	610	585
RG&E Electric	1,566	1,453	1,386
RG&E Gas	492	516	497
Subtotal New York	**5,169**	**4,829**	**4,535**
CMP Dist	982	933	903
CMP Trans	1,448	1,469	1,460
MNG	77	76	71
Subtotal Maine	**2,507**	**2,478**	**2,434**
UI Dist	1,170	1,112	1,035
UI Trans	662	672	592
SCG	588	587	550
CNG	524	538	479
Subtotal Connecticut	**2,944**	**2,909**	**2,656**
BGC	124	136	111
Total	**$ 10,744**	**$ 10,352**	**$ 9,736**

Renewables

The Renewables business, based in Portland, Oregon, is engaged primarily in the design, development, construction, management and operation of generation plants that produce electricity using renewable resources and, with more than 70 renewable energy projects, is one of the leaders in renewable energy production in the United States based on installed capacity. Renewables' primary business is onshore wind energy generation, which represented approximately 90% of Renewables' combined installed capacity as of December 31, 2020. For the year ended December 31, 2020, Renewables produced approximately 18,760,000 MWh of energy through wind power generation. Renewables had a pipeline of approximately 21,200 MW (approximately 16,200 MW - onshore and approximately 5,000 MW - offshore) of future renewable energy projects in various stages of development as of December 31, 2020.

Renewables' growing strategic business is offshore wind. Renewables has access to two lease areas off the coast of the eastern United States that it is developing through Vineyard Wind, LLC, a 50-50 partnership with Copenhagen Infrastructure Partners, or CIP, a fund management company based in Denmark. In total, the lease areas have the potential to generate up to 5,000 MW of renewable energy. Renewables is currently developing two wind projects with CIP in one of the lease areas, which is 166,886 acres. The second lease area, acquired in 2018, is 132,370 acres and located over 16 nautical miles off the coast of Massachusetts.

Vineyard Wind LLC is developing the Vineyard Wind I project, an 800 MW utility-scale offshore wind project located 15 miles off the coast of Massachusetts. The Vineyard Wind I project is expected to generate clean energy for over 400,000 households and businesses in Massachusetts and reduce carbon emissions by over 1.6 million tons per year. The project has 20-year PPA's with the electric distribution companies in Massachusetts with an average price of $88.77/MWh, which represents a price for 50% of the project that starts at $65/MWh and escalates 2.5% annually, and a price for the other 50% of the project that starts at $74/MWh and escalates 2.5% annually. Vineyard Wind LLC is also developing the Park City Wind project, an 804 MW project located in the same lease area as the Vineyard Wind I project, that will deliver clean, reliable energy to the residents of Connecticut through contracts with the electric distribution companies in Connecticut. The project has 20-year PPA's with the electric distribution companies in Connecticut, including UI, with an average price of $79.83/MWh, which is based on a starting price of $62.50 that escalates at 2.5% annually. With respect to the Park City Wind project, Vineyard Wind has agreed to have good faith negotiations to adjust the price if the project benefits from any improvements to the profitability

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of the project for having access to investments tax credits, or ITCs, in excess of 18%. Both projects are expected to be commissioned in the mid-2020's, subject to permitting and contract negotiation.

Renewables also has rights to a federal offshore wind lease area located more than 27 miles off the coast of North Carolina, which has the potential to generate up to 2,500 MW of renewable energy for Virginia and North Carolina. The lease area was acquired through a competitive federal auction in 2017 and is 122,405 acres.

Typically, Renewables enters into long-term lease agreements with property owners who lease their land for renewable energy projects. Electricity generated at a wind project is then transmitted to customers through long-term agreements with purchasers. There are a limited number of turbine suppliers in the market. Renewables' largest turbine suppliers, Siemens-Gamesa, in which Iberdrola had an 8.1% ownership interest until that was sold in February 2020, and GE Wind, in the aggregate supplied turbines that accounted for 72% of Renewables' installed wind capacity as of December 31, 2020.

To monetize the tax benefits resulting from production tax credits, or PTCs, and accelerated tax depreciation available to qualifying wind energy projects, Renewables has entered into "tax equity" financing structures with third party investors for a portion of its wind farms. Renewables holds two operating wind farms under these structures through limited liability companies jointly owned by one or more third party investors. These investors generally provide an up-front investment and, in some cases, payments over time for their membership interests in the financing structures. In return, the investors receive specified cash distribution allocations and substantially all of the tax benefits generated by the wind farms, until such benefits achieve a negotiated return on their investment. Upon attainment of this target return, the sharing of the cash flows and tax benefits flip, with Renewables receiving substantially all of these amounts thereafter. We also have an option to repurchase the investor's interest within a certain timeframe after the target return is met. Renewables maintains operational and management control over the wind farm businesses, subject to investor approval of certain major decisions. See "—Properties—Renewables" for more information regarding Renewables' wind power generation properties.

Additionally, as part of the Renewables portfolio, Renewables operates two thermal generation facilities in the United States, with 636 MW of combined capacity as of December 31, 2020. Renewables worked closely with the City of Klamath Falls, Oregon to develop the Klamath Plant, which has a current capacity of 536 MW. The Klamath Plant operates by creating two useful forms of energy, electricity and process steam, from a single fuel source of natural gas. In addition, Renewables operates a highly flexible 100 MW Klamath Peaking Plant adjacent to the Klamath Plant, providing customers of Renewables additional capability to meet their peak summer and winter power needs.

In addition to its wind assets, Renewables operates four solar photovoltaic facilities with an installed capacity of 130 MW. The solar photovoltaic facilities produced over 242,000 MWh of renewable energy for the year ended December 31, 2020. Solar accounted for 1.5% of the total renewable energy generation from Renewables in these same periods.

Renewables is pursuing the continued development of a large pipeline of wind energy projects in various regions across the United States. Each site features a range of different atmospheric characteristics that ultimately drive the selection of turbine technology for the proposed project. As part of Renewables' wind resource assessment investigation, critical atmospheric parameters such as mean wind speed, extreme wind speed, turbulence intensity, and mean air density are characterized to represent long-term conditions for over 20 years. The summary wind characteristics are then combined with a terrain, or orography, analysis to assess siting risks in order to mitigate any future operations and maintenance concerns that may arise due to improper turbine siting.

Renewables maintains close relationships with key turbine suppliers, including Siemens-Gamesa, GE, Vestas and others in order to identify the turbine technology that safely delivers the lowest cost of energy for each candidate project in its portfolio. Renewables has deployed the following mix of turbines under this strategy. See "—Properties—Renewables" for more information regarding Renewables' turbine technology.

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MFG	Model	Rating	Turbines	MW
Siemens-Gamesa	G83	2.0	60	120
Siemens-Gamesa	G87	2.0	648	1,296
Siemens-Gamesa	G90	2.0	236	472
Siemens-Gamesa	G97	2.0	109	218
Siemens-Gamesa	G114	2.0	321	683
Siemens-Gamesa	G145	4.2/4.5	11	49
Siemens-Gamesa	SWT2.3-93	2.3	44	101
GE	1.5s	1.5	79	119
GE	1.5sle	1.5	955	1,433
GE	1.5sle RP1.62	1.6	217	350
GE	2.3	2.3	84	186
GE	2.52	2.52	128	252
GE	2.5	2.5	9	23
GE	2.82	2.82	8	21
GE	2.85	2.85	76	215
MHI	MWT62/1.0	1.0	45	45
MHI	MWT92/2.4	2.4	167	401
MHI	MWT95/2.4	2.4	124	298
MHI	MWT102/2.4	2.4	1	2
Suzlon	S88	2.1	325	681
Vestas	NM48	0.7	3	2
Vestas	V47	0.7	34	22
Vestas	V82	1.7	98	161
Vestas	V126/3.45	3.45	14	48
Vestas	V136/3.6	3.6	109	392
Vestas	V136/3.8	3.8	38	144
Total			3,943	7,734

Renewables focuses on ensuring solar projects deliver the lowest cost of energy safely. This requires detailed information on first cost, long term performance and reliability of project components including solar panels, trackers and inverters – particularly as technology continues to advance. Renewables relies upon a wide network of experienced solar industry consultants to provide expert advice on project development, performance specifications, manufacturing quality assurance and equipment selection. These consultants range from Tetra Tech Inc. for environmental permitting support, to companies such as DNV GL, Clean Energy Associates, and PI Berlin to advise on energy estimation, equipment performance expectations, and equipment quality audits.

The Renewables meteorology team supports the commercial development of wind and solar energy projects in Renewables' pipeline by performing a wide variety of detailed investigations and analyses to characterize the expected wind and solar energy production from a proposed wind farm or solar plant in its pre-construction phase of development. These investigations include measuring the wind or solar resource with several well-equipped meteorological masts and using energy modeling software packages that characterize the gross energy and relevant losses. For wind projects, state of the art laser-based and acoustic-based remote sensing equipment and computational fluid dynamics modeling software are used. The Renewables fleet of measurement masts consists of approximately 100 wind meteorological towers and 12 solar meteorological stations that are currently in operation. Additionally, a total of six light detecting and ranging and six sonic detecting and ranging remote sensing devices are deployed or available for deployment at sites across the United States to support wind project development. These remote sensing devices allow hub-height wind speed measurement from a ground-based sensor that can be rapidly deployed and moved as the project matures or changes in nature. The resulting pre-construction energy production estimates that utilize these measurements have been shown to be accurate in a multi-year internal study that compares results to actual, operational data at wind plants in a benchmarking analysis. This study provides a critical feedback loop that is used to define methodology requirements for future pre-construction energy production estimates to ensure confidence in project investment. Renewables' commitment to obtaining robust atmospheric measurement is driven by a company culture that values business case confidence and understands the role that accurate meteorological data plays in the pursuit of this goal.

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Regulatory Environment and Principal Markets

Federal Energy Regulatory Commission

Among other things, the FERC regulates the transmission and wholesale sales of electricity in interstate commerce and the transmission and sale of natural gas for resale in interstate commerce. Certain aspects of Networks' businesses and Renewables' competitive generation businesses are subject to regulation by the FERC.

Pursuant to the FPA, electric utilities must maintain tariffs and rate schedules on file with the FERC, which govern the rates, terms and conditions for the provision of the FERC-jurisdictional wholesale power and transmission services. Unless otherwise exempt, any person that owns or operates facilities used for the wholesale sale or transmission of power in interstate commerce is a public utility subject to the FERC's jurisdiction. The FERC regulates, among other things, the disposition of certain utility property, the issuance of securities by public utilities, the rates, the terms and conditions for the transmission or wholesale sale of power in interstate commerce, interlocking officer and director positions, and the uniform system of accounts and reporting requirements for public utilities.

With respect to Networks' regulated electric utilities in Maine, New York and Connecticut, the FERC governs the return on equity, or ROE, on all transmission assets in Maine and Connecticut and certain New York TransCo assets in New York. The FERC also oversees the rates, terms and conditions of the transmission of electric energy in interstate commerce, interconnection service in interstate commerce (which applies to independent power generators, for example) and the rates, terms and conditions of wholesale sales of electric energy in interstate commerce. This includes cost-based rates, market-based rates and the operations of regional capacity and electric energy markets in New England administered by an independent entity, ISO New England, Inc., or ISO-NE, and in New York, administered by the New York Independent System Operator, Inc., or NYISO. The FERC approves CMP's, UI's and New York TransCo's regulated electric utilities transmission revenue requirements. Wholesale electric transmission revenues are recovered through formula rates that are approved by the FERC. CMP's, MEPCO's and UI's electric transmission revenues are recovered from New England customers through charges that recover costs of transmission and other transmission-related services provided by all regional transmission owners. NYSEG's and RG&E's electric transmission revenues are recovered from New York customers through charges that recover the costs of transmission and other transmission-related services provided by all transmission owners in New York. Several of our affiliates have been granted authority to engage in sales at market-based rates and blanket authority to issue securities and have also been granted certain waivers of the FERC reporting and accounting regulations available to non-traditional public utilities; however, we cannot be assured that such authorizations or waivers will not be revoked for these affiliates or will be granted in the future to other affiliates.

Pursuant to a series of orders involving the ROE for regionally planned New England electric transmission projects, the FERC established a base-level transmission ROE of 11.14%, as well as providing a 50-basis point ROE adder on Pool Transmission Facilities for participation in the regional transmission organization, or RTO, for New England and a 100-basis point ROE incentive for projects included in the ISO-NE Regional System Plan that were completed and on line as of December 31, 2008. Certain other transmission projects received authorization for incentives up to 125 basis points.

Since 2011, several parties have filed four separate complaints with the FERC against ISO-NE and several New England transmission owners, or NETOs, including UI, CMP and MEPCO, claiming that the current approved base ROE of 11.14% was not just and reasonable, seeking a reduction of the base ROE and a refund to customers for the 15-month refund periods beginning October 1, 2011 (Complaint I), December 27, 2012 (Complaint II), July 31, 2014 (Complaint III) and April 29, 2016 (Complaint IV).). For more information on this matter see Note 14 of our consolidated financial statements included in Part II, Item 8, "Financial Statements and Supplementary Data" of this Annual Report on Form 10-K, which information is incorporated herein by reference.

The FERC has the right to review books and records of "holding companies," as defined in the Public Utility Holding Company Act of 2005, or PUHCA 2005, that are determined by the FERC to be relevant to the companies' respective FERC-jurisdictional rates. We are a holding company, as defined in PUHCA 2005.

The FERC has civil penalty authority over violations of any provision of Part II of the FPA, as well as any rule or order issued thereunder. FERC is authorized to assess a maximum civil penalty of $1.3 million per violation for each day that the violation continues. The FPA also provides for the assessment of criminal fines and imprisonment for violations under Part II of the FPA. Pursuant to the Energy Policy Act of 2005, or EPAct 2005, the North American Electric Reliability Corporation, or NERC, has been certified by the FERC as the Electric Reliability Organization for North America responsible for developing and overseeing the enforcement of electric system reliability standards applicable throughout the United States. FERC-approved reliability standards may be enforced by the FERC independently, or, alternatively, by NERC and the regional reliability organizations with frontline responsibility for auditing, investigating and otherwise ensuring compliance with reliability standards, subject to the FERC oversight.

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The gas distribution operations of NYSEG, RG&E, SCG, CNG and BGC are subject to the FERC regulation under the Natural Gas Act of 1938, or NGA, with respect to their gas purchases/sales and contracted transportation/storage capacity. FERC has civil penalty authority under the NGA to impose penalties for certain violations of up to $1.3 million per day for violations. FERC also has the authority to order the disgorgement of profits from transactions deemed to violate the NGA and EPAct 2005.

Market Anti-Manipulation Regulation

The FERC and the Commodity Futures Trading Commission, or CFTC, monitor certain segments of the physical and futures energy commodities market pursuant to the FPA, the Commodity Exchange Act and the Dodd-Frank Wall Street Reform and Consumer Protection Act, or the Dodd-Frank Act, including our businesses' energy transactions and operations in the United States. With regard to the physical purchases and sales of electricity and natural gas, the gathering storage, transmission and delivery of these energy commodities and any related trading or hedging transactions that some of our operating subsidiaries undertake, our operating subsidiaries are required to observe these anti-market manipulation laws and related regulations enforced by the FERC and CFTC. The FERC and CFTC hold substantial enforcement authority, including the ability to assess civil penalties of up to $1.3 million per day per violation, to order disgorgement of profits and to recommend criminal penalties.

State Regulation

Networks' regulated utilities are subject to regulation by the applicable state public utility commissions, including with regard to their rates, terms and conditions of service, issuance of securities, purchase or sale of utility assets and other accounting and operational matters. NYSEG and RG&E are subject to regulation by the NYPSC; CMP and MNG are subject to regulation by the MPUC; UI, SCG and CNG are subject to regulation by the PURA; and BGC is subject to regulation by the DPU. The NYPSC, MPUC and the Connecticut Siting Council, or CSC, exercise jurisdiction over the siting of electric transmission lines in their respective states, and each of the NYPSC, MPUC, PURA and DPU exercise jurisdiction over the approval of certain mergers or other business combinations involving Networks' regulated utilities. In addition, each of the utility commissions has the authority to impose penalties on these regulated utilities, which could be substantial, for violating state utility laws and regulations and their orders. In June 2019, the New York State legislature passed a new law titled the Climate Leadership and Community Protection Act, or CLCPA, which could have significant impacts on the operations of electric and gas utilities in New York. A Climate Action Council has been formed consistent with the CLCPA, and that Council will be providing guidance to New York State in reaching aggressive renewable and emission reduction goals delineated in the CLCPA.

Networks' regulated distribution utilities deliver electricity and/or natural gas to all customers in their service territory at rates established under cost of service regulation. Under this regulatory structure, Networks' regulated distribution utilities file rate cases to recover the cost of providing distribution service to their customers based on its costs and earn a return on their capital investment in utility assets. For more information on our regulated utilities' most recent rate cases and other regulatory matters see Note 5 of our consolidated financial statements included in Part II, Item 8, "Financial Statements and Supplementary Data" of this Annual Report on Form 10-K, which information is incorporated herein by reference.

As a result of a restructuring of the utility industry in New York, Maine, Connecticut and Massachusetts, most of Networks' distribution utilities' customers have the opportunity to purchase their electricity or natural gas supplies from third-party energy supply vendors. Most customers in New York, however, continue to purchase such supplies through the distribution utilities under regulated energy rates and tariffs. In Maine, CMP customers can also purchase electric supply from competitive providers, but the majority receive baseline standard offer service that is provided through a MPUC procurement process. Networks' regulated utilities in New York, Connecticut and Massachusetts and MNG purchase electricity or natural gas from unaffiliated wholesale suppliers and recover the actual approved costs of these supplies on a pass-through basis, as well as certain costs associated with industry restructuring, through reconciling rate mechanisms that are periodically adjusted.

State public utility commissions may also have jurisdiction over certain aspects of Renewables' competitive generation businesses. For example, in New York, certain Renewables' generation subsidiaries are electric corporations subject to "lightened" regulation by the NYPSC. As such, the NYPSC exercises its jurisdictional authority over certain non-rate aspects of the facilities, including safety, retirements and the issuance of debt secured by recourse to those generation assets located in New York. In Texas, Renewables' operations within the Electric Reliability Council of Texas, or ERCOT, footprint are not subject to regulation by FERC, as they are deemed to operate solely within the ERCOT market and not in interstate commerce. These operations are subject to regulation by the Public Utility Commission of Texas, or PUCT. In California, Renewables' generation subsidiaries are subject to regulation by the California Public Utilities Commission with regard to certain non-rate aspects of the facilities, including health and safety, outage reporting and other aspects of the facilities' operations.

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RTOs and ISOs

Networks' regulated electric utilities in New York, Connecticut and Maine, as well as some of Renewables' generation fleet, operate in or have access to organized energy markets, known as RTOs or independent system operators, or ISOs, particularly NYISO and ISO-NE. Each organized market administers centralized bid-based energy, capacity and ancillary services markets pursuant to tariffs approved by the FERC, or in the case of ERCOT, market rules approved by the PUCT. These tariffs and rules dictate how the energy, capacity and ancillary service markets operate, how market participants bid, clear, are dispatched, make bilateral sales with one another, and how entities with market-based rates are compensated. Certain of these markets set prices, referred to as Locational Marginal Prices that reflect the value of energy, capacity or certain ancillary services, based upon geographic locations, transmission constraints and other factors. Each market is subject to market mitigation measures designed to limit the exercise of market power. Some markets limit the prices of the bidder based upon some level of cost justification. These market structures impact the bidding, operation, dispatch and sale of energy, capacity and ancillary services.

The RTOs and ISOs are also responsible for transmission planning and operations within their respective regions. Each of Networks' transmission-owning subsidiaries in New York, Connecticut and Maine has transferred operational control over certain of its electric transmission facilities to its respective ISOs, such as ISO-NE and NYISO.

Environmental, Health and Safety

Permitting and Other Regulatory Requirements

Networks. Similar to Renewables, Networks' distribution utilities in New York, Maine, Connecticut and Massachusetts are subject to numerous federal, state and local laws and regulations in connection with the environmental, health and safety effects of its operations. The distribution utilities of Networks are subject to regulation by the applicable state public utility commission with respect to the siting and approval of electric transmission lines, with the exception of UI, the siting of whose transmission lines is subject to the jurisdiction of the CSC, and with respect to pipeline safety regulations for intrastate gas pipeline operators.

The National Environmental Policy Act, or NEPA, requires that detailed statements of the environmental effect of Networks' facilities be prepared in connection with the issuance of various federal permits and licenses. Federal agencies are required by NEPA to make an independent environmental evaluation of the facilities as part of their actions during proceedings with respect to these permits and licenses.

Under the federal Toxic Substances Control Act, the Environmental Protection Agency, or EPA, has issued regulations that control the use and disposal of Polychlorinated Biphenyls, or PCBs. PCBs were widely used as insulating fluids in many electric utility transformers and capacitors manufactured before the federal Toxic Substances Control Act prohibited any further manufacture of such PCB equipment. Fluids with a concentration of PCBs higher than 500 parts per million and materials (such as electrical capacitors) that contain such fluids must be disposed of through burning in high temperature incinerators approved by the EPA. For our gas distribution companies, PCBs are sometimes found in the distribution system. Networks tests any distribution piping being removed or repaired for the presence of PCBs and complies with relevant disposal procedures, as needed.

Under the federal Resource Conservation and Recovery Act, or RCRA, the generation, transportation, treatment, storage and disposal of hazardous wastes are subject to regulations adopted by the EPA. All of Networks' subsidiaries have complied with the notification and application requirements of present regulations, and the procedures by which the subsidiaries handle, store, treat and dispose of hazardous waste products comply with these regulations.

Before the environmental best practices laws and regulations were implemented in the last quarter of the 20th century, utility companies, including Networks' subsidiaries, often disposed of residues from operations by depositing or burying them on-site or at off-site landfills or other facilities. Typical materials disposed of included coal gasification byproducts, fuel oils, ash and other materials that might contain PCBs or otherwise be hazardous. In recent years it was determined that such disposal practices, under certain circumstances, can cause groundwater contamination.

Renewables. Renewables' projects are subject to numerous federal, state and local environmental review and permitting requirements. Whether a project is sited onshore or offshore dictates the complexity of the permitting framework.

Many states where Renewables' projects are located have laws that require state agencies to evaluate the environmental impacts of a proposed project prior to granting state permits or approvals. Generally, state agencies evaluate similar issues as federal agencies, including the project's impact on wildlife, historic or cultural sites, aesthetics, wetlands and water resources, agricultural operations and scenic areas. States may impose different or additional monitoring or mitigation requirements than federal agencies. Additional approvals may be required for specific aspects of a project, such as stream or wetland crossings,

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impacts to designated significant wildlife habitats, storm water management and highway department authorizations for oversize loads and state road closings during construction. Permitting approvals related to transmission lines may be required in certain cases.

Renewables' projects also are subject to local environmental and regulatory requirements, including county and municipal land use, zoning, building and transportation requirements. Permitting at the local municipal or county level often consists of obtaining a special use or conditional use permit under a land use ordinance or code, or, in some cases, rezoning is required for a project. Obtaining a permit usually requires that Renewables demonstrate that the project will conform to certain development standards specified under the ordinance so that the project is compatible with existing land uses and protects natural and human environments. Local or state regulatory agencies may require modeling and measurement of permissible sound levels in connection with the permitting and approval of Renewables' projects. Local or state agencies also may require Renewables to develop decommissioning plans for dismantling the project at the end of its functional life and establish financial assurances for carrying out the decommissioning plan.

In addition to permits required under state and local laws, Renewables' projects may be subject to permitting and other regulatory requirements under federal law. For example, if an offshore wind project is sited in federal waters (beyond the 3 nautical mile state jurisdictional line), the project will require approval from the Department of Interior's Bureau of Ocean Energy Management, or BOEM as well as other federal cooperating agencies such as the National Oceanic and Atmospheric Administration's National Marine Fisheries Service, the U.S. Army Corps of Engineers, or Army Corps, the Federal Aviation Administration, the Department of Defense, the U.S. Environmental Protection Agency and the U.S. Coast Guard. If an onshore project is located near wetlands, a permit may be required from the Army Corps, with respect to the discharge of dredged or fill material into the waters of the United States. The Army Corps may also require the mitigation of any loss of wetland functions and values that accompanies the project's activities. Renewables may be required to obtain permits under the federal Clean Water Act for water discharges, such as storm water runoff associated with construction activities, and to follow a variety of best management practices to ensure that water quality is protected and impacts are minimized. Renewables' projects also may be located, or partially located, on lands administered by the U.S. Bureau of Land Management, or BLM. Therefore, Renewables may be required to obtain and maintain BLM right-of-way grants for access to, or operations on, such lands. To obtain and maintain a grant, there must be environmental reviews conducted, a plan of development implemented and a demonstration that there has been compliance with the plan to protect the environment, including measures to protect biological, archeological and cultural resources encountered on the grant.

Renewables' projects may be subject to requirements pursuant to the Endangered Species Act, or ESA, and analogous state laws. For example, federal agencies granting permits for Renewables' projects consider the impact on endangered and threatened species and their habitat under the ESA, which prohibits and imposes stringent penalties for harming endangered or threatened species and their habitats. Renewables' projects also need to consider the Migratory Bird Treaty Act, or MBTA, and the Bald and Golden Eagle Protection Act, or BGEPA, which protect migratory birds and bald and golden eagles and are administered by the U.S. Fish and Wildlife Service. Criminal liability can result from violations of the MBTA and the BGEPA. For example, the U.S. Department of Justice, or DOJ, has previously enforced substantial penalties and mitigation measures against two large wind farm operators, pursuant to which those operators pled guilty to criminal violations of the MBTA.

In addition to regulations, voluntary wind turbine siting guidelines for onshore wind projects established by the U.S. Fish and Wildlife Service, or USFWS, set forth siting, monitoring and coordination protocols that are designed to support wind development in the United States while also protecting both birds and bats and their habitats. These guidelines include provisions for specific monitoring and study conditions which need to be met in order for projects to be in adherence with these voluntary guidelines. Most states also have similar laws. Because the operation of wind turbines may result in injury or fatalities to birds and bats, federal and state agencies often recommend or require that Renewables conduct avian and bat risk assessments prior to issuing permits for its projects. They may also require ongoing monitoring or mitigation activities as a condition to approving a project.

Similarly, BOEM has established survey guidelines for renewable energy development, including avian surveys in coordination with the USFWS. BOEM will use the data from the offshore marine surveys to evaluate the impacts of construction, installation and operation of meteorological towers, buoys, export and inter-array cables, wind turbine generators and supporting structures on physical, biological, and socioeconomic resources, as well as the seafloor and sub-seafloor conditions. The information will be used by BOEM, other federal agencies and potentially affected states in the preparation of National Environmental Policy Act documents, for consultations and other regulatory requirements.

Global Climate Change and Greenhouse Gas Emission Issues

Global climate change and greenhouse gas emission issues continue to receive an increased focus from state governments and the federal government. In November 2010, the EPA published final rules for monitoring and reporting requirements for petroleum and natural gas systems that emit greenhouse gases under the authority of the Clean Air Act

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beginning in 2011. These regulations apply to facilities that emit greenhouse gases above the threshold level of 25,000 metric tons equivalent per year. SCG and CNG both exceed this threshold and are subject to reporting requirements. The liquefied natural gas, or LNG, facilities owned and/or contracted by SCG and CNG are also subject to the monitoring and reporting requirements under the regulations. Similarly, Networks is subject to reporting requirements under provisions of the greenhouse gases regulations, which regulate electric transmission and distribution equipment that emit sulfur hexafluoride.

We are continuously evaluating the regulatory risks and regulatory uncertainty presented by climate change and greenhouse gas emission. Such concerns could potentially lead to additional rules and regulations as well as requirements imposed through the ratemaking process that impact how we operate our business. We expect that any of Networks' costs for these rules, regulations and requirements would be recovered from customers.

OSHA and Certain Other Federal Safety Laws

We are subject to the requirements of the federal Occupational Safety and Health Act, as amended, or OSHA, and comparable state laws that regulate the protection of the health and safety of employees. In addition, OSHA's hazard communication standard and standards administered by other federal as well as state agencies, including the Emergency Planning and Community Right to Know Act and the related implementing regulations require that information be maintained about hazardous materials used or produced in operations of our subsidiaries and that this information be provided to employees, state and local government authorities and citizens.

Management, Disposal and Remediation of Hazardous Substances

We own or lease real property and may be subject to federal, state and local requirements regarding the storage, use, transportation and disposal of petroleum products and toxic or hazardous substances, including spill prevention, control and counter-measure requirements. Project properties and materials stored or disposed thereon may be subject to the federal RCRA, the Toxic Substances Control Act, the Comprehensive Environmental Response, Compensation and Liability Act and analogous state laws. If any of our owned or leased properties are contaminated, whether during or prior to our ownership or operation, we could be responsible for the costs of investigation and cleanup and for any related liabilities, including claims for damage to property, persons or natural resources. Such responsibility may arise even if we were not at fault and did not cause the contamination. In addition, waste generated by our operating subsidiaries is at times sent to third party disposal facilities. If such facilities become contaminated, the operating subsidiary and any other persons who arranged for the disposal or treatment of hazardous substances at those sites may be jointly and severally responsible for the costs of investigation and remediation, as well as for any claims of damages to third parties, their property or natural resources.

In August 2016, a partial consent order was issued by DEEP related to the investigation and remediation of the English Station site. The consent order requires UI to investigate and remediate certain environmental conditions within the perimeter of the English Station site. Under the consent order, to the extent that the cost of this investigation and remediation is less than $30 million, UI is required to remit to the State of Connecticut the difference between such cost and $30 million to be applied to a public purpose as determined in the discretion of the Governor of the State of Connecticut, the Attorney General of the State of Connecticut and the Commissioner of DEEP. However, UI is obligated to comply with the consent order even if the cost of such compliance exceeds $30 million. The state may discuss options with UI on recovering or funding any cost above $30 million, such as through public funding or recovery from third parties, however it is not bound to agree to or support any means of recovery or funding. UI has initiated its process to investigate and remediate the environmental conditions within the perimeter of the English Station site pursuant to the consent order.

See information on infrastructure protection and cyber security measures in "Properties" in Item 1 of this Annual Report on Form 10-K.

Customers

Networks delivers natural gas and electricity to residential, commercial and institutional customers through its regulated utilities in New York, Maine, Connecticut and Massachusetts. Networks' customer payment terms are regulated by the states of New York, with respect to NYSEG and RG&E; Maine, with respect to CMP and MNG; Connecticut, with respect to UI, SCG and CNG; and Massachusetts, with respect to BGC, and each of the regulated utilities must provide extended payment arrangements to customers for past due balances. See "—Networks" for more information relating to the customers of Networks.

Renewables sells the majority of its output to large investor-owned utilities, public utilities and other credit-worthy entities. Additionally, Renewables generates and provides power, among other services, to federal and state agencies, institutional retail and joint action agencies. Offtakers typically purchase renewable energy from Renewables through long-term PPAs, allowing Renewables to limit its exposure to market volatility. Approximately 67% of Renewables' wind

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generating capacity is fully committed under PPAs as of December 31, 2020, with an average duration of 9.0 years. Renewables also delivers thermal output to wholesale customers in the Western United States.

Competition

Networks' regulated utilities do not generally face competition from other companies that transmit and distribute electricity and natural gas. However, demand for electricity and natural gas may be negatively impacted by federal and state legislation mandating that certain percentages of power delivered to end users be produced from renewable resources, such as wind, thermal and solar energy.

Networks faces competition from self-contained micro-grids that integrate renewable energy sources in the areas served by Networks. However, there has been limited development of these micro-grids in Networks' service areas to date, and Networks expects that growth in distributed generation of renewable energy will continue due to financial incentives being provided by federal and state legislation.

Renewables has competitive advantages, including a robust development pipeline, a management team with extensive experience, strong relationships with suppliers and clients, expert regulatory knowledge and brand awareness. However, Renewables faces competition throughout the life cycles of its energy facilities, including during the development phase, in the identification and procurement of suitable sites with high wind resource availability, grid connection capacity and land availability. Renewables also competes with other suppliers in securing long-term PPAs with power purchasers and participates in competitive bilateral and organized energy markets with other energy sources for power that is not sold under PPAs. Competitive conditions may be substantially affected by various forms of energy legislation and regulation considered from time to time by federal, state and local legislatures and administrative agencies.

Properties

Networks

The following table sets forth certain information relating to Networks' electricity generation facilities and their respective locations, type and installed capacity as of December 31, 2020. Unless noted otherwise, Networks owns each of these facilities and all our generating properties are regulated under cost of service regulation.

Operating Company	Facility Location	Facility Type	Installed Capacity (in MW)	Year(s) Commissioned
NYSEG	Newcomb, NY	Diesel Turbine	4.3	1967, 2017
NYSEG	Blue Mountain, NY	Diesel Turbine	2.0	2019
NYSEG	Long Lake, NY	Diesel Turbine	2.0	2019
NYSEG	Eastern New York (6 locations)	Hydroelectric	61.4	1921—1986
RG&E	Rochester, NY (3 locations)	Hydroelectric	57.1	1917—1960

UI is also party to a 50-50 joint venture with certain affiliates of Clearway Energy, Inc. in GCE Holding LLC, whose wholly-owned subsidiary, GenConn, operates two 188 MW peaking generation plants, GenConn Devon and GenConn Middletown, in Connecticut.

The following table sets forth certain operating data relating to the electricity transmission and distribution activities of each of Networks' regulated utilities as of December 31, 2020:

Utility	State	Substations	Transmission Lines (in miles)	Overhead Distribution Lines (in pole miles)	Underground Lines (in miles)	Total Distribution (in miles)
NYSEG	New York	430	4,549	32,228	2,960	35,188
RG&E	New York	156	1,094	5,944	2,960	8,904
CMP	Maine	205	2,952	21,834	1,585	23,419
UI	Connecticut	28	138	2,887	753	3,640
Total		**819**	**8,733**	**62,893**	**8,258**	**71,151**

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The following table sets forth certain operating data relating to the natural gas transmission and distribution activities of each of Networks' regulated utilities, as of December 31, 2020:

Utility	State	Transmission Pipeline (in miles)	Distribution Pipeline (in miles)
NYSEG	New York	20	8,382
RG&E	New York	105	8,999
MNG	Maine	2	225
SCG	Connecticut	—	2,492
CNG	Connecticut	—	2,204
BGC	Massachusetts	—	766
Total		**127**	**23,068**

CNG owns and operates an LNG plant which can store up to 1.2 Bcf of natural gas and can vaporize up to 100,000 Dth per day of LNG to meet peak demand. SCG has contract rights to and operates a similar plant, which is owned by an affiliate that can also store up to 1.2 Bcf of natural gas. SCG's LNG facilities can vaporize up to 82,000 Dth per day of LNG to meet peak demand. SCG and CNG have also contracted for 20.6 Bcf of storage with a maximum peak day delivery capability of 216,000 Dth per day.

Renewables

The following table sets forth Renewables' portfolio of wind projects as of December 31, 2020. Unless noted otherwise, Renewables wholly owns each of these facilities.

Location	Wind Project	Turbines	Total Installed Capacity (MW)	Commercial Operation Date	North American Electric Reliability Corporation (NERC) Region
Arizona	Dry Lake I	30 (Suzlon S88, 2.1 MW)	63	2009	WECC
	Poseidon Wind (1)	15.5 (Suzlon, 2.1 MW)	33	2010	WECC
California	Dillon	45 (Mitsubishi, 1 MW)	45	2008	WECC
	Manzana	126 (GE, 1.5 MW)	188	2011	WECC
	Mountain View III	34 (Vestas V47, 0.66 MW)	22	2020	WECC
	Phoenix Wind Power	3 (Vestas, 0.66 MW)	2	1999	WECC
	Shiloh	100 (GE, 1.5 MW)	150	2006	WECC
	Tule	57 (GE, 2.3 MW)	130	2017	WECC
Colorado	Colorado Green	100 (GE, 1.5 SLE RP1.62 MW)	162	2003	WECC
	Twin Buttes	50 (GE, 1.5 MW)	75	2007	WECC
	Twin Buttes II	30 (Gamesa G114, 2.10 MW); 6 (Gamesa G114, 2.0 MW)	75	2017	WECC
Illinois	Providence Heights	36 (Gamesa G87, 2.0 MW)	72	2008	MRO
	Streator Cayuga Ridge South	150 (Gamesa, 2.0MW)	300	2010	MRO
	Otter Creek	17 (Vestas, 3.8 MW); 4 (Vestas, 3.5 MW)	158	2020	MRO
Iowa	Barton	80 (Gamesa, 2.0 MW)	160	2009	MRO
	Flying Cloud	29 (GE, 1.5 MW)	44	2004	MRO
	New Harvest	50 (Gamesa G87, 2.0W)	100	2012	MRO
	Top of Iowa II	40 (Gamesa G87, 2.0 MW)	80	2008	MRO
	Winnebago I	10 (Gamesa G87, 2.0 MW)	20	2008	MRO
Kansas	Elk River	100 (GE, 1.5 MW)	150	2005	MRO
Massachusetts	Hoosac	19 (GE, 1.5 MW)	29	2012	NPCC
Minnesota	Elm Creek	66 (GE, 1.5 MW)	99	2008	MRO
	Elm Creek II	62 (Mitsubishi, 2.4)	149	2010	MRO
	MinnDakota	100 (GE, 1.5 MW)	150	2008	MRO
	Moraine I	34 (GE, 1.5 MW)	51	2003	MRO
	Moraine II	33 (GE, 1.5 MW)	50	2009	MRO
	Trimont	67 (GE, 1.5 SLE RP1.62 MW)	107	2020	MRO
Missouri	Farmers City	72 (Gamesa G87, 2.0 MW)	144	2009	MRO

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Location	Wind Project	Turbines	Total Installed Capacity (MW)	Commercial Operation Date	North American Electric Reliability Corporation (NERC) Region
New Hampshire	Groton	24 (Gamesa G87, 2.0 MW)	48	2012	NPCC
	Lempster	12 (Gamesa G87, 2 MW)	24	2008	NPCC
New Mexico	El Cabo	140 (Gamesa G114, 2.1 MW); 2 (Gamesa G114, 2.0 MW)	298	2017	WECC
	La Joya	76 (GE 2.85, 2.85 MW); 34 (Gamesa G114, 2.6 MW)	304	2021	WECC
New York	Hardscrabble	37 (Gamesa G90, 2.0 MW)	74	2011	NPCC
	Maple Ridge I(2)	70 (Vestas V82, 1.65 MW)	116	2006	NPCC
	Maple Ridge II(2)	27 (Vestas V82, 1.65 MW)	45	2006	NPCC
	Roaring Brook	5 (Gamesa G114, 2.625); 8 (Gamesa G145, 4.5); 3 (Gamesa G145, 4.2)	62	2021	NPCC
North Carolina	Desert Wind	104 (Gamesa G114, 2.0 MW)	208	2016	SERC
North Dakota	Rugby	71 (Suzlon S88, 2.1 MW)	149	2009	MRO
Ohio	Blue Creek	152 (Gamesa G90 – 2.0 MW)	304	2012	RFC
Oregon	Hay Canyon	48 (Suzlon S88, 2.1 MW)	101	2009	WECC
	Klondike I	16 (GE, 1.5 S – 1.5 MW)	24	2001	WECC
	Klondike II	50 (GE, 1.5 SLE RP1.62 MW)	81	2020	WECC
	Klondike III	44 (Siemens, 2.3 MW); 80 (GE, 1.5 SLE, 1.5 MW); 1 (Mitsubishi, 2.4 MW)	224	2007	WECC
	Klondike IIIa	51 (GE, 1.5 MW)	77	2008	WECC
	Leaning Juniper II	74 (GE, 1.5 MW); 42 (Suzlon, 2.1 MW)	199	2011	WECC
	Montague	51 (Vestas, 3.6 MW); 5 (Suzlon, 3.45 MW)	201	2019	WECC
	Pebble Springs	47 (Suzlon, 2.1 MW)	99	2009	WECC
	Star Point	47 (Suzlon, 2.1 MW)	99	2010	WECC
Pennsylvania	Casselman	23 (GE, 1.5 MW)	35	2008	RFC
	Locust Ridge I	13 (Gamesa G87, 2.0)	26	2006	RFC
	Locust Ridge II	50 (Gamesa G87, 2.0 MW)	100	2009	RFC
	South Chestnut	22 (Gamesa, 2.0 MW)	44	2012	RFC
South Dakota	Buffalo Ridge I	24 (Suzlon, 2.1 MW)	50	2009	MRO
	Buffalo Ridge II	105 (Gamesa G87, 2.0 MW)	210	2010	MRO
	Coyote Ridge (3)	35 (GE, 2.52 MW); 4 (GE, 2.3 MW)	20	2019	MRO
	Tatanka Ridge (3)	1 (GE, 2.3 MW); 4 (GE, 2.3 MW)	23	2021	MRO
Texas	Baffin	101 (Gamesa G97, 2.0 MW)	202	2015	TRE
	Barton Chapel	60 (Gamesa, 2.0 MW)	120	2009	TRE
	Karankawa	93 (GE, 2.52 MW); 22 (GE, 2.3 MW); 9 (GE, 2.5 MW)	307	2019	TRE
	Patriot	58 (Vestas, 3.6 MW); 5 (Vestas, 3.45 MW)	226	2019	TRE
	Peñascal I	84 (Mitsubishi, 2.4 MW)	202	2009	TRE
	Peñascal II	83 (Mitsubishi, 2.4 MW)	199	2010	TRE
Vermont	Deerfield	7 (Gamesa G87, 2.0 MW); 8 (Gamesa G97, 2.0 MW)	30	2017	NPCC
Washington	Big Horn I	133 (GE, 1.5 MW)	200	2006	WECC
	Big Horn II	25 (Gamesa, 2.0 MW)	50	2010	WECC
	Juniper Canyon	62 (Mitsubishi, 2.4 MW)	149	2011	WECC

(1) Jointly owned with Axium; capacity amounts represent only Renewables' share of the wind farm.
(2) Jointly owned with Horizon Wind Energy; capacity amounts represent only Renewables' share of the wind farm.
(3) Jointly owned with WEC Infrastructure; capacity amounts represent only Renewables' share of the wind farm.

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Additionally, set forth below are the solar and thermal facilities operated by Renewables as of December 31, 2020. Unless otherwise noted, Renewables owns each facility.

Facility	Location	Type of Facility	Installed Capacity (MW) (3)	Commercial Operation Date
Poseidon Solar (1)	Pinal County, Arizona	Solar	12	2011
San Luis Valley Solar Ranch (2)	Alamosa County, Colorado	Solar	35	2012
Gala Solar	Deschutes County, Oregon	Solar	70	2017
Wy'East Solar	Sherman County, Oregon	Solar	13	2018
Klamath Cogeneration	Klamath Falls, Oregon	Thermal	536	2001
Klamath Peakers	Klamath Falls, Oregon	Thermal	100	2009

(1) Jointly owned with Axium; capacity amounts represent only Renewables' share of the solar project.

(2) Operated pursuant to a sale-and-leaseback agreement.

(3) Previously reported in MWac. Reported in MWdc starting in 2020.

Infrastructure Protection and Cyber Security Measures

We have risk-based security measures in place designed to protect our facilities, assets and cyber-infrastructure, such as our transmission and distribution system.

While we have not had any significant security breaches, a physical security intrusion could potentially lead to theft and the release of critical operating information. In addition to physical security intrusions, a cyber breach could potentially lead to theft and the release of critical operating information or confidential customer information.

To manage these operational risks, pursuant to the cybersecurity risk policy and corporate security policy approved by the AVANGRID board, we have implemented cyber and physical security measures and continue to strengthen our security posture by improving and expanding our physical and cyber security capabilities to protect critical assets.

In an effort to reduce our vulnerability to cyber-attacks, the AVANGRID board appointed a senior officer responsible for security (chief security officer) and we have established a dedicated corporate security office, responsible for improving and coordinating security across the company, who regularly reports to the Audit and Compliance Committee of the AVANGRID board on security matters. We have adopted a comprehensive company-wide physical and cyber security program, which is supported by a governance program to manage, oversee and assist us in meeting our corporate, legal and regulatory responsibilities with regard to the protection of our cyber, physical and information assets.

However, as threats evolve and grow increasingly more sophisticated, we cannot ensure that a potential security breach may not occur or quantify the potential impact of such an event. We continue to invest in technology, processes, security measures and services to predict, detect, mitigate and protect our assets, both physical and cyber. These investments include upgrades to our cyber-infrastructure assets, network architecture and physical security measures, and compliance with emerging industry best practice and regulation. See the risk factor "Security breaches, acts of war or terrorism, grid disturbances or unauthorized access could negatively impact our business, financial condition and reputation" under Item 1A - Risk Factors.

Human Capital Resources

Our industry – like our world – is ever-changing, from the pace of innovation to the priorities of our workforce and stakeholders. Our vision is to be a destination where talented and committed people want to build long-term careers. We support a culture that emphasizes continuous improvement and innovative ideas that challenge the status quo and drive performance. We believe innovation thrives within a healthy and sustainable employee community full of diverse perspectives, which results in better ideas, better products and better service.

To meet the challenges of the future, we are dependent on each of us being safe, empowered, and enabled to bring our unique perspectives and personal best to the workplace every day.

As a purpose-driven organization, we believe sustainable growth requires a diverse and inclusive workplace built on individual accountability and commitment to serving others. We are continuing to invest in initiatives that unleash individual potential, value and reward performance, champion well-being, and foster meaningful connections between each another and the communities we serve.

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Demographics

As of December 31, 2020, we employed 7,031 full-time employees, with approximately 49% of our employees represented by a collective bargaining agreement. Virtually all of our employees are full-time. During fiscal year 2020, we hired and onboarded 907 employees. Our voluntary turnover rate was 3.6% in the fiscal year ended December 31, 2020.

Diversity, Equity and Inclusion

Diversity, Equity and Inclusion, or DE&I, is a business imperative for us, as we believe that it is key to our future success. We strive to build and sustain a diverse workforce with a rich mix of differences, inclusive workplaces where each of us feel valued and connected, with equitable opportunities to grow and develop - no matter where we work. We have focused our DE&I initiatives on increasing diverse representation especially in positions of authority, removing barriers, promoting equitable opportunities to grow and develop and building community by establishing tangible pathways for connection with others inside and outside AVANGRID.

During 2020, AVANGRID became a member of the Paradigm for Parity coalition, which is comprised of business leaders, board members and academics committed to addressing the corporate leadership gender gap, and the CEO Action for Diversity & Inclusion, a CEO-driven business commitment to advance diversity and inclusion in workplace. These public initiatives bring business leaders together to commit to specific goals within the workplace – from gender parity to a willingness to have challenging conversations at work. We also established a DE&I Council made up of executive and Business Resource Group leaders to provide steerage and support of our DE&I strategy. We also expanded our Business Resource Groups, adding Pride@ AVANGRID, the AVANGRID African American Council for Excellence (AAACE) and the Hispanic Organization for Leadership and Awareness (¡Hola!). Our Management Committee and their direct reports also engaged in workshops about race and racism facilitated by external training resources. As of December 31, 2020, the approximate demographic breakdowns of our workforce are as follows:

	% of Total	
Ethnicity	**All Employees**	**Senior Leadership**
American Indian or Alaska Native	0.3 %	0.3 %
Asian	2.4 %	2.3 %
Black or African American	6.0 %	2.3 %
Hispanic or Latino	6.3 %	7.0 %
Hawaiian Native or other Pacific Islander	0.0 %	0.0 %
Two or more races	1.1 %	2.0 %
White	76.5 %	70.5 %
Not reported	7.4 %	15.6 %

	Women	**Men**
All Employees	28.0 %	72.0 %
Senior Leadership	29.1 %	70.9 %

Health and Safety

Safety is a core value of AVANGRID. Providing a safe and healthy workplace is our commitment to our employees, communities, customers and investors. Daily emphasis on the importance of a safe workplace – and everyone's role in supporting it – builds employee confidence, motivation and productivity. A safe workplace encourages an environment where creativity and innovation can flourish.

AVANGRID continuously works to embed a safety culture initiative across the company. In addition to the ongoing safety training and awareness programs, we use Safety Excellence Awards and the Spot Recognition Program to recognize exemplary and proactive safety behavior. These programs build critical skills for managers and supervisors to instill and boost engagement with a learning and improving culture for all employees.

A true culture of health and safety is dependent on not only a strong safety program, but also a program that focuses on employee well-being. Healthier employees are at lower risk of injury from industrial exposure and perform work more safely with lower rates of absenteeism. AVANGRID's Health and Well-being program focuses on the physical, emotional, social and financial health of our employees. We provide a wellness portal that all employees and family members can access on their phones to manage their health and wellbeing and participate in activity challenges and other wellbeing activities. We also

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provided onsite prevention and risk reduction programs, such as biometric screenings and flu shots. Our employees' financial health is equally important so we have developed programs for financial education and advisory services.

During the early stages of the COVID-19 pandemic, AVANGRID formed a cross-functional COVID-19 Crisis Management Team that has been leading and coordinating AVANGRID's overall response. This team leads efforts to develop and monitor mitigation and business continuity plans; track all relevant state and local government guidelines, directives and regulations; develop and adopt work-from-home plans where possible; implement safe working protocols; assess appropriate return-to-office protocols; and provide timely and transparent communications to key stakeholders. In response to the COVID-19 pandemic, AVANGRID provided benefits to its employees to cover the cost of COVID-19 testing, promoted its telehealth benefits, expanded its employee assistance and well-being plans and provided supplemental paid leave for quarantined employees.

Engaging our talent

In 2020, AVANGRID continued its dialogue with employees on their ideas about areas of organizational strength and opportunities to improve our culture and work environment. To understand the employee feedback in response to "The Loop" survey, our annual employee engagement survey, AVANGRID identified engagement leads who were responsible for promoting survey awareness and participation, as well as assisting broader groups of managers and business leaders in the analysis of survey data and in planning specific actions to address the opportunity areas with employees. Action plans were created at both the department and organization levels, and commitments were shared broadly so that employees would know how their feedback was being acted upon and understood. While this is an ongoing effort and there is more to be done, employee engagement increased 9% over the previous year.

Growing our talent

We invest in developing the talent needed to remain at the forefront of innovation and make AVANGRID a destination where talented and committed people want to build long-term careers. We encourage the personal and professional development of our employees through leadership preparation and high potential programs, technical and on-the-job training and learning and education opportunities.

Our employees provide the energy and innovation that drive AVANGRID. That is why it is a priority to attract and develop a highly engaged workforce with quality training and development resources. During 2020, we developed leadership succession and talent management plans to help grow and develop our internal talent to meet future needs, while continuing to develop first-class early career programs to help secure the right people in the right roles with the right skills for a sustainability business. We also deployed modern training and development solutions that leverage new technologies to help fuel our employees' desire to grow and meet the needs of our customers, while enacting leadership and professional development solutions to help enhance skills and capability now and in the future.

Compensation and benefits

AVANGRID's compensation programs are designed to align the compensation of our employees with AVANGRID's performance and are designed to attract, retain and motivate employees to achieve superior results. The structure of our compensation programs balances competitive fixed compensation and variable pay to reward performance by:

- Providing base pay that is consistent with employee positions, skill levels, experience, knowledge and geographic location.
- Evaluating the effectiveness and competitiveness of our executive compensation and benefit programs and benchmarking ourselves against our peers within our industry.
- All employees being eligible for health insurance, paid and unpaid leave, retirement savings plans and life and disability plans.
- Offering a comprehensive set of benefits that allow employees to choose programs that meet their individual needs, including flexible time-off, telemedicine, adoption assistance, back-up child/elder care, and physical, mental and financial wellness programs.

For information on the risks related to our human capital resources, see Item 1A - Risk Factors.

Available Information

Copies of our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and any amendments to these reports filed with the SEC may be requested, viewed or downloaded on-line, free of charge, on our website www.avangrid.com. Printed copies of these reports may be obtained free of charge by writing to our Investor Relations Department at 180 Marsh Hill Road, Orange, Connecticut, 06477.

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Information about AVANGRID's environmental, social and governance performance and sustainability reporting is also available on our website www.avangrid.com. under the heading "Sustainability." Information contained on our website is not incorporated herein.

The Company may use its website and/or social media outlets, such as Facebook and Twitter, as distribution channels of material company information. Financial and other important information regarding the Company is routinely posted on and accessible through the Company's website at www.avangrid.com, its Facebook page at https://www.facebook.com/Avangrid/ and its Twitter account @AVANGRID. In addition, you may automatically receive email alerts and other information about the Company when you enroll your email address by visiting the Investor Relations section of www.avangrid.com.

Item 1A. Risk Factors

PNMR Merger Risk Factors

There is no assurance when or if the proposed PNMR Merger will be completed.

Completion of the proposed Merger is subject to the satisfaction or waiver of a number of conditions as set forth in the Merger Agreement, including certain regulatory approvals and other customary closing conditions. There can be no assurance that the conditions to completion of the proposed Merger will be satisfied or waived or that other events will not intervene to delay or result in the failure to close the proposed Merger. In addition, each of AVANGRID and PNMR may unilaterally terminate the Merger Agreement under certain circumstances set forth in the Merger Agreement, and AVANGRID and PNMR may agree at any time to terminate the Merger Agreement, even though PNMR's shareholders have already approved the proposed Merger and the other transactions contemplated by the Merger Agreement. The Merger Agreement provides for certain customary termination rights. If we were to terminate the Merger Agreement under certain circumstances, we could incur significant costs (including, without limitation, the payment of the termination fee and out-of-pocket fees and expenses).

AVANGRID and PNMR may be unable to obtain the regulatory approvals required to complete the proposed Merger.

In addition to other conditions set forth in the Merger Agreement, completion of the proposed Merger is conditioned upon the receipt of various state and U.S. federal regulatory approvals including, but not limited to, approval by the Public Utility Commission of Texas, or PUCT, the New Mexico Public Regulation Commission, or NMPRC, the FERC, the Federal Communications Commission, or FCC, the Committee on Foreign Investment in the United States, or CFIUS, the Nuclear Regulatory Commission, or NRC, and under the Hart-Scott-Rodino Antitrust Improvements Act of 1976. AVANGRID and PNMR have made or will make various filings and submissions and are pursuing all required consents, orders and approvals in accordance with the Merger Agreement. These consents, orders and approvals may impose conditions on or require divestitures relating to the divisions, operations or assets of AVANGRID and PNMR or may impose requirements, limitations or costs or place restrictions on the conduct of the combined company's business, and if such consents, orders and approvals require an extended period of time to be obtained, such extended period of time could increase the chance that an event occurs that constitutes a material adverse effect with respect to PNMR and thereby may allow AVANGRID an opportunity not to consummate the proposed Merger. Such extended period of time also may increase the chance that other adverse effects with respect to AVANGRID or PNMR could occur, such as the loss of key personnel.

The Merger Agreement requires AVANGRID and PNMR, among other things, to accept conditions, divestitures, requirements, limitations, costs or restrictions that may be imposed by regulatory entities, subject to the burdensome effect provisions in the Merger Agreement. Such conditions, divestitures, requirements, limitations, costs or restrictions may jeopardize or delay consummation of the proposed Merger, reduce the benefits that may be achieved from the proposed Merger or result in the abandonment of the proposed Merger. Further, no assurance can be given that the required consents, orders and approvals will be obtained or that the required conditions to closing the proposed Merger will be satisfied, and, even if all such consents, orders and approvals are obtained and such conditions are satisfied, no assurance can be given as to the terms, conditions and timing of such consents, orders and approvals.

The announcement and pendency of the proposed Merger could have an adverse effect on AVANGRID's businesses, results of operations, financial condition, cash flows or the market value of AVANGRID's common stock and debt securities.

The announcement and pendency of the proposed Merger could disrupt AVANGRID's businesses, and uncertainty about the effect of the proposed Merger may have an adverse effect on AVANGRID or the combined company following the proposed Merger. AVANGRID's employees may experience uncertainty regarding their roles after the proposed Merger, for example, employees may depart either before or after the completion of the proposed Merger because of such uncertainty and issues relating to the difficulty of coordination or a desire not to remain following the proposed Merger; and the pendency of the proposed Merger may adversely affect AVANGRID's ability to retain, recruit and motivate key personnel. Additionally, the attention of AVANGRID's management may be directed towards the completion of the proposed Merger including obtaining regulatory approvals and other transaction-related considerations and may be diverted from the day-to-day business operations

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of AVANGRID and matters related to the proposed Merger may require commitments of time and resources that could otherwise have been devoted to other opportunities that might have been beneficial to AVANGRID. Additionally, the Merger Agreement requires AVANGRID to obtain PNMR's consent prior to taking certain specified actions while the proposed Merger is pending. These restrictions may prevent AVANGRID and PNMR from pursuing otherwise attractive business opportunities and executing certain of its business strategies prior to the consummation of the proposed Merger. Further, the proposed Merger may give rise to potential liabilities, including as a result of pending and future shareholder lawsuits relating to the proposed Merger. Any of these matters could adversely affect the businesses of, or harm the results of operations, financial condition or cash flows of AVANGRID and the market value of AVANGRID common stock and debt securities.

AVANGRID will incur substantial transaction fees and costs in connection with the proposed PNMR Merger.

AVANGRID has incurred, and expects to incur additional, material non-recurring expenses in connection with the proposed Merger and consummation of the transactions contemplated by the Merger Agreement. Additional unanticipated costs may be incurred in the course of coordinating the businesses of AVANGRID and PNMR after consummation of the proposed Merger. Even if the proposed Merger is not consummated, AVANGRID may need to pay certain pre-tax costs relating to the proposed Merger incurred prior to the date the proposed Merger was abandoned, such as legal, accounting, financial advisory and filing fees. Additionally, if the proposed Merger is not consummated within the expected timeframe, such delay may materially adversely affect the benefits that AVANGRID may achieve as a result of the proposed Merger and could result in additional pre-tax transaction costs, loss of revenue or other effects associated with uncertainty about the proposed Merger. Satisfying the conditions to, and consummation of, the proposed Merger may take longer than, and could cost more than, AVANGRID expects.

AVANGRID may be unable to integrate PNMR successfully, and AVANGRID may not experience the growth being sought from the proposed Merger.

AVANGRID and PNMR have operated and, until the consummation of the proposed Merger will continue to operate, independently. Coordinating certain aspects of the operations and personnel of PNMR with AVANGRID after the consummation of the proposed Merger will involve complex operational, technological and personnel-related challenges, which may be made more difficult in light of the COVID-19 pandemic. This process will be time-consuming and expensive, may disrupt the businesses of either or both of the companies and may reduce the growth opportunities sought from the Merger. The potential difficulties, and resulting costs and delays, include examples such as:

- managing a larger combined company;
- coordinating corporate and administrative infrastructures;
- unanticipated issues in coordinating information technology, communications, administration and other systems;
- difficulty addressing possible differences in corporate cultures and management philosophies;
- unforeseen and unexpected liabilities related to the proposed Merger or PNMR's business; and
- a deterioration of credit ratings.

While AVANGRID can refuse to consummate the proposed Merger if there is a material adverse effect (as defined in the Merger Agreement) affecting PNMR prior to the consummation of the proposed Merger, certain types of changes do not permit AVANGRID to refuse to consummate the proposed Merger, even if such changes would have a material adverse effect on PNMR. If adverse changes occur but AVANGRID must still consummate the proposed Merger, the market price of AVANGRID common stock may suffer. There can be no assurance that, if the proposed Merger is not consummated, these risks will not materialize and will not materially adversely affect the business and financial results of AVANGRID.

AVANGRID may be materially adversely affected by negative publicity related to the proposed PNMR Merger and in connection with other matters.

From time to time, political and public sentiment in connection with the proposed Merger and in connection with other matters may result in a significant amount of adverse press coverage and other adverse public statements affecting AVANGRID. Adverse press coverage and other adverse statements, whether or not driven by political or public sentiment, may also result in investigations by regulators, legislators and law enforcement officials or in legal claims. Responding to these investigations and lawsuits, regardless of the ultimate outcome of the proceeding, can divert the time and effort of senior management from the management of AVANGRID's businesses. Addressing any adverse publicity, governmental scrutiny or enforcement or other legal proceedings is time consuming and expensive and, regardless of the factual basis for the assertions being made, can have a negative impact on the reputation of AVANGRID, on the morale and performance of its employees and on its relationship with regulators. It may also have a negative impact on AVANGRID's ability to take timely advantage of various business and market opportunities. The direct and indirect effects of negative publicity, and the demands of responding to and addressing it, may have a material adverse effect on AVANGRID's business, financial condition, results of operations and cash flows and the market value of AVANGRID common stock and debt securities.

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Failure by PNMR to successfully execute its business strategy and objectives may materially adversely affect the future results of the combined company and, consequently, the market value of AVANGRID's common stock and debt securities.

The success of the Merger will depend, in part, on the ability of PNMR to successfully execute its business strategy, including delivering electricity in a safe and reliable manner, minimizing service interruptions and investing in its transmission and distribution infrastructure to maintain its system, serve its growing customer base with a modernized grid and support energy production. These objectives are capital intensive. If PNMR is not able to achieve these objectives, is not able to achieve these objectives on a timely basis, or otherwise fails to perform in accordance with AVANGRID's expectations, the anticipated benefits of the Merger may not be realized fully or at all, and the Merger may materially adversely affect the results of operations, financial condition and prospects of the combined company and, consequently, the market value of AVANGRID common stock and debt securities.

The market value of AVANGRID common stock could decline if its existing shareholders sell large amounts of its common stock in anticipation of or following the PNMR Merger, and the market prices of AVANGRID common stock and debt securities may be affected by factors following the Merger that are different from those affecting the market prices for AVANGRID's common stock and debt securities prior to the Merger.

Current shareholders of AVANGRID may not wish to continue to invest in the combined company, or may wish to reduce their investment in the combined company, for a number of reasons, which may include loss of confidence in the ability of the combined company to execute its business strategies, to comply with institutional investing guidelines or to increase diversification. If, before or following the Merger, large amounts of AVANGRID common stock are sold, the market price of its common stock could decline. If the Merger is consummated, the risks associated with the combined company may affect the results of operations of the combined company and the market prices of AVANGRID common stock and debt securities following the Merger differently than they affected such results of operations and market prices prior to the Merger. Additionally, the results of operations of the combined company may be affected by additional or different risks than those that currently affect the results of operations of AVANGRID. Any of the foregoing matters could materially adversely affect the market prices of AVANGRID common stock and debt securities following the Merger.

The PNMR Merger may not positively affect AVANGRID's results of operations and/or may cause a decrease in its earnings per share, which may negatively affect the market price of AVANGRID common stock and debt securities.

AVANGRID anticipates that the Merger, if consummated on the terms, will have a positive impact on its consolidated results of operations. This expectation is based on current market conditions and is subject to a number of assumptions, estimates, projections and other uncertainties, including assumptions regarding the results of operations of the combined company after the Merger, and the financing necessary to fund the Merger Consideration. This expectation also assumes that PNMR will perform in accordance with AVANGRID's expectations, and there can be no assurance that this will occur. In addition, AVANGRID may encounter additional transaction costs and costs to manage its investment in PNMR, may fail to realize some or any of the benefits anticipated in the Merger, may be subject to currently unknown liabilities as a result of the Merger, or may be subject to other factors that affect preliminary estimates. As a result, there can be no assurance that the Merger will positively impact AVANGRID's results of operations, and it is possible that the Merger may have an adverse effect, which could be material, on AVANGRID's results of operations, financial condition and prospects and/or may cause its earnings per share to decrease, any of which may materially adversely affect the market price of AVANGRID common stock and debt securities.

AVANGRID may incur additional indebtedness in connection with the PNMR Merger. As a result, it may be more difficult for AVANGRID to pay or refinance its debts or take other actions, and AVANGRID may need to divert cash to fund debt service payments.

AVANGRID may incur significant additional indebtedness to finance the Merger Consideration and related transaction costs. AVANGRID expects to fund all or a portion of the Merger Consideration through sales of its common stock and, possibly, other equity securities, and to the extent it is unable to do so the amount of indebtedness it may incur to finance the Merger and associated transaction costs will likely increase, perhaps substantially. If AVANGRID is required to obtain more debt financing than anticipated to finance the Merger Consideration and associated transaction costs, whether through the issuance of debt securities or borrowings under the committed financing or otherwise, the required regulatory approvals to complete the Merger may be more difficult to obtain and the combined company's credit ratings and ability to service its debt could be materially adversely affected. The increase in AVANGRID's debt service obligations resulting from this additional indebtedness could have a material adverse effect on the results of operations, financial condition and prospects of AVANGRID.

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AVANGRID's increased indebtedness could:

- make it more difficult and/or costly for AVANGRID to pay or refinance its debts as they become due, particularly during adverse economic and industry conditions, because a decrease in revenues or increase in costs could cause cash flow from operations to be insufficient to make scheduled debt service payments;
- limit AVANGRID's flexibility to pursue other strategic opportunities or react to changes in its business and the industry sectors in which it operates and, consequently, put AVANGRID at a competitive disadvantage to its competitors that have less debt;
- require a substantial portion of AVANGRID's available cash to be used for debt service payments, thereby reducing the availability of its cash to fund working capital, capital expenditures, development projects, acquisitions, dividend payments and other general corporate purposes, which could harm AVANGRID's prospects for growth and the market price of its common stock and debt securities, among other things;
- result in a downgrade in the credit ratings on AVANGRID's indebtedness, which could limit AVANGRID's ability to borrow additional funds, increase the interest rates under its credit facilities and under any new indebtedness it may incur, and reduce the trading prices of its outstanding debt securities and common stock;
- make it more difficult for AVANGRID to raise capital to fund working capital, make capital expenditures, pay dividends, pursue strategic initiatives or for other purposes;
- result in higher interest expense in the event of increases in interest rates on AVANGRID's current or future borrowings subject to variable rates of interest; and
- require that additional materially adverse terms, conditions or covenants be placed on AVANGRID under its debt instruments.

Based on the current and expected results of operations and financial condition of AVANGRID and its subsidiaries, AVANGRID believes that its cash flow from operations, together with the proceeds from borrowings, issuances of debt securities in the capital markets, distributions from its equity method investments, project financing and equity sales (including tax equity and partnering in joint ventures) will generate sufficient cash on a consolidated basis to make all of the principal and interest payments when such payments are due under AVANGRID's and its current subsidiaries' existing credit facilities, indentures and other instruments governing its outstanding indebtedness and under the indebtedness incurred to fund the Merger Consideration. However, AVANGRID's expectation is subject to numerous estimates, assumptions and uncertainties, and there can be no assurance that AVANGRID will be able to repay or refinance such borrowings and obligations when due. PNMR and its subsidiaries will not guarantee any indebtedness of AVANGRID, nor will any of them have any obligation to provide funds, whether in the form of dividends, loans or otherwise, to enable AVANGRID and its other subsidiaries to make required debt service payments. As a result, the Merger may substantially increase AVANGRID's debt service obligations without any assurance that AVANGRID will receive any cash from PNMR or any of its subsidiaries to assist AVANGRID in servicing its indebtedness or other cash needs.

The Merger will increase our goodwill and other intangible assets.

Following the Merger, we may have a significant amount of goodwill and other intangible assets on our consolidated financial statements that could be subject to impairment based upon future adverse changes in our business or prospects. The impairment of any goodwill and other intangible assets may have a negative impact on our consolidated results of operations.

Any litigation filed against PNMR and the members of the PNMR board of directors could result in the payment of damages following completion of the Merger or prevent or delay completion of the Merger.

In connection with the Merger, purported shareholders of PNMR have filed lawsuits against PNMR and the members of the PNMR board of directors under the federal securities laws, challenging the adequacy of the disclosures made in PNMR's proxy statement in connection with the Merger or otherwise.

The outcome of any such litigation is uncertain. If a dismissal is not granted or a settlement is not reached, the lawsuits could prevent or delay completion of the Merger and result in substantial costs to AVANGRID, including any costs associated with indemnification of PNMR's directors and officers. Additional lawsuits may be filed against PNMR or the directors and officers of PNMR in connection with the Merger. The defense or settlement of any lawsuit or claim that remains unresolved at the time the Merger is consummated may adversely affect the combined company's business, financial condition, results of operations and cash flows.

The impact of severe weather conditions could negatively affect PNMR.

PNMR has large networks of electric transmission and distribution facilities. Weather conditions in the U.S. Southwest region and Texas vary and could contribute to severe weather conditions, such as wildfires or the recent severe winter weather events in Texas, in or near PNMR's service territories. While PNMR may take certain proactive steps to mitigate the risks caused by severe weather conditions, such risks are always present and PNMR could be held liable for damages incurred as a result of severe weather conditions or as a result of wildfires caused, or allegedly caused, by their transmission and distribution

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systems. In addition, wildfires could cause damage to PNMR's assets that could result in loss of service to customers or make it difficult to supply power in sufficient quantities to meet customer needs. These events could adversely affect PNMR and may materially adversely affect the results of operations, financial condition and prospects of the combined company and, consequently, the market value of AVANGRID's common stock and debt securities.

Costs of decommissioning, remediation and restoration of nuclear and fossil-fueled power plants, as well as reclamation of related coal mines, could exceed the estimates of PNMR as well as the amounts PNMR recovers from its ratepayers, which could negatively impact PNMR.

PNMR has interests in a nuclear power plant, two coal-fired power plants and several natural gas-fired power plants and is obligated to pay its share of the costs to decommission these facilities. PNMR is also obligated to pay for its share of the costs of reclamation of the mines that supply coal to the coal-fired power plants. Likewise, other owners or participants are responsible for their shares of the decommissioning and reclamation obligations and it is important to PNMR that those parties fulfill their obligations. Rates charged by PNMR to its customers, as approved by the NMPRC, include a provision for recovery of certain costs of decommissioning, remediation, reclamation and restoration. The NMPRC has established a cap on the amount of costs for the final reclamation of the surface coal mines that may be recovered from customers. PNMR records estimated liabilities for its share of the legal obligations for decommissioning and reclamation in accordance with GAAP. These estimates include many assumptions about future events and are inherently imprecise. In the event the costs to decommission those facilities or to reclaim the mines serving the plants exceed current estimates, or if amounts are not approved for recovery by the NMPRC, they could materially and adversely affect PNMR and may materially adversely affect the results of operations, financial condition and prospects of the combined company and, consequently, the market value of AVANGRID's common stock and debt securities.

The costs of decommissioning any nuclear or fossil power plant are substantial. PNMR is responsible for all decommissioning obligations related to its entire proportionate interest in Palo Verde Nuclear Generating Station, or PVNGS, San Juan Generating Station, or SJGS, and Four Corners Power Plant, or FCPP, including portions under lease both during and after termination of the leases, other than amounts after the consummation of PNMR's sale of its interest in the Four Corners Power Plant (assuming that transaction closes pursuant to the purchase and sale agreement on December 31, 2024). A delay or termination of the sale of PNMR's interest in the FCPP could have a negative impact on AVAGRID's sustainability reputation.

PNMR maintains trust funds and escrow accounts designed to provide adequate financial resources for decommissioning PVNGS, SJGS and FCPP and for reclamation of the coal mines serving SJGS and FCPP at the end of their expected lives. However, because the funds and accounts grow over time to meet decommissioning and reclamation responsibilities, if the PVNGS, SJGS or FCPP units are decommissioned before their planned dates or the coal mines are shut down sooner than expected, these funds may prove to be insufficient, which may materially adversely affect the results of operations, financial condition and prospects of the combined company and, consequently, the market value of AVANGRID's common stock and debt securities.

There are inherent risks in the ownership and operation of nuclear facilities.

While PNMR does not operate PVNGS, PNMR has an indirect 10.2% undivided interest in PVNGS, including interests in Units 1 and 2 held under leases. PVNGS is subject to environmental, health, and financial risks, including, but not limited to, the ability to obtain adequate supplies of nuclear fuel and water, the ability to dispose of spent nuclear fuel, decommissioning of the plant, securing the facilities against possible terrorist attacks, and unscheduled outages due to equipment failures.

The NRC has broad authority under federal law to impose licensing and safety-related requirements for the operation of nuclear generation facilities. Events at nuclear facilities of other operators or which impact the industry generally may lead the NRC to impose additional requirements and regulations on all nuclear generation facilities, including PVNGS. A major incident at a nuclear facility anywhere in the world could cause the NRC to limit or prohibit the operation or licensing of any domestic nuclear unit and to promulgate new regulations that could require significant capital expenditures and/or increase operating costs.

In the event of noncompliance with its requirements, the NRC has the authority to impose a progressively increasing inspection regime that could ultimately result in the shutdown of a unit, civil penalties or both, depending upon the NRC's assessment of the severity of the situation, until compliance is achieved. Increased costs resulting from penalties, a heightened level of scrutiny, and/or implementation of plans to achieve compliance with NRC requirements could adversely affect the financial condition, results of operations, and cash flows of PNMR. Although PNMR has no reason to anticipate a serious nuclear incident at PVNGS, if an incident did occur, it could materially and adversely affect PNMR and may materially adversely affect the results of operations, financial condition and prospects of the combined company and, consequently, the market value of AVANGRID's common stock and debt securities.

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Strategic Risk Factors

The success of AVANGRID depends on achieving our strategic objectives, which may be through acquisitions, joint ventures, dispositions and restructurings and failure to achieve these objectives could adversely affect our business, financial condition and prospects.

We are continuously reviewing the alternatives available to ensure that we meet our strategic objectives, which include, among other things, acquisitions, joint ventures, dispositions and restructuring. With respect to potential acquisitions, joint ventures and restructuring activities, we may not achieve expected returns, cost savings and other benefits as a result of various factors including integration and collaboration challenges such as personnel and technology. We also may participate in joint ventures with other companies or enterprises in various markets, including joint ventures where we may have a lesser degree of control over the business operations, which may expose us to additional operational, financial, legal or compliance risks. We also continue to evaluate the potential disposition of assets and businesses that may no longer help us meet our objectives or sell a stake of these assets as a way of maximizing the value of AVANGRID. When we decide to sell assets or a business, we may encounter difficulty in finding buyers or executing alternative exit strategies on acceptable terms in a timely manner, which could delay the accomplishment of our strategic objectives or be on terms less favorable than we anticipated.

We expect to invest in development opportunities in all segments of AVANGRID, but such opportunities may not be successful, projects may not commence operation as scheduled and/or within budget or at all, which could have an adverse effect on our business, financial condition and prospects.

We are pursuing additional development investment opportunities related to all segments of AVANGRID with a particular focus on additional opportunities in electric transmission, renewable energy generation and interconnections to generating resources. The development, construction and expansion of such projects involve numerous risks. Various factors could result in increased costs or result in delays or cancellation of these projects. Risks include regulatory approval processes, permitting, new legislation, citizen referendums or ballot initiatives, economic events, foreign currency risk, environmental and community concerns, negative publicity, design and siting issues, difficulties in obtaining required rights of way, construction delays and cost overruns, including delays in equipment deliveries, particularly of wind turbines or transformers, severe weather, competition from incumbent facilities and other entities, and actions of strategic partners. There may be delays or unexpected developments in completing current and future construction projects. For example, we have spent approximately $180 million and expect to invest approximately $1 billion in our NECEC project. Delays in the regulatory approval and permitting process, new legislation or citizen referendums or ballot initiatives impacting or challenging the necessary approvals and permits, and cost overruns could impact our ability to make these investments and have an adverse effect on the success of the NECEC project and our financial condition and prospects. While most of Renewables' construction projects are constructed under fixed-price and fixed-schedule contracts with construction and equipment suppliers, these contracts provide for limitations on the liability of these contractors to pay liquidated damages for cost overruns and construction delays. These circumstances could prevent Renewables' construction projects from commencing operations or from meeting original expectations about how much electricity it will generate or the returns it will achieve. In addition, for Renewables' projects that are subject to PPAs, substantial delays could cause defaults under the PPAs, which generally require the completion of project construction by a certain date at specified performance levels. A delay resulting in a wind project failing to qualify for federal PTCs or ITCs could result in losses that would be substantially greater than the amount of liquidated damages paid to Renewables.

Regulatory and Legislative Risk Factors

AVANGRID is subject to substantial regulation by federal, state and local regulatory agencies and our business, results of operations and prospects may be adversely affected by legislative or regulatory changes, as well as liability under, or any future inability to comply with, existing or future regulations or requirements.

The operations of AVANGRID are subject to, and influenced by, complex and comprehensive federal, state and local regulation and legislation, including regulations promulgated by state utility commissions and the FERC. This extensive regulatory and legislative framework regulates the industries in which our subsidiaries operate, our business segments, rates for our products and services, financings, capital structures, cost structures, construction, environmental obligations, development and operation of our facilities, acquisition, disposal, depreciation and amortization of facilities and other assets, service reliability, hedging, derivatives transactions and commodities trading.

The federal, state and local political and economic environment has had, and may in the future have, an adverse effect on regulatory decisions with negative consequences for AVANGRID. These decisions may require AVANGRID to cancel, reduce, or delay planned development activities or other planned capital expenditures or investments or otherwise incur costs that we may not be able to recover through rates. We are unable to predict future legislative or regulatory changes, initiatives or interpretations, and there can be no assurance that we will be able to respond adequately or sufficiently quickly to such actions.

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AVANGRID is subject to the jurisdiction of various regulatory agencies including, but not limited to, the FERC, the NERC, the CFTC, the DOE and the EPA. Further, Networks' regulated utilities are subject to the jurisdiction of the NYPSC, the MPUC, the New York State Department of Environmental Conservation, the Maine Department of Environmental Protection, the PURA, the CSC, the DEEP and the DPU. These regulatory agencies cover a wide range of business activities, including, among other items the retail and wholesale rates for electric energy, the transmission and distribution of energy, the setting of tariffs and rates including cost recovery clauses, procurement of electricity for Networks' customers, and certain aspects of the siting, construction and transmission and distribution systems. These regulatory agencies have the authority to initiate associated investigations or enforcement actions or impose penalties or disallowances, which could be substantial. Certain regulatory agencies have the authority to review and disallow recovery of costs that they consider excessive or imprudently incurred and to determine the level of return that AVANGRID is permitted to earn on invested capital.

The regulatory process, which may be adversely affected by the political, regulatory, and economic environment in the states we operate in may limit our earnings and does not provide any assurance with respect to the achievement of authorized or other earnings levels. The disallowance of the recovery of costs incurred by us or a decrease in the rate of return that we are permitted to earn on our invested capital could have a material adverse effect on our financial condition. In addition, certain of these regulatory agencies also have the authority to audit the management and operations of AVANGRID and its subsidiaries, which could result in operational changes or adversely impact our financial condition. Such audits and post-audit work require the attention of our management and employees and may divert their attention from other regulatory, operational or financial matters.

AVANGRID's regulated utility operations may not be able to recover costs in a timely manner or at all or obtain a return on certain assets or invested capital through base rates, cost recovery clauses, other regulatory mechanisms or otherwise.

Our regulated utilities are subject to periodic review of their rates and the retail rates charged to their customers through base rates and cost recovery clauses which are subject to the jurisdiction of the NYPSC, MPUC, PURA and DPU, as applicable. New rate proceedings can be initiated by the utilities or the regulators and are subject to review, modification and final authorization and implementation by the regulators. Networks' regulated utilities' business rate plans approved by state utility regulators limit the rates Networks' regulated utilities can charge their customers. The rates are generally designed for, but do not guarantee, the recovery of Networks' regulated utilities' respective cost of service and the opportunity to earn a reasonable rate of Return on Equity, or ROE. Actual costs may increase due to inflation or other factors and exceed levels provided for such costs in the rate plans for Networks' regulated utilities. Utility regulators can initiate proceedings to prohibit Networks' regulated utilities from recovering from their customers the cost of service that the regulators determine to have been imprudently incurred. Networks' regulated utilities defer for future recovery certain costs including major storm costs and environmental costs. Networks' regulated subsidiaries could be denied recovery of certain costs, or deferred recovery pending the next general rate case, including denials or deferrals related to major storm costs and construction expenditures. In some instances, denial of recovery may cause the regulated subsidiaries to record an impairment of assets. If Networks' regulated utilities' costs are not fully and timely recovered through the rates ultimately approved by regulators, our financial condition could be adversely affected.

Current electric and gas rate plans of Networks' regulated utilities include revenue decoupling mechanisms, or RDMs, and the provisions for the recovery of energy costs, including reconciliation of the actual amount paid by such regulated utilities. There is no guarantee that such decoupling mechanisms or recovery and reconciliation mechanism will apply in future rate proceedings.

There are pending challenges at the FERC against New England transmission owners (including UI and CMP) seeking to lower the ROE that these transmission owners are allowed to receive for wholesale transmission service pursuant to the ISO-NE Open Access Transmission Tariff. Reductions to the ROE adversely impact the revenues that Networks' regulated utilities receive from wholesale transmission customers and could have a material effect on our financial condition.

Changes in regulatory and/or legislative policy could negatively impact Networks' transmission planning and cost allocation.

The existing FERC-approved ISO-NE transmission tariff allocates the costs of transmission facilities that provide regional benefits to all customers of participating transmission-owning utilities in New England. The FERC has issued rules requiring all RTOs and transmission owning utilities to make compliance changes to their tariffs and contracts in order to further encourage the construction of transmission for generation, including renewable generation. Changes in RTO tariffs, transmission owners' agreements or legislative policy, or implementation of these new FERC planning rules, could adversely affect our transmission planning and financial condition.

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AVANGRID's operating subsidiaries' purchases and sales of energy commodities and related transportation and services expose us to potential regulatory risks that could have a material adverse effect on our business, and financial condition.

Under the EPAct 2005 and the Dodd-Frank Act, AVANGRID is subject to enhanced FERC and CFTC statutory authority to monitor certain segments of the physical and financial energy commodities markets. Under these laws, the FERC and CFTC have promulgated regulations that have increased compliance costs and imposed reporting requirements on AVANGRID. These regulations require our operating subsidiaries to comply with certain margin requirements for our over-the-counter derivative contracts with certain CFTC- or SEC-registered entities that require us to post cash collateral with respect to swap transactions, that could potentially have an adverse effect on our liquidity or our ability to hedge commodity or interest rate risks.

With regard to the physical purchases and sales of energy commodities, the physical trading of energy commodities and any related transportation and/or hedging activities that some of our operating subsidiaries undertake, our operating subsidiaries are required to follow market-related regulations and certain reporting and other requirements enforced by the FERC, the CFTC and the SEC. Additionally, to the extent that operating subsidiaries enter into transportation contracts with natural gas pipelines or transmission contracts with electricity transmission providers that are subject to FERC regulation, the operating subsidiaries are subject to FERC requirements related to the use of such transportation or transmission capacity. Any failure on the part of our operating subsidiaries to comply with the regulations and policies of the FERC, the CFTC or the SEC relating to the physical or financial trading and sales of natural gas or other energy commodities, transportation or transmission of these energy commodities or trading or hedging of these commodities could result in the imposition of significant civil and criminal penalties, which could have a material adverse effect on our business.

The increased cost of purchasing natural gas during periods in which natural gas prices have increased significantly could adversely impact our earnings and cash flow

Our regulated utilities are permitted to recover the costs of natural gas purchased for customers. Under the regulatory body-approved gas cost recovery pricing mechanisms, the gas commodity charge portion of gas rates charged to customers may be adjusted upward on a periodic basis. If the cost of purchasing natural gas increases and Networks' regulated natural gas utilities are unable to recover these costs from its customers immediately, or at all, Networks may incur increased costs associated with higher working capital requirements and/or realize increased costs. In addition, any increases in the cost of purchasing natural gas may result in higher customer bad debt expense for uncollectible accounts and reduced sales volume and related margins due to lower customer consumption.

Climate related proceedings and legislation may result in the alteration of the public utility model in the state we operate in and could materially and adversely impact our business and operations.

Clean energy and emission reduction legislation, proceedings, or executive orders have been issued within New York, Maine, Connecticut and Massachusetts that, among other things, set renewable energy and carbon emission goals and create incentive programs for energy efficiency and renewable energy programs. Additionally, new legislation can require significant change to the natural gas portion of AVANGRID including reduction in usage and restriction of the expansion of natural gas within our territories. We are unable to predict the impact these law and actions may have on the operations of our subsidiaries in New York, Maine, Connecticut and Massachusetts which could have an adverse effect on our business and financial condition.

Renewables relies in part on governmental policies that support utility-scale renewable energy. Any reductions to, or the elimination of, these governmental mandates and incentives or the imposition of additional taxes or other assessments on renewable energy, could adversely impact our growth prospects, our business and financial condition.

Renewables relies, in part, upon government policies that support the development and operation of utility-scale renewable energy projects and enhance the economic feasibility of these projects. The federal government and many state and local jurisdictions have policies or other mechanisms in place, such as tax incentives or Renewable Portfolio Standards, or RPS, that support the sale of energy from utility-scale renewable energy facilities. Federal, state and local governments may review their policies and mechanisms that support renewable energy and take actions that would make them less conducive to the development or operation of renewable energy facilities. Any reductions to, or the elimination of, governmental policies or other mechanisms that support renewable energy or the imposition of additional taxes or other assessments on renewable energy, could result in, among other items, the lack of a satisfactory market for new development, Renewables abandoning the development of new projects, a loss of Renewables' investments in the projects and reduced project returns.

New tariffs imposed on imported goods may increase capital expense in projects and negatively impact expected returns.

Changes in tariffs may affect the final cost of a significant portion of capital expenses in projects, with renewable projects being more exposed. Tariffs have been imposed in the recent years to imports of solar panels, aluminum and steel,

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among other goods or raw materials. Depending on the timing and contractual terms, tariff changes may have adverse impacts to the buyer of these goods which could affect expected returns on approved projects.

Operational, Environmental, Social and Legal Risk Factors

AVANGRID is subject to numerous environmental laws, regulations and other standards, including rules and regulations with respect to climate change, which could result in increased capital expenditures, operating costs and various liabilities, and could require us to cancel or delay planned projects or limit or eliminate certain operations, all of which could have an adverse effect on our business and financial condition.

AVANGRID is subject to environmental laws and regulations, including, but not limited to, extensive federal, state and local environmental statutes, rules and regulations relating to air quality, water quality and usage, climate change, emissions of greenhouse gases, waste management, hazardous wastes, wildlife mortality and habitat protection, historical artifact preservation, natural resources and health and safety that could, among other things, prevent or delay the development of power generation, power or natural gas transmission, or other infrastructure projects, restrict the output of some existing facilities, limit the availability and use of some fuels required for the production of electricity, require additional pollution control equipment, and otherwise increase costs, increase capital expenditures and limit or eliminate certain operations. There are significant costs associated with compliance with these environmental statutes, rules and regulations, and those costs could be even more significant in the future as a result of new legislation. Violations of current or future laws, rules, regulations or other standards could expose our subsidiaries to regulatory and legal proceedings, disputes with, and legal challenges by, third parties, and potentially significant civil fines, criminal penalties and other sanctions.

Security breaches, acts of war or terrorism, grid disturbances or unauthorized access could negatively impact our business, financial condition and reputation.

Cyber breaches, acts of war or terrorism or grid disturbances resulting from internal or external sources could target our facilities or our information technology systems. In the ordinary course of business, we maintain sensitive customer, employee, financial and system operating information and are required by various laws to safeguard this information. Cyber or physical security intrusions could potentially lead to disabling damage to our facilities or to theft and the release of critical operating information or confidential customer or employee information, which could adversely affect our operations and/or reputation, and could result in significant costs, fines and litigation. Additionally, because our generation and transmission facilities are part of an interconnected regional grid, we face the risk of blackout due to a disruption on a neighboring interconnected system. As threats evolve and grow increasingly more sophisticated, we may incur significant costs to upgrade or enhance our security measures to protect against such risks and we may face difficulties in fully anticipating or implementing adequate preventive measures or mitigating potential harms.

A physical attack on our infrastructure could interfere with our normal business operations and affect our ability to control our transmission and distribution assets. A physical security intrusion could potentially lead to theft and the release of critical operating information and could result in significant costs, fines and litigation. Theft, vandalism or damages to our facilities and equipment can cause significant disruption to operations and can lead to operating losses.

The outbreak of COVID-19 and its impact on business and economic conditions could negatively affect our business, results of operations, financial condition, cash flows and the trading value of our securities.

The scale and scope of the COVID-19 pandemic and the impact on the economy and financial markets could adversely affect our business, financial performance and results of operations. We have not yet experienced a materially adverse impact to our business, results of operations or financial condition, however, given the uncertain scope and duration of the COVID-19 outbreak and its potential effects on our business, we currently cannot predict if there will be materially adverse impacts to our business, results of operations or financial condition in the future. While the situation surrounding COVID-19 remains fluid and its potential impact on AVANGRID is difficult to predict, the continued spread of the virus, availability of a vaccine and actions undertaken by national, regional, and local governments and health officials to contain COVID-19 or treat its effects could: impact customer demand for electricity particularly from businesses, commercial and industrial customers; cause us to experience an increase in costs as a result of our emergency measures, delayed payments from our customers and uncollectable accounts; cause delays and disruptions in the availability and timely delivery of materials and components used in our operations; cause delays and disruptions in the supply chain resulting in disruptions in the commercial operation dates of certain projects and impacting qualification criteria for certain tax credits and potential delay damages in our power purchase agreements; cause deterioration in credit quality of our counterparties, contractors or retail customers that could result in credit losses; cause impairment of goodwill or long-lived assets and impact our ability to develop, construct and operate facilities; result in our inability to meet the requirements of the covenants in our existing credit facilities, including covenants regarding the ratio of indebtedness to total capitalization; cause a deterioration in our financial metrics or the business environment that impacts our credit ratings; cause a delay in the permitting process of certain development projects, affecting the timing of final investment decisions and start of construction dates; cause extended remote work, which could harm productivity, increase

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cybersecurity risk, strain our business continuity plans, give rise to claims by employees and otherwise negatively impact our business.

If Networks' electricity and natural gas transmission, transportation and distribution systems do not operate as expected, they could require unplanned expenditures, including the maintenance and refurbishment of Networks' facilities, which could adversely affect our business and financial condition.

Networks' ability to operate its electricity and natural gas transmission, transportation and distribution systems is critical to the financial performance of AVANGRID. The ongoing operation of Networks' facilities involves risks customary to the electric and natural gas industry that include the breakdown, failure, loss of use or destruction of Networks' facilities, equipment or processes or the facilities, equipment or processes of third parties due to natural disasters, war or acts of terrorism, operational and safety performance below expected levels, errors in the operation or maintenance of these facilities and the inability to transport electricity or natural gas to customers in an efficient manner. Any unexpected failure, including failure associated with breakdowns, forced outages or any unanticipated capital expenditures, accident, failure of major equipment, shortage of or inability to acquire critical replacement or spare parts could result in reduced profitability, impacted cash flows, harm to our reputation or result in regulatory penalties.

Storing, transporting and distributing natural gas involves inherent risks that could cause us to incur significant costs that could adversely affect our business, financial condition and reputation.

There are inherent hazards and operational risks in gas distribution activities, such as leaks, explosions and mechanical problems that could cause the loss of human life, significant damage to property, environmental pollution and impairment of operations. The location of pipelines and storage facilities near populated areas could increase the level of damages resulting from these risks. These incidents may subject us to litigation and administrative proceedings that could result in substantial monetary judgments, fines or penalties and damage to our reputation.

If Renewables' equipment is not available for operation, Renewables projects' electricity generation and the revenue generated from its projects may fall below expectations and adversely affect our financial condition.

The revenues generated by Renewables' facilities depend upon the ability to maintain the working order of its projects. A natural disaster, severe weather, accident, failure of major equipment, failure of equipment supplier or shortage of or acquire critical replacement of spare parts not held in inventory or maintenance services, including the failure of interconnection to available electricity transmission or distribution networks, could damage or require Renewables to shut down its turbines, panels or related equipment and facilities, leading to decreases in electricity generation levels and revenues.

Renewables' ability to generate revenue from renewable energy facilities depends on interconnecting utility and/or RTO rules, policies, procedures and FERC tariffs that do not present restrictions to renewable project operations which could adversely impact our operations and financial condition.

If a transmission network connected to one or more generating facilities experiences outages or curtailments caused by interconnecting utility and/or RTO, the affected projects may lose revenue. In addition, certain Renewables' generation facilities have agreements that may allow for economic curtailment by off-taker, which could negatively impact revenues. Furthermore, economic congestion on the transmission grid (for instance, a negative price difference between the location where power is put on the grid by a project and the location where power is taken off the grid by the project's customer) in certain of the bulk power markets in which Renewables operates may occur and its businesses may be responsible for those congestion costs. Similarly, negative congestion costs may require that the projects either not participate in the energy markets or bid and clear at negative prices which may require the projects to pay money to operate each hour in which prices are negative. If such businesses were liable for such congestion costs or if the projects are required to pay money to operate in any given hour when prices are negative, then our financial results could be adversely affected. Additionally, we are obligated to pay the FERC Tariff price, which can be adjusted from time to time, for Renewables' facilities interconnection agreements even if the project has been curtailed.

AVANGRID's subsidiaries do not own all the land on which their projects are located and our rights may be subordinate to the rights of lienholders and leaseholders, which could have an adverse effect on their business and financial condition.

Existing and future projects may be located on land occupied under long-term easements, leases and rights of way. The ownership interests in the land subject to these easements, leases and rights of way may be subject to mortgages securing loans or other liens and other easements, lease rights and rights of way of third parties that were created previously. As a result, some of these real property rights be subordinate to the rights of these third parties, and the rights of our operating subsidiaries to use the land on which their projects are, or will be, located and their projects' rights to such easements, leases and rights of way could be lost or curtailed.

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AVANGRID and our subsidiaries face risks of strikes, work stoppages or an inability to negotiate future collective bargaining agreements on commercially reasonable terms which could have an adverse effect on our business and financial condition.

The majority of employees at Networks' facilities are subject to collective bargaining agreements with various unions. Unionization activities, including votes for union certification, could occur among non-union employees. If union employees strike, participate in a work stoppage or slowdown or engage in other forms of labor strike or disruption, our subsidiaries could experience reduced power generation or outages if replacement labor is not procured. The ability to procure such replacement labor or the ability to negotiate future collective bargaining agreements on commercially reasonable terms is uncertain.

Advances in technology and rate design initiatives could impair or eliminate AVANGRID's competitive advantage or could result in customer defection, which could have an adverse effect on our growth prospects, business and financial condition.

Legislative and regulatory initiatives designed to reduce greenhouse gas emissions or limit the effects of global warming and overall climate change has increased the development of new technologies for renewable energy, energy efficiency and investment to make those technologies more efficient and cost effective. There is a potential that new technology or rate design incentives could adversely affect the demand for services of our regulated subsidiaries thus impacting our revenues, such as distributed generation. Such emergence of alternative energy supply can result in customers relying on the power grid for limited use or completely abandoning the grid, which is known as customer defection. Similarly, future investments in Networks could be impacted if adequate rate making does not fully contemplate the characteristics of an integrated reliable grid from a unified perspective, regardless of customer disconnection. The interoperability, integration and standard connection of these distributed energy devices and systems could place a burden on the system of Networks' operating subsidiaries, without adequately compensating them. The technology and techniques used in the production of electricity from renewable sources are constantly evolving and becoming more complex. In order to maintain its competitiveness and expand its business, Renewables must adjust to changes in technology effectively and in a timely manner, which could impact our cash flow and/or reduce our profitability.

Business and Market Risk Factors

AVANGRID's operations and power production may fall below expectations due to the impact of natural events, which could adversely affect our financial condition and reputation.

Weather conditions influence the supply and demand for electricity, natural gas and other fuels and affect the price of energy and energy-related commodities. Severe weather can result in power outages, bodily injury and property damage or affect the availability of fuel and water. Many of our facilities could be at greater risk of damage should climate change produce unusual variations in temperature and weather patterns, resulting in more intense, frequent and extreme weather events and conditions.

Recoverability of additional costs associated with restoration and/or repair of regulated utilities facilities is defined within their respective rate decision. Regulatory agencies have the authority to review and disallow recovery of costs that they consider excessive or imprudently incurred. Reliability metrics may be negatively affected resulting in a potential negative rate adjustment or other imposed penalty. Our regulated utilities are subject to adverse publicity focused on the reliability of their distribution services and the speed with which they are able to respond to electric outages, natural gas leaks and similar interruptions caused by storm damage or other unanticipated events. Adverse publicity of this nature could harm our reputations and the reputations of our subsidiaries. Renewables can incur damage to wind or solar equipment, either through natural events such as lightning strikes that damage blades or in-ground electrical systems used to collect electricity from turbines or panels; or may experience production shut-downs or delayed restoration of production during extreme weather conditions resulting from, among other things, icing on the blades or restricted access to sites.

If weather conditions are unfavorable or below production forecasts, Renewables projects' electricity generation and the revenue generated from its projects may fall below expectations and have an adverse effect on financial condition.

Changing weather patterns or lower than expected wind or solar resource could cause reductions in electricity generation at Renewables' projects, which could negatively affect revenues. These events could vary production levels significantly from period to period, depending on the level of available resources. To the extent that resources are not available at planned levels, the financial results from these facilities may be less than expected. Changing weather patterns could also degrade equipment, components, and/or shorten interconnection and transmission facilities' useful lives or increase maintenance costs.

Lower prices for other fuel sources may reduce the demand for wind and solar energy development, which could adversely affect Renewables' growth prospects and financial condition.

Wind and solar energy demand is affected by the price and availability of other fuels, including nuclear, coal, natural gas and oil, as well as other sources of renewable energy. To the extent renewable energy, particularly wind and solar, becomes less

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cost-competitive due to reduced government targets, increases in the costs, new regulations, incentives that favor other forms of energy, cheaper alternatives or otherwise, demand for renewable energy could decrease.

There are a limited number of purchasers of utility-scale quantities of electricity, which exposes Renewables' utility-scale projects to additional risk that could have an adverse effect on its business.

Since the transmission and distribution of electricity is highly concentrated in most jurisdictions, there are a limited number of possible purchasers for utility-scale quantities of electricity in a given geographic location, including transmission grid operators, state and investor-owned power companies, public utility districts and cooperatives. As a result, there is a concentrated pool of potential buyers for electricity generated by Renewables' businesses, which may restrict our ability to negotiate favorable terms under new PPAs and could impact our ability to find new customers for the electricity generated by our generation facilities should this become necessary. Renewables' PPA portfolio is mostly contracted with low risk regulated utility companies. In the past few years, there has been increased participation from commercial and industrial customers. The higher long-term business risk profile of these companies results in increased credit risk. Furthermore, if the financial condition of these utilities and/or power purchasers deteriorated or the RPS programs, climate change programs or other regulations to which they are currently subject and that compel them to source renewable energy supplies change, demand for electricity produced by Renewables' businesses could be negatively impacted.

The benefits of any warranties provided by the suppliers of equipment for Networks and Renewables' projects may be limited by the ability of a supplier to satisfy its warranty obligations, or if the term of the warranty has expired or has liability limits which could have an adverse effect on our business and financial condition.

Networks and Renewables expect to benefit from various warranties, including product quality and performance warranties, provided by suppliers in connection with the purchase of equipment by our operating subsidiaries. The suppliers may fail to fulfill their warranty obligations, or the warranty may not be sufficient to compensate for all losses or cover a particular defect. In addition, these warranties generally expire within two to five years after the date of equipment delivery or commissioning and are subject to liability limits. If installation is delayed, the operating subsidiaries may lose all or a portion of the benefit of warranty.

Renewables' revenue may be reduced upon expiration or early termination of PPAs if the market price of electricity decreases and Renewables is otherwise unable to negotiate favorable pricing terms which could have a negative effect on our business and financial condition.

Renewables' PPA portfolio primarily has fixed or otherwise predetermined electricity prices for the life of each PPA. A decrease in the market price of electricity could result in a decrease in revenues upon expiry or extension of a PPA. The majority of Renewables' energy generation projects become merchant upon the expiration of a PPA and are subject to market risks unless Renewables can negotiate an extension or replacement contract. If Renewables is not able to secure a replacement contract with equivalent terms and conditions or otherwise obtain prices that permit operation of the related facility on a profitable basis, the affected project may temporarily or permanently cease operations and trigger an asset value impairment.

Our risk management policies cannot fully eliminate the risk associated with some of our operating subsidiaries' commodity trading and hedging activities, which may result in significant losses and adversely impact our financial condition.

Our subsidiaries' commodity trading and hedging activities are inherently uncertain and involve projections and estimates of factors that can be difficult to predict such as future prices and demand for power and other energy-related commodities. In addition, Renewables has exposure to commodity price movements through their "natural" long positions in electricity in addition to proprietary trading and hedging activities. We manage the exposure to risks of such activities through internal risk management policies, enforcement of established risk limits and risk management procedures but they may not be effective and, even if effective, cannot fully eliminate the risks associated with such activities.

Risk Factors Relating to Ownership of Our Common Stock

Iberdrola exercises significant influence over AVANGRID, and its interests may be different from yours. Additionally, future sales or issuances of our common stock by Iberdrola could have a negative impact on the price of our common stock.

Iberdrola owns approximately 81.5% of outstanding shares of our common stock and will be able to exercise significant influence over AVANGRID's policies and affairs, including the composition of our board of directors and any action requiring the approval of our shareholders, including the adoption of amendments to the certificate of incorporation and bylaws and the approval of a merger or sale of substantially all of our assets, subject to applicable law and the limitations set forth in the shareholder agreement to which we and Iberdrola are parties. The directors designated by Iberdrola may have significant authority to effect decisions affecting our capital structure, including the issuance of additional capital stock, incurrence of additional indebtedness, the implementation of stock repurchase programs and the decision of whether or not to declare dividends.

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The interests of Iberdrola may conflict with the interests of our other shareholders. For example, Iberdrola may support certain long-term strategies or objectives for us that may not be accretive to shareholders in the short term. The concentration of ownership may also delay, defer or even prevent a change in control, even if such a change in control would benefit our other shareholders, and may make some transactions more difficult or impossible without the support of Iberdrola. This significant concentration of share ownership may adversely affect the trading price for shares of our common stock because investors may perceive disadvantages in owning stock in companies with shareholders who own significant percentages of a company's outstanding stock.

Further, sales of our common stock by Iberdrola or the perception that sales may be made by it could significantly reduce the market price of shares of our common stock. Even if Iberdrola does not sell a large number of shares of our common stock into the market, its right to transfer such shares may depress the price of our common stock. Furthermore, pursuant to the shareholder agreement, Iberdrola is entitled to customary registration rights of our common stock, including the right to choose the method by which the common stock is distributed, a choice as to the underwriter and fees and expenses to be borne by us. Iberdrola also retains preemptive rights to protect against dilution in connection with issuances of equity by us. If Iberdrola exercises its registration rights and/or its preemptive rights, the market price of shares of our common stock may be adversely affected. Additionally, being a controlled company, relevant risks materializing at the ultimate parent level could have a negative impact on our share price, financial condition, credit ratings or reputation.

We have elected to take advantage of the "controlled company" exemption to the corporate governance rules for NYSE-listed companies, which could make shares of our common stock less attractive to some investors or otherwise harm our stock price.

Under the rules of the NYSE, a company in which over 50% of the voting power is held by an individual, a group or another company is a "controlled company" and may elect to take advantage of certain exemptions to the corporate governance rules for NYSE-listed companies. AVANGRID has elected to take advantage of these exemptions and, as a controlled company, is not required to have a majority of its board of directors be independent directors, a compensation committee, or to have such committees be composed entirely of independent directors, and a nominating and corporate governance committee, or to have such committee composed entirely of independent directors. Because we are a "controlled company," you will not have the same protections afforded to shareholders of companies that are subject to all the corporate governance requirements of the NYSE without regard to the exemptions available for "controlled companies." Our status as a "controlled company" could make our shares of common stock less attractive to some investors or otherwise harm our stock price.

Our dividend policy is subject to the discretion of our board of directors and may be limited by our debt agreements and limitations under New York law.

Although we currently anticipate paying a regular quarterly dividend, any such determination to pay dividends is at the discretion of our board of directors and dependent on conditions such as our financial condition, earnings, legal requirements, including limitations under New York law and other factors the board of directors deem relevant. Our board of directors may, in its sole discretion, change the amount or frequency of dividends or discontinue the payment of dividends entirely. For these reasons, investors may not be able to rely on dividends to receive a return on their investments.

AVANGRID may be unable to meet our financial obligations and to pay dividends on our common stock if our subsidiaries are unable to pay dividends or repay loans from us.

We are a holding company and, as such, have no revenue-generating operations of our own. We are dependent on dividends and the repayment of loans from our subsidiaries and on external financings to provide the cash necessary to make future investments, service debt we have incurred, pay administrative costs and pay dividends. Our subsidiaries are separate legal entities and have no independent obligation to pay dividends. Our regulated utilities are restricted by regulatory decision from paying us dividends unless a minimum equity-to-total capital ratio is maintained. The future enactment of laws or regulations may prohibit or further restrict the ability of our subsidiaries to pay upstream dividends or to repay funds. In addition, in the event of a subsidiary's liquidation or reorganization, our right to participate in a distribution of assets is subject to the prior claims of the subsidiary's creditors. As a result, our ability to pay dividends on our common stock and meet our financial obligations is reliant on the ability of our subsidiaries to generate sustained earnings and cash flows and pay dividends to and repay loans from us.

General Risk Factors

If we are unable to implement and maintain effective internal control over financial reporting in the future, investors may lose confidence in the accuracy and completeness of our financial reports and the trading price of our common stock may be negatively affected.

As a public company, we are subject to reporting, disclosure control and other obligations in accordance with applicable laws and rules adopted, and to be adopted, by the SEC and the NYSE such as the requirement that our management to report on

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the effectiveness of our internal control over financial reporting and our independent registered public accounting firm to attest to the effectiveness of our internal controls. Our management and other personnel devote a substantial amount of time to these compliance activities, and if we are not able to comply with these requirements in a timely manner or if we are unable to conclude that our internal control over financial reporting is effective, our ability to accurately report our cash flows, results of operations or financial condition could be inhibited and additional financial and management resources could be required. Any failure to maintain internal control over financial reporting or if our independent registered public accounting firm determines the we have a material weakness or significant deficiency in our internal control over financial reporting, could cause investors to lose confidence in the accuracy and completeness of our financial reports, a decline in the market price of our common stock, or subject us to sanctions or investigations by the NYSE, the SEC or other regulatory authorities. Failure to remedy any material weakness or significant deficiency in our internal control over financial reporting, or to implement or maintain other effective control systems required of public companies, could also restrict our future access to the capital markets and reduce or eliminate the trading market for our common stock.

Changes in tax laws, as well as judgments and estimates used in the determination of tax-related asset and liability amounts, could adversely affect our financial condition.

Our provision for income taxes and reporting of tax-related assets and liabilities require significant judgments and the use of estimates. Amounts of tax-related assets and liabilities involve judgments and estimates of the timing and probability of recognition of income, deductions and tax credits, including, but not limited to, estimates for potential adverse outcomes regarding tax positions that have been taken and the ability to utilize tax benefit carryforwards, such as net operating loss, or NOL, and tax credit carryforwards. Actual income taxes could vary significantly from estimated amounts due to the future impacts of, among other things, changes in tax laws, regulations and interpretations, our financial performance and results of operations.

Our investments and cash balances are subject to the risk of loss.

Our cash balances and the cash balances at our subsidiaries may be deposited in banks, may be invested in liquid securities such as commercial paper or money market funds or may be deposited in a liquidity agreement in which we are a participant along with other affiliates of the Iberdrola Group. Bank deposits in excess of federal deposit insurance limits would be subject to risks in the counterparty bank. Liquid securities and money market funds are subject to loss of principal, more likely in an adverse market situation, and to the risk of illiquidity.

The cost and availability of capital to finance our business is inherently uncertain and may adversely affect our financial condition.

AVANGRID and its subsidiaries are exposed to an increase in the general level of interest rates and to events, such as the 2008 financial crisis, affecting the capital markets that may increase the cost of capital or restrict its availability. In addition, AVANGRID's performance directly affects its financial strength and credit ratings and therefore its cost of, and ability to attract, capital. Significant increases in the cost of capital, whether caused by economic or capital market conditions or adverse company performance, would adversely impact our financial performance and may make certain potential business opportunities uneconomic. Prolonged inability to access capital would impair our ability to execute our business plan and could impair AVANGRID's ability to meet its financial obligations.

AVANGRID and our subsidiaries are subject to litigation or administrative proceedings, the outcome or settlement of which could adversely affect our business, financial condition and reputation.

AVANGRID and our operating subsidiaries have been and continue to be involved in legal proceedings, administrative proceedings, claims and other litigation that arise in the ordinary course of business. AVANGRID could experience unfavorable outcomes, developments or settlement of claims relating to these proceedings or future proceedings such as judgments for monetary damages, injunctions, unfavorable settlement terms, or denial or revocation of permits or approvals that could adversely impact our business, financial condition and reputation.

AVANGRID is not able to insure against all potential risks which could adversely affect our financial condition.

AVANGRID is exposed to certain risks inherent in our business such as equipment failure, manufacturing defects, natural disasters, terrorist attacks, cyber-attacks and sabotage, as well as affected by international, national, state or local events. Our insurance coverage may not continue to be offered or offered on an economically feasible basis and may not cover all events that could give rise to a loss or claim involving the assets or operations of our subsidiaries.

Pension and post-retirement benefit plans could require significant future contributions to such plan that could adversely impact our business and financial condition.

We provide defined benefit pension plans and other post-retirement benefits administered by our subsidiaries for a significant number of employees, former employees and retirees. Financial market disruptions and significant declines in the

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market values of the investments held to meet those obligations, discount rate assumptions, participant demographics and increasing longevity, and changes in laws and regulations may require us to make significant contributions to the plans.

AVANGRID and our subsidiaries may suffer the loss of key personnel or the inability to hire and retain qualified employees, which could have an adverse effect on our operations and financial condition.

The operations of AVANGRID depend on the continued efforts of our employees. Retaining key employees and attracting new employees are important to our financial performance and our operations. We cannot guarantee that any member of our management will continue to serve in any capacity for any length of time. In addition, a significant portion of our skilled workforce will be eligible to retire in the next five to ten years. Such highly skilled individuals cannot be quickly replaced due to the technically complex work they perform. This could lead to a loss in productivity and increased recruiting and training costs.

Item 1B. ***Unresolved Staff Comments.***

None.

Item 2. ***Properties.***

We have included descriptions of the location and general character of our principal physical operating properties by segment in "Item 1. *Business*", which is incorporated herein by reference. The principal offices of AVANGRID and Networks are located in Orange, Connecticut; Portland, Maine; and Rochester, New York, while Renewables' headquarters is located in Portland, Oregon. In addition, AVANGRID and its subsidiaries have various administrative offices located throughout the United States. AVANGRID leases part of its administrative and local offices.

The following table sets forth the principal properties of AVANGRID, by location, type, lease or ownership and size as of December 31, 2020:

Location	Type of Facility	Leased/Owned	Size (square feet)
Orange, Connecticut	Office	Owned	127,310
Augusta, Maine	Office	Leased	220,400
Portland, Maine	Office	Leased	15,194
Rochester, New York	Office	Owned	122,494
Portland, Oregon	Office	Leased	63,543

We believe that our office facilities are adequate for our current needs and that additional office space can be obtained if necessary.

Item 3. ***Legal Proceedings.***

For information with respect to this item see Notes 14 and 15 of our consolidated financial statements included in Part II, Item 8, "Financial Statements and Supplementary Data" of this Annual Report on Form 10-K, which information is incorporated herein by reference.

Item 4. ***Mine Safety Disclosures.***

Not applicable.

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Information about our Executive Officers

The names and ages of all executive officers of AVANGRID as of February 26, 2021 and a brief account of the business experience during the past five years of each executive officer are as follows:

Name	Age (1)	Title
Dennis V. Arriola	60	Chief Executive Officer
Douglas K. Stuver	57	Senior Vice President – Chief Financial Officer
Scott M. Tremble	41	Senior Vice President – Controller
Alejandro de Hoz García-Bellido	53	President and Chief Executive Officer of Renewables
David T. Flanagan	73	Executive Chairman of CMP
Peter T. Church	48	Senior Vice President – Human Resources & Corporate Administration
Ignacio Estella	51	Senior Vice President – Corporate Development
Robert D. Kump	59	Deputy Chief Executive Officer and President
Carl A. Taylor	56	President and Chief Executive Officer of NYSEG and RG&E
R. Scott Mahoney	55	Senior Vice President – General Counsel and Corporate Secretary
Anthony Marone	57	President and Chief Executive Officer of Networks
Franklyn Reynolds	53	President and Chief Executive Officer of UIL

(1) Age as of December 31, 2020.

Dennis V. Arriola. Mr. Arriola was appointed Chief Executive Officer of AVANGRID effective July 22, 2020. Mr. Arriola joins the Avangrid, Inc. from Sempra Energy (Sempra), a publicly-traded energy infrastructure company, where he served as executive vice president and group president, and chief sustainability officer. Previously, he served as chairman, president and chief executive officer of Southern California Gas Co. (SoCalGas), one of Sempra's regulated California utilities. Mr. Arriola spent most of the past 26 years in a broad range of leadership roles for the Sempra companies including as chief executive officer of SoCalGas, senior vice president and chief financial officer of both San Diego Gas & Electric and SoCalGas, vice president of communications and investor relations for Sempra, and regional vice president and general manager of Sempra's South American operations. From 2008 to 2012, Mr. Arriola worked as executive vice president and president and chief financial officer for SunPower Corp., a Silicon Valley based solar technology company. Mr. Arriola previously served on the boards of directors for several Sempra operating companies, including Infraestructura Energética Nova (IEnova), a publicly-traded company in Mexico, Luz del Sur S.A.A., a publicly-traded company in Peru and Chilquinta Energía in Chile. He holds a bachelor's degree in economics from Stanford University and a master's degree in business administration from Harvard University. Mr. Arriola serves on the board of directors for Auto Club Enterprises, the U.S. Chamber of Commerce and the Edison Electric Institute, and previously served on the board of the California Business Roundtable and the California Latino Economic Institute.

Douglas K. Stuver. Mr. Stuver was appointed Senior Vice President - Chief Financial Officer of AVANGRID on July 8, 2018, and is responsible for AVANGRID's investor relations corporate communications, risk management, treasury and purchasing divisions. Mr. Stuver joined AVANGRID in 2015 as Managing Director, Finance of Avangrid Renewables, LLC and served as Vice President – Controller of Avangrid Renewables, LLC from 2017 until 2018. Prior to joining the Company, he served as chief financial officer of the Company's prior affiliate, PacifiCorp, from 2008 to 2015. Mr. Stuver graduated magna cum laude with a B.A. from University of Pittsburgh and is a Certified Public Accountant (inactive status).

Scott M. Tremble. Mr. Tremble was appointed Senior Vice President – Controller of AVANGRID on May 1, 2018, and is responsible for the execution and recording of AVANGRID's transactional processes while meeting mandatory reporting requirements and tax obligations. Mr. Tremble also serves as a director of AVANGRID's subsidiaries Networks, Renewables and UIL. Mr. Tremble joined the Company as chief accounting officer of Avangrid Management Company, LLC, a wholly-owned subsidiary of AVANGRID, in 2015, and was responsible for oversight in the areas of consolidation, financial reporting, internal controls, technical accounting and corporate accounting for the Company. From 2014 to 2015, he served as the international controller of Cole Haan LLC. Mr. Tremble started his career at PricewaterhouseCoopers in October 2002 and served various roles, including, most recently, as senior manager in the assurance practice. Mr. Tremble received his B.S. in Accountancy from Bentley University and is a Certified Public Accountant.

Alejandro de Hoz García-Bellido. Mr. de Hoz García-Bellido was appointed President and Chief Executive Officer of Renewables on October 15, 2019. Mr. de Hoz García-Bellido previously served as Vice President of U.S. Offshore Wind of Renewables from November 3, 2017 until October 15, 2019. Prior to joining Renewables, Mr. de Hoz García-Bellido served as Offshore Business Performance director within the Iberdrola offshore business from 2013 until 2017, based both in London and

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Madrid, responsible for preparing Iberdrola's offshore pipeline for competitive auction processes both in the U.K. and Germany, as well as coordinating the teams to take awarded projects through the financial close. Prior to this, he held different positions within the Iberdrola group in developing the onshore wind business internationally, including the establishment in the French market and the development of the Mexican and Brazilian markets. Mr. de Hoz García-Bellido holds a degree in Physics from the University Complutense of Madrid and an MBA from ICAI-ICADE University of Madrid.

David T. Flanagan. Mr. Flanagan was appointed Executive Chairman of the Board of Directors of CMP effective February 18, 2020. Previously, Mr. Flanagan served as Chief Executive Officer of CMP from 1994 to 2000. Most recently, Mr. Flanagan served as the Interim President of the University of Southern Maine from 2014 until 2015. He also served as President and Chief Executive Officer at Preservation Management Inc., a management company specializing in affordable housing, from 2010 to 2013 and as General Counsel for the United States Senate Homeland Security Committee for the Hurricane Katrina investigation from 2005 until 2006. Prior to joining Central Maine Power Company, he served as legal counsel to the Governor of the State of Maine from 1979 to 1984 and as a member of the Board of Trustees of the University of Maine System from 1986 to 1995. Mr. Flanagan holds a Bachelor's Degree from Harvard University and a J.D. from Boston College Law School.

Peter T. Church. Mr. Church was appointed Senior Vice President – Human Resources & Corporate Administration of AVANGRID on October 31, 2018, and is responsible for ensuring that human resources strategies and initiatives support AVANGRID's mission and objectives, overseeing all aspects of human resources management, practices and operations, and coordinates AVANGRID's other corporate administrative functions including health and safety, general services, and information technology and systems. Prior to joining AVANGRID, Mr. Church held a number of executive positions at UnitedHealth Group from 2012 to 2018 including serving as the Chief Talent Officer, Vice President, Human Capital - Commercial Markets, and Vice President, Talent Acquisition and Workforce Insights. Mr. Church earned both a Bachelor of Arts in Psychology as well as a Master of Arts in General/Experimental Psychology from the University of Hartford.

Ignacio Estella. Mr. Estella was appointed Senior Vice President – Corporate Development of AVANGRID on December 17, 2015, and is responsible for delivering non-organic growth opportunities for the Company beyond those of its present businesses. Previously, Mr. Estella served as corporate vice president of business origination of Iberdrola from May 2009 until November 2013 and vice president – corporate development of Iberdrola USA, Inc., from December 2013 to December 16, 2015. He served as gas markets development director of Iberdrola between February 2007 and April 2009. Mr. Estella holds a degree in law and business administration from the Universidad Pontificia Comillas and a Master of Public Administration, with concentration in industry analysis and strategic negotiation, from Harvard University.

Robert D. Kump. Mr. Kump was appointed Deputy Chief Executive Officer and President of AVANGRID on June 5, 2019. Mr. Kump served as President and Chief Executive Officer of Networks from November 2010 until June 5, 2019 and as AVANGRID's Chief Corporate Officer from January 2014 to December 2016. Mr. Kump also served as a director of AVANGRID's subsidiaries CMP, NYSEG and RG&E from 2009 until June 5, 2019, and as the Chief Executive Officer of Avangrid Service Company from October 2009 until June 5, 2019. Mr. Kump held various positions from February 1997 to October 2009 as AVANGRID's senior vice president and chief financial officer, vice president, controller and chief accounting officer, treasurer and secretary. Mr. Kump also previously held a number of positions at NYSEG from 1986 to 1997, including senior accountant-external financial reporting, director-investor relations, director-financial services and treasurer. Mr. Kump earned a B.A. in accounting from Binghamton University and is a Certified Public Accountant in New York.

Carl A. Taylor. Mr. Taylor was appointed President and Chief Executive Office of NYSEG and RG&E on June 30, 2017. Previously, Mr. Taylor served as Vice President of Customer Service of AVANGRID. Mr. Taylor started with NYSEG in 1987 as an electrical engineer in the generation planning area and progressed through positions of increasing seniority in the organization including president of NYSEG Solutions, Inc., a subsidiary of NYSEG. He earned a Bachelor of Electrical Engineering Degree from Rochester Institute of Technology and a Master's of Business Administration Degree from State University of New York at Binghamton.

R. Scott Mahoney. Mr. Mahoney was appointed Senior Vice President – General Counsel of AVANGRID on December 17, 2015. He was appointed Secretary of AVANGRID on January 27, 2016, and previously served as vice president-general counsel and secretary of Networks. Mr. Mahoney previously served as Deputy General Counsel and Chief FERC Compliance Officer for AVANGRID from January 2007 to June 2012, and served in legal and senior executive positions at AVANGRID subsidiaries from October 1996 until January 2007. Mr. Mahoney also serves on the board of directors of the Gulf of Maine Research Institute. Mr. Mahoney earned a B.A. from St. Lawrence University, a J.D. from the University of Maine, a master's degree in environmental law from the Vermont Law School, and a postgraduate diploma in business administration from the University of Warwick. He has received bar admission to the State of Maine, the State of New York, the U.S. Court of Appeals, the U.S. District Court and the U.S. Court of Military Appeals and is a State of Connecticut Authorized House Counsel.

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Anthony Marone. Mr. Marone was appointed President and Chief Executive Officer of Networks on June 5, 2019. In this role, he has overall responsibility for Avangrid Networks' electric and natural gas operating companies in Connecticut and Massachusetts and functional responsibility for AVANGRID's regulatory and asset management and planning. Mr. Marone also serves as President – Connecticut and Massachusetts Operations of Networks, director of Avangrid Enterprises, Inc., Avangrid Networks, Inc., Avangrid Networks New York TransCo, LLC, Avangrid Service Company, Berkshire Energy Resources, The Berkshire Gas Company, Central Maine Power Company, CMP Group, Inc., Connecticut Energy Corporation, Connecticut Natural Gas Corporation, CTG Resources, Inc., Mainecom Services, New York State Electric & Gas Corporation, RGS Energy Group, Inc., Rochester Gas and Electric Corporation, The Southern Connecticut Gas Company, Thermal Energies, Inc., UIL Group, LLC, UIL Holdings Corporation, The Union Water-Power Company, United Capital Investment, Inc., The United Illuminating Company, United Resources, Inc., Xcelecom, Inc., and Xcel Services, Inc. Previously Mr. Marone served as senior vice president of customer and business services of UIL since May 14, 2013. Mr. Marone served as senior vice president – business services of UI and vice president of business services of UIL from November 16, 2010 to May 2013. Mr. Marone received his master's degree in engineering and business management from the University of New Haven and a bachelor's degree in mechanical engineering from the New York Institute of Technology.

Franklyn Reynolds. Mr. Reynolds was appointed president and chief executive officer of UIL Holdings Corporation on October 20, 2020. From January 2019 to October 19, 2020, Mr. Reynolds served as the president of The Berkshire Gas Company. He also served as Vice President of Gas Integration from October 2017 to October 2020 and Vice President Asset Management and Planning of Avangrid Service Company from May 2013 to October 2017 where he was responsible for Electric Transmission & Distribution Planning, Vegetation Management, Substation Maintenance and Investment Planning. Mr. Reynolds earned a master's degree in business administration from the University of New Haven and a bachelor's degree in industrial technology from Central Connecticut State University. He is certified as a supply chain professional and has completed executive courses at Iberdrola's School of Management, Ross School of Business and Wharton School of Business.

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PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.

Market Information and Holders

Our shares of common stock began trading on the NYSE on December 17, 2015, under the symbol "AGR." Prior to that time, there was no public market for shares of our common stock.

As of February 26, 2021, there were 3,286 shareholders of record.

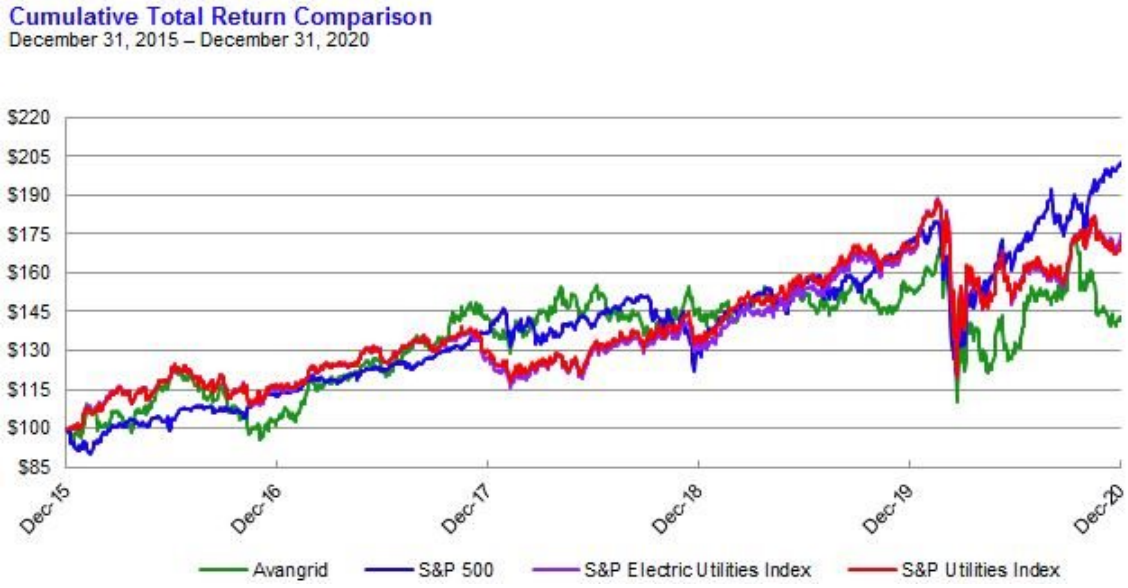
Dividends

AVANGRID expects to continue paying quarterly cash dividends, although there is no assurance as to the amount of future dividends, which depends on future earnings, capital requirements and financial condition.

Further information regarding payment of dividends is provided in "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" of this Annual Report on Form 10-K.

Performance Graph

The line graph appearing below compares the change in AVANGRID's total shareowner return on its shares of common stock with the return on the S&P Composite-500 Stock Index, the S&P Electric Utilities Index and the S&P Utilities Index for the period December 31, 2015 through December 31, 2020.



	December 31, 2015	December 31, 2020
AVANGRID	$ 100.00	$ 142.64
S&P 500	$ 100.00	$ 202.96
S&P Electric Utilities Index	$ 100.00	$ 174.91
S&P Utilities Index	$ 100.00	$ 172.38

The above information assumes that the value of the investment in shares of AVANGRID's common stock and each index was $100 on December 31, 2015, including dividend reinvestment during this time period. The changes displayed are not necessarily indicative of future returns.

Recent Sales of Unregistered Securities

None.

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Issuer Repurchases of Equity Securities

There were no repurchases of common stock of AVANGRID during the fourth quarter of the year ended December 31, 2020.

Equity Compensation Plan Information

For information regarding securities authorized for issuance under equity compensation plans, see Part III, Item 12 of this Annual Report on Form 10-K.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

You should read the following discussion of our financial condition and results of operations in conjunction with the consolidated financial statements and the notes thereto included elsewhere in this Annual Report on Form 10-K. In addition to historical consolidated financial information, the following discussion contains forward-looking statements that reflect our plans, estimates and beliefs. Our actual results could differ materially from those discussed in the forward-looking statements. Factors that could cause or contribute to these differences include those discussed below and elsewhere in this Annual Report on Form 10-K, particularly in Part I, Item 1A, "Risk Factors."

Overview

AVANGRID is one of the leading sustainable energy companies in the United States. Our purpose is to work every day to deliver a more accessible clean energy model that promotes healthier, more sustainable communities. A commitment to sustainability is firmly entrenched in the values and principles that guide AVANGRID, with environmental, social, governance and financial sustainability key priorities driving our business strategy.

AVANGRID has approximately $38 billion in assets and operations in 24 states concentrated in our two primary lines of business - Avangrid Networks and Avangrid Renewables. Avangrid Networks owns eight electric and natural gas utilities, serving approximately 3.3 million customers in New York and New England. Avangrid Renewables owns and operates 8.5 gigawatts of electricity capacity through primarily wind and solar power, with a presence in 22 states across the United States. AVANGRID supports the achievement of the Sustainable Development Goals approved by the member states of the United Nations, and was named among the World's Most Ethical companies in 2019 and 2020 by the Ethisphere Institute and is listed by Forbes and Just Capital as one of the 2021 Just 100, an annual ranking of the most just U.S. public companies. AVANGRID employs approximately 7,000 people. Iberdrola S.A., a corporation *(sociedad anónima)* organized under the laws of the Kingdom of Spain, a worldwide leader in the energy industry, directly owns 81.5% of the outstanding shares of AVANGRID common stock. AVANGRID's primary businesses are described below.

Our direct, wholly-owned subsidiaries include Avangrid Networks, Inc., or Networks, and Avangrid Renewables Holdings, Inc., or ARHI. ARHI in turn holds subsidiaries including Avangrid Renewables, LLC, or Renewables. Networks owns and operates our regulated utility businesses through its subsidiaries, including electric transmission and distribution and natural gas distribution, transportation and sales. Renewables operates a portfolio of renewable energy generation facilities primarily using onshore wind power and also solar, biomass and thermal power.

Through Networks, we own electric generation, transmission and distribution companies and natural gas distribution, transportation and sales companies in New York, Maine, Connecticut and Massachusetts, delivering electricity to approximately 2.3 million electric utility customers and delivering natural gas to approximately 1.0 million natural gas utility customers as of December 31, 2020.

Networks, a Maine corporation, holds our regulated utility businesses, including electric transmission and distribution and natural gas distribution, transportation and sales. Networks serves as a super-regional energy services and delivery company through the eight regulated utilities it owns directly:

- New York State Electric & Gas Corporation, or NYSEG, which serves electric and natural gas customers across more than 40% of the upstate New York geographic area;
- Rochester Gas and Electric Corporation, or RG&E, which serves electric and natural gas customers within a nine-county region in western New York, centered around Rochester;
- The United Illuminating Company, or UI, which serves electric customers in southwestern Connecticut;
- Central Maine Power Company, or CMP, which serves electric customers in central and southern Maine;
- The Southern Connecticut Gas Company, or SCG, which serves natural gas customers in Connecticut;
- Connecticut Natural Gas Corporation, or CNG, which serves natural gas customers in Connecticut;
- The Berkshire Gas Company, or BGC, which serves natural gas customers in western Massachusetts; and
- Maine Natural Gas Corporation, or MNG, which serves natural gas customers in several communities in central and southern Maine.

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Through Renewables, we had a combined wind, solar and thermal installed capacity of 8,499 megawatts, or MW, as of December 31, 2020, including Renewables' share of joint projects, of which 7,734 MW was installed wind capacity. As of December 31, 2020, approximately 67% of the capacity was contracted, for an average period of 9.0 years, and 18% of installed capacity was hedged. Being among the top three largest wind operators in the United States based on installed capacity as of December 31, 2020, Renewables strives to lead the transformation of the U.S. energy industry to a sustainable, competitive, clean energy future. Renewables installed capacity includes 65 wind farms and four solar facilities in 21 states across the United States.

February 2021 Texas Weather Event

During February 2021, Texas experienced unprecedented extreme cold weather, resulting in outages impacting millions in the state. Despite this challenge, our team worked safely to operate our Texas wind generation facilities to their maximum potential given the difficult conditions. Through our risk management procedures, we met all of our delivery obligations in Texas and produced excess energy, contributing to the solution for our customers during this critical period. If the expected amounts are not approved for recovery by ERCOT, it could adversely affect our results.

Proposed Merger with PNMR

On October 20, 2020, AVANGRID, PNM Resources, Inc., a New Mexico corporation, or PNMR, and NM Green Holdings, Inc., a New Mexico corporation and wholly-owned subsidiary of AVANGRID, or Merger Sub, entered into an Agreement and Plan of Merger, or Merger Agreement, pursuant to which Merger Sub is expected to merge with and into PNMR, with PNMR surviving the Merger as a direct wholly-owned subsidiary of AVANGRID, or the Merger. PNMR is a publicly-owned holding company with two regulated utilities providing electricity and electric services in New Mexico and Texas. PNMR's electric utilities are the Public Service Company of New Mexico and the Texas-New Mexico Power Company. Following consummation of the Merger, AVANGRID will expand its geographic and regulatory diversity with ten regulated electric and gas companies in six states to help expand our growing leadership position in transforming the U.S. energy industry.

Pursuant to the Merger Agreement, each issued and outstanding share of the common stock of PNMR (other than (i) the issued shares of PNMR common stock that are owned by AVANGRID, Merger Sub, PNMR or any wholly-owned subsidiary of AVANGRID or PNMR, which will be automatically cancelled at the time the Merger is consummated and (ii) shares of PNMR common stock held by a holder who has not voted in favor of, or consented in writing to, the Merger who is entitled to, and who has demanded, payment for fair value of such shares) will be converted, at the time the merger is consummated, into the right to receive $50.30 in cash, or Merger Consideration, or approximately $4.3 billion in aggregate consideration. In connection with the Merger, Iberdrola, S.A. has provided the Iberdrola Funding Commitment Letter, pursuant to which Iberdrola has unilaterally agreed to provide to AVANGRID, or arrange the provision to AVANGRID of, funds to the extent necessary for AVANGRID to consummate the Merger, including the payment of the aggregate Merger Consideration. On February 12, 2021, the shareholders of PNMR approved the proposed Merger. The Merger is expected to close in the second half of 2021 and is subject to certain conditions including certain regulatory approvals and entry into agreements providing for, and to making filings required to, exit from all ownership interests in the Four Corners Power Plant and certain other customary closing conditions.

In connection with the Merger, purported shareholders of PNMR have filed lawsuits against PNMR and the members of the PNMR board of directors under the federal securities laws, challenging the adequacy of the disclosures made in PNMR's proxy statement in connection with the Merger or otherwise. We cannot predict the outcome of these lawsuits.

For additional information on the Merger, see Note 1 - Background and Nature of Operations.

COVID-19

The COVID-19 pandemic has led to global economic disruption and volatility in financial markets and the United States economy. AVANGRID is one of the many companies providing essential services during this national emergency and we communicate regularly with federal and state authorities and industry resources to ensure a coordinated response. We have implemented business continuity and emergency response plans to continue to provide service to our customers and support our operational needs. We continue to monitor developments affecting both our workforce and our customers and will take precautions that we determine are necessary or appropriate. We regularly communicate with our customers regarding the tools and resources available and to help our customers stay informed during this public health crisis. In addition to measures to protect our workforce and critical operations, we have established a cross-functional task force to plan for a safe and effective return to office. AVANGRID is actively monitoring potential supply chain and transportation disruptions that could impact the Company's operations and will implement plans to address any such impacts on our business.

This is a rapidly evolving situation that could continue to lead to extended disruption of economic activity in our markets, which could adversely affect our business. We have not yet experienced a materially adverse impact to our business,

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results of operations or financial condition, however, given the uncertain scope and duration of the COVID-19 outbreak and its potential effects on our business, we currently cannot predict if there will be materially adverse impacts to our business, results of operations or financial condition in the future.

For more information, see the risk factor under the heading "The outbreak of COVID-19 and its impact on business and economic conditions could negatively affect our business, results of operations or financial condition." in Item 1A. Risk Factors in this Form 10-K.

Summary of Results of Operations

Our operating revenues decreased by less than 1%, from $6,336 million for the year ended December 31, 2019, to $6,320 million for the year ended December 31, 2020.

Networks business revenues increased mainly due to increased customer rates in the period. Renewables had a decrease in revenues mainly due to unfavorable mark to market, or MtM, changes on energy derivative transactions entered into for economic hedging purposes.

Net income attributable to AVANGRID decreased by 13% from $667 million for the year ended December 31, 2019, to $581 million for the year ended December 31, 2020, primarily as a result of gain from the sale of assets in Renewables in 2019 that did not recur in 2020.

Adjusted net income (a non-GAAP financial measure) decreased by 2%, from $640 million for the year ended December 31, 2019 to $625 million for the year ended December 31, 2020. The decrease is primarily due to a $77 million decrease in Renewables as a result of gain from the sale of assets in 2019 that did not recur in 2020 and a $41 million decrease in Corporate mainly driven by higher interest expenses in the period, offset by a $103 million increase in Networks driven primarily by approved rate cases in the period.

For additional information and reconciliation of the non-GAAP adjusted net income to net income attributable to AVANGRID, see "*—Non-GAAP Financial Measures.*"

See "*—Results of Operations*" for further analysis of our operating results for the year.

Our financial condition and financing capability will be dependent on many factors, including the level of income and cash flow of its subsidiaries, conditions in the bank and capital markets, economic conditions, interest rates and legislative and regulatory developments.

Networks

Electric Transmission and Distribution and Natural Gas Distribution

The operating subsidiaries of Networks are regulated electric distribution and transmission and natural gas transportation and distribution utilities whose structure and operations are significantly affected by legislation and regulation. The FERC regulates, under the FPA, the interstate transmission and wholesale sale of electricity by these regulated utilities, including transmission rates and allowed ROE on transmission assets. Further, the distribution rates and allowed ROEs for Networks' regulated utilities in New York, Maine, Connecticut and Massachusetts are subject to regulation by the NYPSC, the MPUC, PURA and DPU, respectively. Legislation and regulatory decisions implementing legislation establish a framework for Networks' operations. Other factors affecting Networks' financial results are operational matters, such as the ability to manage expenses, uncollectibles and capital expenditures, in addition to major weather disturbances and environmental regulation. Networks expects to continue to make significant capital investments in its distribution and transmission infrastructure.

Pursuant to Maine law, CMP earns revenue for the delivery of energy to its retail customers, but is prohibited from selling power to them. CMP generally does not enter into purchase or sales arrangements for power with ISO-NE, the New England power pool, or any other ISO or similar entity. CMP generally sells all of its power entitlements under its nonutility generator and other PPAs to unrelated third parties under bilateral contracts. If the MPUC does not approve the terms of bilateral contracts, it can direct CMP to sell power entitlements that it receives from those contracts on the spot market through ISO-NE. NYSEG and RG&E enter into power purchase and sales transactions with the NYISO to have adequate supplies for their customers who choose to purchase energy directly from them. Customers may also choose to purchase energy from other energy supply companies.

Under Connecticut law, UI's retail electricity customers are able to choose their electricity supplier while UI remains their electric distribution company. UI purchases power for those of its customers under standard service rates who do not choose a retail electric supplier and have a maximum demand of less than 500 kilowatts and its customers under supplier of last resort service for those who are not eligible for standard service and who do not choose to purchase electric generation service

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from a retail electric supplier. The cost of the power is a “pass-through” to those customers through the generation services charge on their bills.

UI has wholesale power supply agreements in place for its entire standard service load for the first half of 2021, 70% of its standard service load for the second half of 2021 and 20% of its standard service load for the first half of 2022. Supplier of last resort service is procured on a quarterly basis and UI has a wholesale power supply agreement in place for the second quarter of 2021. However, from time to time, there are no bidders in the procurement process for supplier of last resort service and UI manages the load directly.

For additional information regarding Networks, including a comprehensive overview of our regulated businesses, please see the section entitled, “Business —Networks” in Part I, Item 1 in this report.

Revenues

Networks utilizes regulatory deferrals to evaluate its financial condition and operating performance by reconciling differences between actual revenue received or cost incurred with the rate allowances provided under the tariffs set by the state utilities commissions and the FERC. Regulatory deferrals create regulatory assets and liabilities under the FERC, consistent with generally accepted accounting principles for financial reporting in the United States, or U.S. GAAP.

Regulatory deferrals in New York include electric and gas supply costs, PPAs, net plant reconciliations (downward only), revenue decoupling, system benefit charges, RPS, energy efficiency portfolio standards, including heat pumps, economic development programs, earnings sharing mechanism, electric vehicle program costs, labor FTE's, low income programs, pension costs, other post-employment benefits costs, environmental remediation costs, major storm costs, distribution vegetation management costs (downward only), gas research and development, incremental maintenance initiatives (downward only), management audit consultant and implementation costs, property taxes, Reforming the Energy Vision, or REV, initiatives, Nuclear Electric Insurance Limited credits, credit and debit card fees, debt costs, power tax, 2017 Tax Act, exogenous costs and certain legislative, accounting, regulatory and tax related actions.

Regulatory deferrals in Maine include stranded costs, distribution revenue decoupling, power tax regulatory asset, 2017 Tax Act, environmental remediation, storm reserve accounting, electric thermal storage pilot costs, standard offer retainage costs, AMI opt-out program costs, AMI deferral costs, AMI legal/health proceeding costs, conservation program costs, demand side management costs, low income program costs, electric lifeline program costs, make-ready line extension costs, electric vehicle pilot program costs and transmission planning and related cost allocation.

Regulatory deferrals in Connecticut include electric and gas supply costs, PPAs, revenue decoupling, earnings sharing mechanism, system benefit charges, certain hardship bad debt expense, transmission revenue requirements, gas distribution integrity management program costs, gas system expansion costs, certain public policy costs, certain environmental remediation costs, major storm costs and certain legislative, accounting, regulatory and tax related actions.

Regulatory deferrals in Massachusetts include gas supply costs, gas supply-related bad debt costs, environmental remediation costs, arrearage management program costs, gas system enhancement program costs, energy efficiency program costs, 2017 Tax Act and certain other public policy costs.

Each of Networks' regulated utilities' rate plans, other than MNG, contain an RDM under which their actual energy delivery revenues are compared on a periodic basis with the authorized delivery revenues and the difference accrued, with interest, for refund to or recovery from customers, as applicable.

NYSEG, RG&E and UI are energy delivery companies and also provide energy supply as providers of last resort. Energy costs that are set on the wholesale markets are passed on to consumers. The difference between actual energy costs that are incurred and those that are initially billed are reconciled in a process that results in either immediate or deferred tariff adjustments. These procedures apply to other costs, which are in most cases exceptional, such as the effects of extreme weather conditions, environmental factors, regulatory and accounting changes and treatment of vulnerable customers, that are offset in the tariff process.

Pursuant to agreements with, or decisions of the NYPSC and the MPUC, Networks’ Maine and New York regulated utilities are each subject to a minimum equity ratio requirement that is tied to the capital structure assumed in establishing revenue requirements. Pursuant to these requirements, each of NYSEG, RG&E, CMP and MNG must maintain a minimum equity ratio equal to the ratio in its currently effective rate plan or decision measured using a trailing 13-month average. On a monthly basis, each utility must maintain a minimum equity ratio of no less than 300 basis points below the equity ratio used to set rates. The minimum equity ratio requirement has the effect of limiting the amount of dividends that can be paid if the minimum equity ratio is not maintained and can, under certain circumstances, require that AVANGRID contribute equity capital. For CMP and MNG, equity distributions that would result in equity falling below the minimum level are prohibited. For

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NYSEG and RG&E, equity distributions that would result in a 13-month average common equity less than the maximum equity ratio utilized for the earnings sharing mechanism, or ESM, are prohibited if the credit rating of NYSEG, RG&E, AVANGRID or Iberdrola are downgraded by a nationally recognized rating agency to the lowest investment grade with a negative watch or downgraded to noninvestment grade. UI, SCG, CNG and BGC may not pay dividends if paying such dividend would result in a common equity ratio lower than 300 basis points below the equity percentage used to set rates in the most recent distribution rate proceeding as measured using a trailing 13-month average calculated as of the most recent quarter end. In addition, UI, SCG, CNG and BGC are prohibited from paying dividends to their parent if the utility's credit rating, as rated by any of the three major credit rating agencies, falls below investment grade, or if the utility's credit rating, as determined by two of the three major credit rating agencies, falls to the lowest investment grade and there is a negative watch or review downgrade notice. We believe that these minimum equity ratio requirements do not present any material risk with respect to our performance, cash flow or ability to pay quarterly dividends. In the ordinary course, Networks utilities manage their capital structures to allow the maximum level of returns consistent with the levels of equity authorized to set rates, and accordingly, compliance with these requirements does not alter ordinary equity level management. The regulated utility subsidiaries are also prohibited by regulation from lending to unregulated affiliates.

Rates

In December 2016, PURA approved new distribution rate schedules for UI for three years, which became effective January 1, 2017 and, among other things, provide for annual tariff increases and an ROE of 9.10% based on a 50.00% equity ratio, continued UI's existing ESM pursuant to which UI and its customers share on a 50/50 basis all distribution earnings above the allowed ROE in a calendar year, continued the existing decoupling mechanism and approved the continuation of the requested storm reserve. Any dollars due to customers from the ESM continue to be first applied against any storm regulatory asset balance (if one exists at that time) or refunded to customers through a bill credit if such storm regulatory asset balance does not exist.

In December 2017, PURA approved new tariffs for SCG effective January 1, 2018, for a three-year rate plan with annual rate increases. The new tariffs also include an RDM and Distribution Integrity Management Program (DIMP) mechanism, ESM, the amortization of certain regulatory liabilities (most notably accumulated hardship deferral balances and certain accumulated deferred income taxes) and tariff increases based on a ROE of 9.25% and approximately 52.00% equity level. Any dollars due to customers from the ESM will be first applied against any environmental regulatory asset balance as defined in the settlement agreement (if one exists at that time) or refunded to customers through a bill credit if such environmental regulatory asset balance does not exist.

In December 2018, PURA approved new tariffs for CNG effective January 1, 2019 for a three-year rate plan with annual rate increases. The new tariffs continued the RDM and DIMP mechanism, ESM and tariff increases based on an ROE of 9.30% and an equity ratio of 54.00% in 2019, 54.50% in 2020 and 55.00% in 2021.

On January 18, 2019, the DPU approved new distribution rates for BGC. The distribution rate increase is based on an ROE of 9.70% and 54.00% equity ratio. The new tariffs provide for the implementation of an RDM and pension expense tracker and also provide that BGC will not file to change base distribution rates to become effective before November 1, 2021.

On June 15, 2016, the NYPSC approved NYSEG's and RG&E's 2016 Joint Proposal for a three-year rate plan for electric and gas service which balanced the varied interests of the signatory parties including but not limited to maintaining the companies' credit quality and mitigating the rate impacts to customers. The 2016 Joint Proposal reflected many customer benefits including: acceleration of the companies' natural gas leak prone main replacement programs and increased funding for electric vegetation management to provide continued safe and reliable service. The delivery rate increases for the last year of the 2016 Joint Proposal can be summarized as follows:

	May 1, 2018	
Utility	Rate Increase (Millions)	Delivery Rate Increase %
NYSEG Electric	$ 30	4.10 %
NYSEG Gas	$ 15	7.30 %
RG&E Electric	$ 26	5.70 %
RG&E Gas	$ 10	5.20 %

The allowed rate of return on common equity for NYSEG Electric, NYSEG Gas, RG&E Electric and RG&E Gas was 9.00%. The equity ratio for each company was 48.00%; however, the equity ratio was set at the actual up to 50.00% for earnings sharing calculation purposes. The customer share of any earnings above allowed levels increased as the ROE increased, with customers receiving 50.00%, 75.00% and 90.00% of earnings in rate year three (May 1, 2018 – April 30, 2019)

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above 9.75%, 10.25% and 10.75% ROE, respectively. The rate plans also included the implementation of a rate adjustment mechanism (RAM) designed to return or collect certain defined reconciled revenues and costs, new depreciation rates and continuation of the existing RDM for each business. The 2016 Joint Proposal reflected the recovery of deferred NYSEG Electric storm costs of approximately $262 million, of which $123 million is being amortized over ten years and the remaining $139 million is being amortized over five years. The proposal also continues reserve accounting for qualifying Major Storms ($21 million annually for NYSEG Electric and $3 million annually for RG&E Electric). Incremental maintenance costs incurred to restore service in qualifying divisions will be chargeable to the Major Storm Reserve provided they meet certain thresholds.

On June 22, 2020, NYSEG and RG&E filed a joint proposal with the NYPSC for a new three-year rate plan, or the 2020 Joint Proposal. On November 19, 2020, the NYPSC approved the 2020 Joint Proposal, with modifications to the rate increases at the two electric businesses. The modifications were made to limit the overall bill impacts, to a level at or below 2.00% per year, in consideration of the current impacts of COVID-19 on the economic climate. The effective date of new tariffs was December 1, 2020 with a make-whole provision back to April 17, 2020. The proposed rates facilitate the companies' transition to a cleaner energy future while allowing for important initiatives such as COVID-19 relief for customers and additional funding for vegetation management, hardening/resiliency and emergency preparedness. The rate plans continue the RAM designed to return or collect certain defined reconciled revenues and costs, have new depreciation rates and continue existing RDMs for each business. The 2020 Joint Proposal bases delivery revenues on an 8.80% ROE and 48.00% equity ratio; however, for the proposed earnings sharing mechanism, the equity ratio is the lower of the actual equity ratio or 50.00%. The below table provides a summary of the approved delivery rate increases and delivery rate percentages, including rate levelization and excluding energy efficiency, which is a pass-through, for all four businesses:

	Year 1		Year 2		Year 3	
Utility	**Rate Increase (Millions)**	**Delivery Rate Increase %**	**Rate Increase (Millions)**	**Delivery Rate Increase %**	**Rate Increase (Millions)**	**Delivery Rate Increase %**
NYSEG Electric	$ 34	4.6 %	$ 46	5.9 %	$ 36	4.2 %
NYSEG Gas	$ —	— %	$ 2	0.8 %	$ 3	1.6 %
RG&E Electric	$ 17	3.8 %	$ 14	3.2 %	$ 16	3.3 %
RG&E Gas	$ —	— %	$ —	— %	$ 2	1.3 %

In an order issued on February 19, 2020, the MPUC authorized an increase in CMP's distribution revenue requirement of $17 million, or approximately 7.00%, based on an allowed ROE of 9.25% and a 50.00% equity ratio. The rate increase was effective March 1, 2020. The MPUC also imposed a 1.00% ROE reduction (to 8.25%) for management efficiency associated with CMP's customer service performance following the implementation of its new billing system in 2017. The management efficiency adjustment will remain in effect until CMP has demonstrated satisfactory customer service performance on four specified service quality measures for a rolling average period of 18 months, which commenced on March 1, 2020. CMP is meeting the required rolling average benchmarks on all four of these quality measures.

The order provided additional funding for staffing increases, vegetation management programs and storm restoration costs, while retaining the basic tiered structure for storm cost recovery implemented in the 2014 stipulation. The MPUC order also retained the RDM implemented in 2014. The order denied CMP's request to increase rates for higher costs associated with services provided by its affiliates and ordered the initiation of a management audit to evaluate whether CMP's current management structure, and the management and other services from its affiliates, are appropriate and in the interest of Maine customers. The management audit was commenced in July 2020 by the MPUC's consultants and is expected to conclude in 2021.

On May 17, 2016, the MPUC approved MNG's ten-year rate plan through April 30, 2026. The settlement structure for non-Augusta customers includes a 34.60% delivery revenue increase over five years with an allowed 9.55% ROE and 50.00% common equity ratio. The settlement structure for Augusta customers includes a ten-year rate plan with existing Augusta customers being charged rates equal to non-Augusta customers plus a surcharge which increases annually for five years. New Augusta customers will have rates set based on an alternate fuel market model. In year seven of the rate plan MNG will submit a cost of service filing for the Augusta area to determine if the rate plan should continue. This cost of service filing will exclude $15 million of initial 2012/2013 gross plant investment, however the stipulation allows for accelerated depreciation of these assets. If the Augusta area's cost of service filing illustrates results above a 14.55% ROE then the rate plan may cease, otherwise the rate plan would continue.

CMP's and UI's electric transmission rates are determined by a tariff regulated by the FERC and administered by ISO-NE. Transmission rates are set annually pursuant to a FERC authorized formula that allows for recovery of direct and allocated transmission operating and maintenance expenses, including return of and on investment in assets. The FERC currently

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provides an initial base ROE of 10.57% and additional incentive adders applicable to assets based upon vintage, voltage and other factors.

In September 2011, several New England governmental entities, including PURA, the Connecticut Attorney General and the Connecticut Office of Consumer Counsel filed a joint complaint with the FERC against ISO-NE and several New England Transmission Owners, or NETOs, (including CMP and UI) claiming that the current approved base ROE used in calculating formula rates for transmission service under the ISO-NE Open Access Transmission Tariff, or OATT, by the NETOs of 11.14% was not just and reasonable and seeking a reduction of the base ROE with refunds to customers for the 15-month refund periods beginning October 1, 2011 (Complaint I), December 27, 2012 (Complaint II), July 31, 2014 (Complaint III) and April 29, 2016 (Complaint IV).

Following various intermediate hearings, orders, and appellate decisions, on October 16, 2018, the FERC issued an order directing briefs and proposing a new methodology to calculate the NETOs ROE that is contained in NETOs' transmission formula rate on file at the FERC, or the October 2018 Order. The FERC proposed to use this new methodology to resolve Complaints I, II, III and IV filed by the New England state consumer advocates.

The proposed ROE methodology set forth in the October 2018 Order considers more than just the two-step discounted cash flow, or DCF, analysis adopted in the FERC order on Complaint I vacated by the Court. It uses four financial analyses (i.e., DCF, the capital-asset pricing model, expected earnings analysis and risk premium analysis) to produce a range of returns to narrow the zone of reasonableness when assessing whether a complainant has met its initial burden of demonstrating that the utility's existing ROE is unjust and unreasonable. The proposed ROE methodology establishes a range of just and reasonable ROEs of 9.60% to 10.99% and proposes a just and reasonable base ROE of 10.41% with a new ROE cap of 13.08%. Pursuant to the October 2018 Order, the NETOs filed initial briefs on the proposed methodology in all four Complaints on January 11, 2019 and replied to the initial briefs on March 8, 2019. On November 21, 2019, the FERC issued rulings on two complaints challenging the base return on equity for Midcontinent Independent System Operator, or MISO transmission owners. These rulings established a new zone of reasonableness based on equal weighting of the DCF and capital-asset pricing model for establishing the base return on equity. This resulted in a base return on equity of 9.88% as the midpoint of the zone of reasonableness. Various parties have requested rehearing of this decision. We cannot predict the outcome of this proceeding, and the potential impact it may have in establishing a precedent for our pending four Complaints.

Legislative and Regulatory Update

New England Clean Energy Connect

In 2018, the New England Clean Energy Connect, or NECEC, transmission project, proposed in a joint bid by CMP and Hydro-Québec, was selected by the Massachusetts electric distribution utilities (EDCs) and the Massachusetts Department of Energy Resources, or DOER, in the Commonwealth of Massachusetts's 83D clean energy Request for Proposal. The NECEC transmission project includes a 145-mile transmission line linking the electrical grids in Québec, Canada and New England. The project, which has an estimated cost of approximately $1.0 billion, will add 1,200 MW of transmission capacity to supply Maine and the rest of New England with power from reliable hydroelectric generation. As of December 31, 2020, we have spent approximately $180 million on the NECEC project.

On June 13, 2018, CMP entered into transmission service agreements, or TSAs, with the Massachusetts EDCs, and H.Q. Energy Services (U.S.) Inc., or HQUS, an affiliate of Hydro-Québec, which govern the terms of service and revenue recovery for the NECEC transmission project. Simultaneous with the execution of the TSAs with CMP, the EDCs executed certain PPAs with HQUS for sales of electricity and environmental attributes to the EDCs. On October 19, 2018, FERC issued an order accepting the TSAs for filing as CMP rate schedules effective as of October 20, 2018. On June 25, 2019, the Massachusetts DPU issued an Order approving the NECEC project long term PPAs and the cost recovery by the EDCs of the TSA charges. This Order was subsequently appealed by NextEra Energy Resources. On September 3, 2020, the Massachusetts Supreme Judicial Court denied NextEra Energy Resources' appeal of the DPU Order.

The NECEC project requires a Certificate of Public Convenience and Necessity, or CPCN, from the MPUC. On May 3, 2019, the MPUC issued an Order granting the CPCN for the NECEC project and approving a stipulation dated February 21, 2019, or the NECEC I Stipulation. Among other things, the NECEC I Stipulation provided for the transfer of the NECEC transmission project from CMP to NECEC Transmission LLC, a new subsidiary of Networks; the funding by NECEC Transmission LLC, CMP and HQUS of certain funds to provide benefits to the State of Maine totaling approximately $250 million during construction and over the 40-year useful life of the NECEC transmission project; and other commitments. The NECEC I Stipulation also required CMP, NECEC Transmission LLC and HQUS to enter into a support agreement reflecting, among other things, HQUS's commitment to fund certain of the funds to provide benefits to the State of Maine, or the Support Agreement.

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In compliance with the conditions set forth in the MPUC May 3, 2019 Order, in August 2019, CMP and NECEC Transmission LLC filed a joint petition in a new proceeding before the MPUC to, among other, obtain approval of the various affiliate transactions involved in the transfer of the NECEC project from CMP to NECEC Transmission LLC. On October 20, 2020, the MPUC issued an Order approving a stipulation dated July 30, 2020, entered into by CMP, NECEC Transmission LLC, and certain other parties to resolve all issues among them in connection with this proceeding, or the NECEC II Stipulation. In addition to addressing the transfer of the NECEC project from CMP to NECEC Transmission LLC, the NECEC II Stipulation contains further details regarding implementation of some of the commitments set forth in the NECEC I Stipulation.

On December 10, 2019, CMP submitted a petition to the FERC, seeking FERC's authorization to transfer the TSAs (FERC rate schedules) from CMP to NECEC Transmission LLC upon the project's transfer. On March 13, 2020, FERC authorized the transfer of the rate schedules.

On June 25, 2020, the parties to the TSAs executed the Second Amendment to the TSAs and Consent to Assignment, whereby the EDCs and HQUS consented to CMP's assignment of the TSAs to NECEC Transmission LLC. On October 2, 2020, NECEC Transmission LLC submitted notices of succession to the FERC to notify the FERC of the transfer of the seven TSAs from CMP to NECEC Transmission LLC effective as of the closing of the transfer. On October 2, 2020, CMP submitted a notice of cancellation notifying FERC of the prospective cancellation of the TSAs as CMP rate schedules. On November 30, 2020 and December 18, 2020, FERC accepted the notices of succession. On December 18, 2020, FERC also accepted CMP's notice of cancellation.

On December 29, 2020, CMP, NECEC Transmission LLC and HQUS executed the Support Agreement. In addition, Avangrid, Inc. issued the parent guarantees required pursuant to the NECEC I Stipulation and further described by the NECEC II Stipulation.

On January 4, 2021, CMP transferred the NECEC project to NECEC Transmission LLC pursuant to the terms of a transfer agreement dated November 3, 2020. Among other things, on that date, CMP assigned the TSAs to NECEC Transmission LLC.

The NECEC project requires certain permits, including environmental, from multiple state and federal agencies and a presidential permit from the U.S. Department of Energy authorizing the construction, operation, maintenance and connection of facilities for the transmission of electric energy at the international border between the United States and Canada. On January 8, 2020, the Maine Land Use Planning Commission, or LUPC, deliberated and granted the LUPC Certification for the NECEC. The Maine Department of Environmental Protection, or MDEP, granted Site Location of Development Act, Natural Resources Protection Act, and Water Quality Certification permits for the NECEC by an Order dated May 11, 2020. The MDEP Order has been appealed by certain intervenors. The appeals are currently pending before the Maine Board of Environmental Protection. Certain parties to the MDEP proceedings requested the stay of the MDEP permits during the pendency of the appeals. The motions to stay were denied by the MDEP Commissioner in August 2020. On November 2, 2020, a motion to stay the MDEP permits was filed before the Maine Superior Court by certain parties. In January 2021, the Maine Superior Court denied the motion for a stay. We cannot predict the outcome of these proceedings.

On November 6, 2020, the project received the required approvals from the Army Corps pursuant to Section 10 of the Rivers and Harbor Act of 1899 and Section 404 of the Clean Water Act. A complaint for declaratory and injunctive relief asking the court to vacate or remand the Section 404 Clean Water Act permit for the NECEC project filed by three environmental groups is currently pending before the District Court in Maine. A related request for preliminary injunction seeking to enjoin construction of the NECEC was denied by the District Court on December 16, 2020. That denial was appealed to the First Circuit Court of Appeals. On December 21, 2020, plaintiffs filed a motion for emergency injunction pending appeal in the District Court. The District Court denied that motion on December 23, 2020. On December 30, 2020, plaintiffs filed an emergency motion for injunction with the First Circuit Court seeking to enjoin construction in Segment 1 of the project pending their appeal of the District Court's denial of a preliminary injunction. On January 15, 2021, the First Circuit Court granted the motion temporarily enjoining construction in Segment 1 of the NECEC project. We cannot predict the outcome of these proceedings.

ISO-NE issued the final System Impact Study (SIS) for NECEC on May 13, 2020, determining the network upgrades required to permit the interconnection of NECEC to the ISO-NE system. On July 9, 2020, the project received the formal I.3.9 approval associated with this interconnection request. CMP, NECEC Transmission LLC and ISO-NE executed an interconnection agreement. With respect to the system upgrade required at the Seabrook Station, on October 13, 2020, Avangrid and NECEC Transmission LLC filed a Complaint with the FERC. On October 5, 2020, NextEra Energy Seabrook, LLC filed a Petition for Declaratory Order. Both proceedings are currently pending before FERC.

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On January 14, 2021, the Department of Energy issued a Presidential Permit granting permission to NECEC Transmission LLC to construct, operate, maintain and connect electric transmission facilities at the international border of the United States and Canada.

A complaint challenging the validity of NECEC Transmission LLC's leasehold interest in public land that will host a section of the NECEC project, granted by Maine's Bureau of Parks and Lands, is currently pending before the Maine Superior Court. We cannot predict the outcome of this proceeding.

In 2019, certain opponents of the NECEC began an effort to have a referendum ballot question to enact legislation (i.e., a Maine citizen initiative) entitled "Resolve, To Reject the New England Clean Energy Transmission Project," which, if passed by Maine voters, would have required the MPUC to amend its May 3, 2019 Order granting a CPCN for the project and deny the CPCN. On August 13, 2020, the Maine Supreme Judicial Court vacated a June 29, 2020 Maine Superior Court decision, held that the referendum is unconstitutional and remanded the case to the Maine Superior Court to enter a declaratory judgment. On August 21, 2020, the Maine Superior Court issued a declaratory judgment that the referendum fails to meet the constitutional requirements for inclusion on the ballot.

On September 16, 2020, a group of Maine voters submitted an application for a citizen referendum (i.e., a Maine citizen initiative) to enact legislation that, if enacted into law and found to be constitutional, would require the vote of 2/3 of all members elected to each House of the Maine Legislature to approve construction of a high-impact electric transmission line crossing or utilizing public lands, prohibit construction of a high impact electric transmission line in the Upper Kennebec Region and require the vote of 2/3 of all members elected to each House of the Maine Legislature for the lease by Maine's Bureau of Parks and Lands of public reserved lands for transmission lines and similar linear projects. On February 22, 2021, the Maine Secretary of State issued a decision finding that proponents of the initiative have gathered the constitutionally required number of signatures and that the referendum is valid for placement on the November 2021 ballot. We cannot predict the outcome of this citizen initiative.

At the municipal level, the project plans to apply for and obtain local approvals from organized towns gradually, based on the project's construction sequence and schedule. Seven towns have granted municipal approvals to date. Construction of the NECEC project started in January 2021 and commercial operation is expected in the second quarter of 2023.

Maine Government-Run Power Referendum

On September 18, 2020, a request was submitted to the Maine Secretary of State to initiate the process of placing a government-run power referendum on the ballot. We cannot predict the outcome of this request or any potential referendum.

CMP System Upgrades Due to Distributed Generation Demand

CMP has entered into certain interconnection agreements with distributed generation operators and/or developers. Due to the increased demand for solar distribution-side connections, certain reconfigurations of the grid and substation and systems upgrades may be necessary to prevent potential safety issues. CMP is analyzing the anticipated costs of the necessary upgrades and the distributed generation operations and/or developers responsibility for such costs under the interconnection agreements. We cannot predict the outcome of this matter, including any potential proceedings before the MPUC.

New England Clean Energy Request for Proposals

On May 25, 2017, UI entered into six 20-year PPAs, totaling approximately 32 MW with developers of wind and solar generation. These PPAs originated from a three-state Clean Energy RFP, and were entered into pursuant to PA 13-303, which provides that the net costs of the PPAs are recoverable through electric rates. The PPAs were approved by PURA on September 13, 2017.

On June 20, 2017, UI entered into twenty-two 20-year PPAs totaling approximately 72 MW with developers of wind and solar generation. These PPAs originated from an RFP issued by the DEEP under PA 15-107 1(b) which provides that the net costs of the PPAs are recoverable through electric rates. The PPAs were approved by PURA on September 7, 2017. One contract was terminated on October 24, 2017, resulting in UI having twenty-one remaining contracts from this solicitation totaling approximately 70 MW.

In October of 2018, UI entered into five PPAs totaling approximately 50 MW from developers of offshore wind and fuel cell generation. These PPAs originated from an RFP issued by DEEP, under PA 17-144 which provides that the net costs of the PPAs are recoverable through electric rates. The PPAs were filed for PURA approval on October 25, 2018. On December 19, 2018, PURA issued its final decision approving the five PPAs and approved UI's use of the non-bypassable federally mandated congestion charges for all customers to recover the net costs of the PPAs.

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On December 28, 2018, DEEP issued a directive to UI to negotiate and enter into PPAs with twelve projects, totaling approximately 12 million MWh, selected as a result of the Zero Carbon RFP issued by DEEP pursuant to PA 17-3, which provides that the net costs of the PPAs are recoverable through electric rates. One of the selected projects is the Millstone nuclear facility located in Waterford, Connecticut which is owned by Dominion Energy, Inc. The PPA with Dominion was executed and approved by PURA in September 2019. Of the eleven other projects, one dropped out and PPAs with nine other projects were executed and approved by PURA in November 2019. The remaining PPA has been executed and submitted for approval to PURA.

Pursuant to Connecticut Act Concerning the Procurement of Energy Derived from Offshore Wind, DEEP solicited proposals from providers of energy derived from offshore wind facilities that are Class I renewable energy sources for up to 2,000 MW in the aggregate. In 2020, Pursuant to Connecticut Act Concerning the Procurement of Energy Derived From Offshore Wind, UI entered into a PPA with Vineyard Wind, an affiliate of UI, to provide 804 MW of offshore wind through the development of its Park City Wind Project. Similar to the case with the zero carbon PPAs discussed above, the net costs of the PPAs are recoverable through electric rates.

Reforming the Energy Vision

In 2014, the NYPSC instituted its REV proceeding, the goals of which are to improve electric system efficiency and reliability, encourage renewable energy resources, support distributed energy resources, or DER, and empower customer choice. In this proceeding, the NYPSC is examining the establishment of a Distributed System Platform to manage and coordinate DER, and provide customers with market data and tools to manage their energy use. The NYPSC is also examining how its regulatory practices should be modified to incentivize utility practices to promote REV objectives. REV has been divided into two tracks, Track 1 for market design and technology, and Track 2 for regulatory reform. REV proposes regulatory changes that are intended to promote more efficient use of energy, deeper penetration of renewable energy resources such as wind and solar, and wider deployment of DER, such as micro grids, on-site power supplies and storage. Track 2 was undertaken in parallel with Track 1, and examines changes in current regulatory, tariff, market design and incentive structures to better align utility interests with achieving NYPSC's policy objectives. Our New York utilities are addressing related regulatory issues in their individual rate cases. A Track 2 order was issued in 2016 which included guidance related to the potential for earnings adjustment mechanisms, or EAMs, platform service revenues, innovative rate designs, and data utilization and security. In 2016, NYSEG and RG&E filed a proposal for the implementation of EAMs in the areas of system efficiency, energy efficiency, interconnections and clean air. The EAM is reflected in the rate plan approved in 2020.

In 2016, an initial DSIP was filed by NYSEG and RG&E and included information regarding the potential deployment of Automated Metering Infrastructure, or AMI. A separate petition for the cost recovery associated with full deployment of AMI was filed by NYSEG and RG&E. In March 2017, the NYPSC issued three separate REV-related orders. In July 2018, NYSEG and RG&E submitted an updated DSIP plan consistent with guidance received from the NY Department of Public Service. As of the end of 2018, both NYSEG and RG&E had deployed two energy storage projects each, consistent with the March 2017 NYPSC order requirements. In December 2018, the NYPSC staff submitted whitepapers on standby and buyback service rate design, future value stack compensation and capacity value compensation. The NYPSC ruled on the proposals set forth in the whitepapers on May 16, 2019. NYSEG and RG&E filed proposed standby and buyback rates with the NYPSC on September 24, 2019. The NYPSC also issued an order on value stack compensation for high-capacity-factor resources on December 12, 2019 modifying the treatment of certain high-capacity-factor DER in the Value Stack compensation framework. The modification per the December 12, 2019 Order became effective February 1, 2020. On March 19, 2020, the Commission issued an additional Order regarding Value Stack Compensation. The Order directs National Grid, NYSEG and RGE to reallocate capacity from closed tranches where available capacity remained due to projects being canceled since the issuance of the VDER Compensation Order, and to assign that capacity to a new Community Credit Tranche with compensation at 2 cents per kWh. The utilities must also continue to reallocate capacity to this new Tranche for the next six months when there are cancellations of projects that have received a Market Transition Credit (MTC) or Community Credit allocation. The new provisions per the March 19, 2020 Order became effective on May 1, 2020.

On May 14, 2020, the Commission issued an Order extending and expanding distributed solar incentives. In addition to authorizing the extension of and additional funding for the NY-Sun program, the Commission modified certain program rules related to the NY-Sun program and the VDER policy. As part of the ordered modifications, the Commission directed the electric utilities with VDER tariffs to add tariff language for a Remote Crediting program that will allow Value-Stack-eligible generation resources to distribute the credits they receive for generation injected into the utility system to the utility bills of multiple, separately sited, non-residential customers. The Commission ordered the utilities to submit tariff leaves that implement the modifications associated with the Remote Crediting program to become effective November 1, 2020. Given the complexity of the program changes, the utilities have petitioned the Commission for tariffs filings to be made on February 15, 2021, with an effective date of March 1, 2021.

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New York State Department of Public Service Investigation of the Preparation for and Response to the March 2018 Winter Storms

In March 2018, following two severe winter storms that impacted over more than a million electric utility customers in New York, including 520,000 NYSEG and RG&E customers, the NYDPS commenced a comprehensive investigation of the preparation and response to those events by New York's major electric utility companies. The investigation was expanded in the spring of 2018 to include other 2018 New York spring storm events.

On April 18, 2019, the NYDPS staff issued a report or the 2018 Staff Report, of the findings from their investigation. The 2018 Staff Report identified 94 recommendations for corrective actions to be implemented in the utilities Emergency Response Plans, or ERPs. The report also identified potential violations by several of the utilities, including NYSEG and RG&E.

Also on April 18, 2019, the NYPSC issued an Order Instituting Proceeding and to Show Cause directed to all major electric utilities in New York, including NYSEG and RG&E. The order directs the utilities, including NYSEG and RG&E, to show cause why the NYPSC should not pursue civil and/or administrative penalties for the apparent failure to follow their respective ERPs as approved and mandated by the NYPSC. The NYPSC also directed the utilities, within 30 days, to address whether the NYPSC should mandate, reject or modify in whole or in part, the 94 recommendations contained in the 2018 Staff Report. On May 20, 2019, NYSEG and RG&E responded to the portion of the Order to Show Cause with respect to the recommendations contained in the 2018 Staff Report. A petition requesting Commission approval of a joint settlement agreement was filed with the Commission on December 17, 2019. On February 6, 2020, the Commission approved the joint settlement agreement, which allows the companies to avoid litigation and provides for payment by the companies of a $10.5 million penalty ($9.0 million by NYSEG and $1.5 million by RG&E). The settlement reached as part of the NYSEG Electric and RG&E Electric three-year rate plan provides for utilization of these penalties as rate modifiers by the establishment of regulatory liabilities that will be amortized over the three-year term of the rate plans for both NYSEG Electric and RG&E Electric.

New York State Public Service Commission Show Cause Order Regarding Greenlight Pole Attachments

On November 20, 2020, the NYPSC issued an Order Instituting Proceeding and to Show Cause, or the Show Cause Order, regarding alleged violations of the NYPSC's 2004 Order Adopting Policy Statement on Pole Attachments, dated August 6, 2004, or the 2004 Pole Order, by RG&E, Greenlight Networks, Inc., or Greenlight, and Frontier Communications, or Frontier. The alleged violations detailed in the Show Cause Order arise from Greenlight's installation of unauthorized and substandard communications attachments throughout RG&E's and Frontier's service territories. The Show Cause Order directs RG&E to show cause within 30 days why the NYPSC should not pursue civil and/or administrative penalties or initiate a prudency proceeding or civil action for injunctive relief for more than 11,000 alleged violations of the 2004 Pole Order. Under NY Public Service Law Section 25-a, each alleged violation carries a potential penalty of up to $100,000 where it can be shown that the violator failed to "reasonably comply" with a statute or NYPSC order.

RG&E, Greenlight and Frontier filed respective notices to initiate settlement negotiations with respect to the alleged violations and to extend the deadline for filing a response to the Show Cause Order. The NYPSC granted the extension requests initiating settlement discussions. We cannot predict the outcome of this matter.

CMP Customer Billing System Investigation and Class Action

On March 1, 2018, the MPUC issued a Notice of Investigation initiating a summary investigation into CMP's metering, billing, and customer communications practices. Due to the highly technical nature of CMP's customer billing system, on March 22, 2018 the MPUC issued an Order Initiating Audit commencing a forensic audit of CMP's customer billing system to identify any errors that have, or continue to be resulting in billing inaccuracies. On July 10, 2018, the MPUC issued an Order Modifying Scope of Audit, which expanded the scope of the audit to include CMP's customer communication practices. On December 20, 2018, the MPUC released the findings of the forensic audit of CMP's customer billing system and customer communication practices. On January 14, 2019, the MPUC issued an Order and Notice of Investigation initiating an investigation of CMP's metering and billing practices. On September 3, 2019, the MPUC issued its Bench Analysis in the Metering and Billing Investigation and supported the findings of the independent audit. On September 7, the OPA issued testimony and findings from a separate audit firm which agreed with certain portions of the independent audit and also stated that continuing problems still persist in CMP's billing system. CMP provided rebuttal testimony on October 16, 2019, and hearings were held in November 2019. On January 30, 2020, the MPUC Commissioners deliberated and based on the verbal discussion, the Commissioners indicated that CMP's Metering and Billing system is accurately reporting data; there is no systemic root cause for high usage complaints and errors related to CMP's metering and billing system are localized and random, not systemic. The Commissioners were critical of CMP finding that CMP failed to implement proper testing of the SmartCare system prior to go-live; CMP's implementation of SmartCare was imprudent; CMP's SmartCare implementation

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experienced an unacceptable number of billing errors, delayed or estimated bills, bill presentment issues and unreasonable time required to address these issues; and the implementation issues were compounded by inadequate staffing, resulting in the inability of customers to contact a CMP representative. On February 19, 2020, the MPUC issued an order in CMP's distribution rate case proceeding discussed above and on February 24, 2020 issued an order in the metering and billing investigation. Each order reflected the MPUC's conclusion that CMP's Metering and Billing system is accurately reporting data, there is no systemic root cause for high usage complaints and errors related to CMP's metering and billing system are localized and random, not systemic. However, the MPUC orders imposed a reduction of 100 basis points in ROE, as a management efficiency adjustment, to address the MPUC Commissioners' concerns with CMP's customer service implementation and performance following the launch of its new billing system in 2017. The management efficiency adjustment will remain in effect until CMP has demonstrated satisfactory customer service performance on four specified service quality measures for a rolling average period of 18 months, which commenced on March 1, 2020. CMP is meeting the required rolling average benchmarks on all four of these quality measures. On April 27, 2020, the MPUC issued an order requiring that CMP pay for the costs of the metering, billing and customer service practices audit, which were less than $1 million.

On August 16, 2018, an amended class action lawsuit was filed against CMP and the Company in the Cumberland County Superior Court on behalf of all CMP customers alleging that CMP's new billing software and metering system improperly overcharged customers. The plaintiff asserts this claim under the common law of unjust enrichment, breach of contract and fraudulent and intentional misrepresentation and seeks damages, punitive damages, attorney fees and costs. On September 21, 2018, we filed a Motion to Dismiss all of the claims that was opposed by the plaintiffs. On November 14, 2018, the plaintiff filed a motion for a preliminary and permanent injunction enjoining CMP from sending disconnection notices and/or disconnecting their power until this litigation is resolved. On February 22, 2019, the Cumberland County Superior Court ordered that the proceedings be stayed until November 1, 2019 to allow resolution of the MPUC's formal investigation of CMP's billing practices and denied the plaintiff's motion for a temporary restraining order. On July 30, 2019, Douglas Herling, chief executive officer of CMP, and Iberdrola, S.A. were added as defendants and additional claims alleging violations of the Racketeer Influenced and Corrupt Organizations Act were added to the case. CMP and the Company removed the case to federal court and filed a Motion to Dismiss on September 30, 2019. On November 22, 2019, upon agreement of the parties, CMP and the Company withdrew its motion to dismiss without prejudice and the plaintiffs were granted leave to file an amended complaint on or before January 31, 2020 to allow for the conclusion of the MPUC investigation into CMP's metering, billing, and customer communications practices. On January 30, 2020, the MPUC deliberated the metering, billing and customer communications investigation. The MPUC found that with exception of certain localized and random errors, CMP's billing system is working as designed and there were no systemic errors in billing. The decision also included an administrative process to address unresolved customer complaints of high bills. On January 31, 2020, the plaintiffs filed their third amended complaint. On February 28, 2020, CMP and the Company filed a Motion to Dismiss Plaintiff's Third Amended Complaint Without Prejudice or to Stay Proceedings Pending Plaintiffs' Exhaustion of Administrative Remedies which was denied on November 25, 2020. We cannot predict the outcome of this class action lawsuit.

CMP Disconnection Notices Investigation

On January 22, 2020, the MPUC initiated an investigation into certain customer notices of CMP that reference service disconnection. The purpose of this investigation is (1) to determine whether CMP provided customers notices that violated Commission rules or that contained incorrect or misleading information and, (2) if it did, to order CMP to show cause why it should not be subject to administrative penalties for those violations. CMP has responded to data requests and party testimony was filed on March 2, 2020. Hearings were suspended to allow for settlement discussions that began in March 2020. On April 27, 2020, CMP filed a proposed stipulation to resolve all issues in this proceeding and requested that the Hearing Examiner convene a settlement conference to discuss the proposed Stipulation. A settlement conference was held on April 30, 2020 and May 5, 2020. A revised Stipulation was filed with the MPUC on May 8, 2020, and was deliberated and rejected by the MPUC on June 2, 2020, due to the Office of the Public Advocate's lack of authority to perform the tasks required by the revised Stipulation. A written order rejecting the Stipulation was issued on June 8, 2020. Following submission of an offer of proof by the customer-intervenors, comments by CMP and the Office of the Public Advocate and recommendations by the MPUC staff, the MPUC issued an Order on August 5, 2020, accepting CMP's consent to a finding that CMP violated a MPUC rule and payment of an administrative penalty less than $1 million.

CMP Revenue Decoupling Mechanism Investigation

On June 9, 2020, the MPUC issued a Notice of Investigation to open an investigation into the effects of the COVID-19 pandemic on customers' electricity-usage patterns and whether CMP's RDM should be suspended for the annual distribution rate change that is expected to occur on July 1, 2021, for electricity delivered in calendar year 2020. On June 24, 2020, the MPUC issued a procedural order setting forth initial steps in this proceeding. On July 21, 2020, CMP filed testimony presenting electricity-usage data for its two RDM classes (residential and commercial/industrial) through June 2020, along with testimony explaining the data and the reasons why the current RDM should remain in place without alteration. On August 11, 2020, a

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technical conference was held and CMP filed electricity-usage data on August 20, 2020. On December 16, 2020, the MPUC issued an Order determining that CMP's RDM should not be suspended and the RDM should be simplified by merging the two RDM classes into a single class. There is no impact to existing RDM balances as a result of the order issued by the MPUC.

CMP Annual Compliance Filing

On March 31, 2020, CMP submitted its annual compliance filing in accordance with the Commission's February 19, 2020 decision in *Public Utilities Commission, Investigation into Rates and Revenue Requirements of Central Maine Power Company*. In its filing, CMP proposed an overall increase in its distribution delivery revenues of $14.5 million, or 5.6% over current rates, effective July 1, 2020. This increase is due primarily to storm costs and RDM, which are offset by excess deferred income taxes. As a result of the COVID-19 pandemic, CMP's filing proposed cost recovery provisions designed to minimize the rate impacts on customers including, without limitation, an extended period for recovery of storm costs incurred in 2019. On June 18, 2020, the MPUC approved a partial stipulation, which adopted CMP's proposal to recover 2019 major storm costs over a three-year period commencing on July 1, 2020, but denied CMP's proposed recovery of costs related to its legacy billing system, which are less than $1 million. On June 18, 2020, CMP made a compliance filing with revised tariffs, which was approved by the MPUC on June 23, 2020, and the new rates took effect on July 1, 2020.

CMP Standard Offer Uncollectible Adder Investigation

On August 19, 2020, the MPUC issued a Notice of Investigation to open an investigation into the whether the uncollectible adder to CMP's standard offer retainage account for the residential and small non-residential standard offer customer class should be increased for standard offer electricity-supply rates that will go into effect January 1, 2022. The investigation will also include a review of CMP's credit and collection practices. A technical conference was held on October 8, 2020. On December 4, 2020, the MPUC Staff issued a Bench Analysis proposing an imprudent disallowance adjustment of approximately $4.5 million to the uncollectible adder retainage account reflecting CMP's alleged imprudence in its implementation of its new billing system and credit and collection practices. CMP filed testimony in response to the Bench Analysis on February 5, 2021. We cannot predict the outcome of this matter.

Tax Act Proceedings

The Tax Act significantly changed the federal taxation of business entities including, among other things, implementing a federal corporate tax rate decrease from 35% to 21% for tax years beginning after December 31, 2017. Reductions in accumulated deferred income tax balances due to the reduction in the corporate income tax rates will result in amounts previously and currently collected from utility customers for these deferred taxes to be refundable to such customers, generally through reductions in future rates. The NYPSC, MPUC, PURA, DPU and the FERC have instituted separate proceedings in New York, Maine, Connecticut, Massachusetts and the FERC, respectively, to review and address the implications of the Tax Act on the utilities.

In New York, the NYPSC issued an order requiring sur-credits to return benefits reflecting the lower effective tax rate of 21% to customers effective October 1, 2018. For NYSEG Gas, RG&E Electric and RG&E Gas the NYPSC also required the sur-credit to include the return to customers of the January - September 2018 Tax Act savings over three years. The remaining deferred amounts associated with the recognition of the effects of the Tax Act are being used as rate moderators in the approved 2020 Joint Proposal. In Connecticut, UI and SCG expect Tax Act savings to be deferred until they are reflected in tariffs in a future rate case, unless PURA determines otherwise. CNG and BGC include Tax Act savings in their current rate plans. In Maine, CMP adjusted rates beginning July 1, 2018 to pass back to customers the Tax Act savings after offsetting for recovery of deferred 2017 storm costs and in the general rate case filing with the MPUC is proposing to use savings arising out of the Tax Act to minimize rate increases while making its electric system more reliable. In its February 19, 2020 order in the CMP's distribution rate case proceeding discussed above, the MPUC approved CMP's distribution related accumulated deferred income tax balances associated with the Tax Act as well as the authorized amortization periods for the return of regulatory liabilities and the recovery regulatory assets. At the FERC, CMP transmission and UI transmission adjusted their tariffs in June 2018 to reflect the income statement value of Tax Act savings.

Power Tax Audits

Previously, CMP, NYSEG and RG&E implemented Power Tax software to track and measure their respective deferred tax amounts. In connection with this change, we identified historical updates needed with deferred taxes recognized by CMP, NYSEG and RG&E and increased our deferred tax liabilities, with a corresponding increase to regulatory assets, to reflect the updated amounts calculated by the Power Tax software. Since 2015, the NYPSC and MPUC accepted certain adjustments to deferred taxes and associated regulatory assets for this item in recent distribution rate cases, resulting in regulatory asset balances of approximately $148 million and $153 million, respectively, for this item at December 31, 2020 and December 31, 2019.

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In 2017, audits of the power tax regulatory assets were commenced by the NYPSC and MPUC. On January 11, 2018, the NYPSC issued an order opening an operations audit on NYSEG and RG&E and certain other New York utilities regarding tax accounting. The NYPSC audit report is expected to be completed during 2021. In January 2018, the MPUC published the Power Tax audit report with respect to CMP, which indicated the auditor was unable to verify the asset "acquisition value" used to calculate the Power Tax regulatory asset. CMP responded to the audit report in its rate case filing by providing additional acquisition value support and, therefore, requested full recovery of the Power Tax regulatory asset. The MPUC had an outside firm conduct an audit of CMP's filing and acquisition values, and the auditor found CMP's information was reasonable. In September 2019, CMP filed a report in response to the audit report and addressed MPUC staff concerns. On December 17, 2019, CMP filed a stipulation with the MPUC providing for recovery of the Power Tax regulatory asset and adjusting the carrying costs values for the period of July 1, 2017 through June 30, 2019. The MPUC approved the stipulation on January 21, 2020 and CMP began collecting the Power Tax Regulatory asset in July 2020 over 32.5 years.

Weather Impact

The demand for electric power and natural gas is affected by seasonal differences in the weather. Statewide demand for electricity in New York, Connecticut and Maine tends to increase during the summer months to meet cooling load or in winter months for heating load while statewide demand for natural gas tends to increase during the winter to meet heating load. Market prices for both electricity and natural gas reflect the demand for these products and their availability at that time. Overall operating results of Networks do not fluctuate due to commodity costs as the regulated utilities generally recover those costs coincident with their expense or defer any differences for future recovery. Networks has historically sold less power when weather conditions are milder and may also be affected by severe weather, such as ice and snow storms, hurricanes and other natural disasters which may result in additional cost or loss of revenues that may not be recoverable from customers. However, Networks' regulated utilities, other than MNG, have approved RDMs as part of the NYPSC, PURA and MPUC rate plans in place for the period ended December 31, 2020. The RDM allows the regulated utilities to defer for future recovery and shortfall from projected revenues whether due to weather, economic conditions, conservation or other factors.

New Renewable Source Generation

Under Connecticut Public Act 11-80, or PA, Connecticut electric utilities are required to enter into long-term contracts to purchase Connecticut Class I Renewable Energy Certificates, or RECs, from renewable generators located on customer premises. Under this program, UI is required to enter into contracts totaling approximately $200 million in commitments over approximately 21 years. The obligations were initially expected to phase in over a six-year solicitation period and to peak at an annual commitment level of about $13.6 million per year after all selected projects are online. PA 17-144, PA 18-50 and PA 19-35 extended the original six-year solicitation period of the program by adding seventh, eighth, ninth, and tenth years, and increased the original funding level of this program by adding up to $64 million in additional commitments by UI. UI expects to partially mitigate the cost of these contracts through the resale of the RECs. PA 11-80 provides that the remaining costs (and any benefits) of these contracts, including any gain or loss resulting from the resale of the RECs, are fully recoverable from (or credited to) customers through electric rates.

Pursuant to Connecticut statute, in January 2017, UI entered into a master agreement with the Connecticut Green Bank to procure Connecticut Class I RECs produced by residential solar installations in 15-year tranches, with a final tranche to commence no later than 2022. UI's contractual obligation is to procure 20% of RECs produced by about 255 MW of residential solar installations. Connecticut statutes provides that the net costs (and any benefits) of these contracts, including any gain or loss resulting from the resale of the RECs, are fully recoverable from (or credited to) customers through electric rates.

Pursuant to Maine law, the MPUC is authorized to conduct periodic requests for proposals seeking long-term supplies of energy, capacity or RECs, from qualifying resources. The MPUC is further authorized to order Maine transmission and distribution utilities to enter into contracts with sellers selected from the MPUC's competitive solicitation process. Pursuant to a MPUC Order dated October 8, 2009, CMP entered into a 20-year agreement with Evergreen Wind Power III, LLC, on March 31, 2010, to purchase capacity and energy from Evergreen's 60 Megawatt (MW) Rollins wind farm. CMP's purchase obligations under the Rollins contract are approximately $7 million per year. Pursuant to a MPUC Order dated December 18, 2017, CMP entered into a 20-year agreement with Dirigo Solar, LLC on September 10, 2018, to purchase capacity and energy from multiple Dirigo solar facilities throughout CMP's service territory. CMP's purchase obligations under the Dirigo contract will increase as additional solar facilities are brought on line, eventually reaching a level of approximately $4 million per year. Pursuant to a MPUC Order dated November 6, 2019, CMP entered into a 20-year agreement with Maine Aqua Ventus I GP LLC on December 9, 2019, to purchase capacity and energy from an off-shore wind under development near Monhegan Island, Maine. CMP's purchase obligations under the Maine Aqua Ventus contract will be approximately $12 million per year once the facility begins commercial operation. Pursuant to Maine law, the MPUC must conduct two competitive solicitation processes to procure, in the aggregate, an amount of energy or RECs from Class 1A resources that is equal to 14% of retail electricity sales in the State during calendar year 2018, or 1.715 million MWh. Of that 14% total, the MPUC must acquire at least 7%, but not more than 10%, through contracts approved by December 31, 2020 (Tranche 1), and acquire the remaining amount (Tranche 2)

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through a solicitation process that started on January 15, 2021. Pursuant to Maine law, on September 23, 2020, the MPUC issued an order accepting term sheet proposals from 14 projects in CMP's service territory and ordered the MPUC Staff and CMP to negotiate and execute contracts to implement the accepted terms. As of December 31, 2020, one project has withdrawn from the solicitation and CMP has executed contracts with 5 of the remaining 13 projects for 20-year terms. In accordance with MPUC orders, CMP either sells the purchased energy from these facilities in the ISO New England markets or periodically auctions the purchased output to wholesale buyers in the New England regional market. Under Maine law, CMP is assured recovery of any differences between power purchase costs and achieved market revenues through a reconcilable component of its retail distribution rates. Although the MPUC has conducted multiple requests for proposals under Maine law, and has tentatively accepted long-term proposals from other sellers, these selections have not yet resulted in additional currently effective contracts with CMP.

Renewables

Renewable Energy Incentives

Renewables relies, in part, upon government policies that support utility-scale renewable energy and enhance the economic feasibility of development and operating wind energy projects in regions in which Renewables operates or plans to develop and operate renewable energy facilities.

On December 20, 2019, the Setting Every Community up for Retirement Enhancement Act of 2019 was signed into law that extended the PTC and investment tax credit, or ITC, options for wind facilities to 60% of the full credit for facilities commencing construction in 2020, leaving in place phased down credits for projects commencing in years prior to 2020.

The 2020 Consolidated Appropriations Act provides favorable extensions to renewable income tax incentives. Onshore and offshore wind projects may now claim a 60% PTC for projects commencing construction in 2020 and 2021. In addition, offshore wind may now elect to claim a 30% ITC for projects commencing construction through 2025. Onshore wind can claim an 18% ITC for projects commencing construction in 2020 or 2021, with no ITC thereafter.

Solar projects commencing construction before 2020 may claim a 30% ITC. Solar projects that commence construction from 2020-2022 may claim a 26% ITC, projects commencing construction in 2023 may claim a 22% ITC and projects commencing thereafter may claim a 10% ITC. The ITC statutes require solar projects be completed by the end of 2025 in order to claim the applicable ITCs.

The Internal Revenue Service, or IRS, provided continuity safe harbor guidance that requires renewable projects to be completed within four years of the year construction commences. Any projects that do not meet this requirement will fall outside of the safe harbor and be subject to IRS scrutiny with regard to the date construction commenced. In 2020, the IRS allowed projects beginning construction in 2016 or 2017 an additional year (five years total) to complete construction. In late December 2020, the IRS issued a notice giving onshore wind projects on federal lands, with transmission permit requirements, and offshore wind projects 10 years to complete construction.

Results of Operations

The following table sets forth financial information by segment for each of the periods indicated. During the year ended December 31, 2020, we identified various immaterial corrections to prior periods primarily related to property, plant and equipment and deferred tax liabilities that originated in prior periods. Accordingly, we have reflected the correction of these prior period amounts in the periods in which they originated.

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	Year Ended December 31, 2020			
	Total	Networks	Renewables	Other(1)
	(in millions)			
Operating Revenues	**$ 6,320**	**$ 5,188**	**$ 1,132**	**$ —**
Operating Expenses				
Purchased power, natural gas and fuel used	1,379	1,125	254	—
Operations and maintenance	2,466	2,038	429	(1)
Depreciation and amortization	987	592	394	1
Taxes other than income taxes	619	556	71	(8)
Total Operating Expenses	**5,451**	**4,311**	**1,148**	**(8)**
Operating Income	**869**	**877**	**(16)**	**8**
Other Income (Expense)				
Other income (expense)	18	15	15	(12)
Losses (earnings) from equity method investments	(3)	10	(13)	—
Interest expense, net of capitalization	(316)	(234)	(7)	(75)
Income Before Income Tax	**568**	**668**	**(21)**	**(79)**
Income tax expense (benefit)	29	120	(80)	(11)
Net Income (Loss)	**539**	**548**	**59**	**(68)**
Net loss (income) attributable to noncontrolling interests	42	(2)	44	—
Net Income (Loss) Attributable to Avangrid, Inc.	**$ 581**	**$ 546**	**$ 103**	**$ (68)**

	Year Ended December 31, 2019			
	Total	Networks	Renewables	Other(1)
	(in millions)			
Operating Revenues	**$ 6,336**	**$ 5,164**	**$ 1,184**	**$ (12)**
Operating Expenses				
Purchased power, natural gas and fuel used	1,509	1,249	260	—
Operations and maintenance	2,305	1,932	392	(19)
Depreciation and amortization	933	549	383	1
Taxes other than income taxes	591	544	56	(9)
Total Operating Expenses	**5,338**	**4,274**	**1,091**	**(27)**
Operating Income	**998**	**890**	**93**	**15**
Other Income (Expense)				
Other income (expense)	121	(15)	155	(19)
Earnings (losses) from equity method investments	3	11	(8)	—
Interest expense, net of capitalization	(310)	(269)	(14)	(27)
Income Before Income Tax	**812**	**617**	**226**	**(31)**
Income tax expense (benefit)	169	152	28	(11)
Net Income (Loss)	**643**	**465**	**198**	**(20)**
Net loss (income) attributable to noncontrolling interests	24	(2)	26	—
Net Income (Loss) Attributable to Avangrid, Inc.	**$ 667**	**$ 463**	**$ 224**	**$ (20)**

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	Year Ended December 31, 2018			
	Total	Networks	Renewables	Other(1)
	(in millions)			
Operating Revenues	**$ 6,477**	**$ 5,310**	**$ 1,138**	**$ 29**
Operating Expenses				
Purchased power, natural gas and fuel used	1,653	1,423	228	2
Operations and maintenance	2,258	1,887	369	2
Loss from assets held for sale	16	—	—	16
Depreciation and amortization	855	503	352	—
Taxes other than income taxes	579	529	57	(7)
Total Operating Expenses	**5,361**	**4,342**	**1,006**	**13**
Operating Income (Loss)	**1,116**	**968**	**132**	**16**
Other Income (Expense)				
Other (expense) income	(66)	(79)	18	(5)
Earnings (losses) from equity method investments	10	13	(3)	—
Interest expense, net of capitalization	(303)	(260)	(33)	(10)
Income Before Income Tax	**757**	**642**	**114**	**1**
Income tax expense (benefit)	167	167	(32)	32
Net Income (Loss)	**590**	**475**	**146**	**(31)**
Net income attributable to noncontrolling interests	(3)	(2)	(1)	—
Net Income (Loss) Attributable to Avangrid, Inc.	**$ 587**	**$ 473**	**$ 145**	**$ (31)**

(1)Other amounts represent Corporate, Gas (only in 2018) and intersegment eliminations.

Comparison of Period to Period Results of Operations

Operating revenues decreased by less than 1%, from $6,336 million for the year ended December 31, 2019, to $6,320 million for the year ended December 31, 2020.

Purchased power, natural gas and fuel used decreased by 9%, from $1,509 million for the year ended December 31, 2019, to $1,379 million for the year ended December 31, 2020.

Operations and maintenance increased by 7%, from $2,305 million for the year ended December 31, 2019, to $2,466 million for the year ended December 31, 2020.

Details of the period to period comparison are described below at the segment level.

Year Ended December 31, 2020 Compared to the Year Ended December 31, 2019

Networks

Operating revenues for the year ended December 31, 2020 increased by $24 million, or less than 1%, from $5,164 million for the year ended December 31, 2019, to $5,188 million. Electricity and gas revenues increased by $60 million, primarily due to the impact of increased customer rates for the year ended December 31, 2020 compared to the same period of 2019 and increased by $26 million primarily due to make whole period revenue adjustment from new rate case activity in NY. Electricity and gas revenues also increased by $24 million due to higher transmission revenues, negative revenues adjustments in 2019 totaling $16 million related to earnings sharing, net plant reconciliation and other regulatory deferrals and $3 million of other increases. These were offset by a decrease of $10 million from a pension deferral write-off and a $10 million decrease from the inability to charge late payment fees due to regulatory orders. Electricity and gas revenues changed due to the following items that have offsets within the income statement: a decrease of $124 million in purchased power and purchased gas (offset in purchased power), a decrease of $42 million which is offset in income taxes. These were offset by an increase of $69 million of amortizations that are offset in operating expenses and an increase of $12 million in taxes other than income taxes.

Purchased power, natural gas and fuel used for the year ended December 31, 2020 decreased by $124 million, or 10%, from $1,249 million for the year ended December 31, 2019, to $1,125 million. The decrease is primarily driven by a $131 million decrease in average commodity prices and an overall decrease in electricity and gas units procured due to a decline in degree days offset by a $7 million increase in other power supply purchases in the period.

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Operations and maintenance during the year ended December 31, 2020 increased by $106 million, or 5%, from $1,932 million for the year ended December 31, 2019, to $2,038 million. The increase is driven by $22 million in increased salaries due to additional headcount offset by favorable capitalized labor, a $10 million increase in outage restoration costs, a $7 million increase in uncollectible expenses, a $6 million increase due to additional cleaning and personal protective equipment resulting from COVID-19, an increase of $69 million in amortizations (which are offset in revenue) and a $2 million increase in Other. These were offset by a decrease of $5 million in unfavorable write-off of deferred storm costs in the year ended December 31, 2019, which did not recur in 2020 and a decrease of $5 million in favorable overhead.

Renewables

Operating revenues for the year ended December 31, 2020 decreased by $52 million, or 4% from $1,184 million for the year ended December 31, 2019, to $1,132 million. The decrease in operating revenues was primarily due to unfavorable MtM changes of $69 million on energy derivative transactions entered for economic hedging purposes, a decrease of $26 million in merchant pricing, a $34 million decrease in thermal revenue driven by lower volumes and average prices in the period, and a $7 million decrease in other revenues (offset in operating expenses). These were offset by an increase of $85 million driven by wind generation output increase of 1,790 GWh from existing and new capacity in the current period.

Purchased power, natural gas and fuel used for the year ended December 31, 2020 decreased by $6 million, or 2%, from $260 million for the year ended December 31, 2019, to $254 million. The decrease is primarily driven by a decrease of $28 million in thermal purchases driven by the decrease in volume and unit cost in the period, offset by an increase of $5 million in power purchases, $5 million in RECs and unfavorable MtM changes on derivatives of $11 million due to market price changes in the period.

Operations and maintenance for the year ended December 31, 2020 increased by $37 million, or 9%, from $392 million for the year ended December 31, 2019, to $429 million. The increase is primarily due to $36 million of increased costs resulting from higher personnel and maintenance costs, which are primarily attributed to new capacity. Additionally, operations and maintenance expense increased by $11 million driven by a favorable asset retirement obligation adjustment in 2019, offset by a $3 million decrease due to a favorable provision release in the year ended December 31, 2020, and $7 million in lower other expenses (offset in operating revenues).

Depreciation, Amortization and Impairment

Depreciation, amortization and impairment expenses for the year ended December 31, 2020 increased by $54 million, or 6%, from $933 million for the year ended December 31, 2019, to $987 million. The increase is driven by $71 million from plant additions in Networks and Renewables in the period, an increase in lease amortizations of $3 million and a $4 million increase due to a favorable asset retirement obligation adjustment for the year ended December 31, 2019, offset by a $24 million decrease of accelerated depreciation from the repowering of wind farms in Renewables.

Other Income and (Expense) and Equity Earnings

Other income and (expense) and equity earnings for the year ended December 31, 2020 decreased by $109 million, or 88%, from $124 million for the year ended December 31, 2019, to $15 million. The decrease is primarily due to a $134 million gain from the sale of assets in Renewables recorded in 2019 and $6 million of unfavorable equity earnings in the period, offset by a $20 million gain from the sale of assets in the year ended December 31, 2020 in Renewables and Networks and an $11 million penalty incurred in the same period of 2019 in Networks.

Interest Expense, Net of Capitalization

Interest expense for the year ended December 31, 2020 increased by $6 million or 2% from $310 million for the year ended December 31, 2019, to $316 million. Networks had an $18 million decrease in carrying costs on regulatory deferrals during the period. Renewables interest expense decreased by $5 million due to lower average debt balances in the current period. This is offset by an interest expense increase in Other of $28 million primarily from new debt issued in 2020 and 2019.

Income Tax Expense

The effective tax rate, inclusive of federal and state income tax, for the year ended December 31, 2020 was 5.1%, which is below the federal statutory tax rate of 21%, primarily due to the recognition of production tax credits associated with wind production and the effect of the excess deferred tax amortization resulting from the Tax Act (offset in revenue). The effective tax rate, inclusive of federal and state income tax, for the year ended December 31, 2019, was 20.8%, which is below the federal statutory tax rate of 21%, primarily due to the recognition of production tax credits associated with wind production and favorable discrete tax adjustments.

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Year Ended December 31, 2019 Compared to the Year Ended December 31, 2018

Networks

Operating revenues for the year ended December 31, 2019 decreased by $146 million, or 3%, from $5,310 million for the year ended December 31, 2018, to $5,164 million. Operating revenues changed due to the following items that have offsets within the income statement: decrease of $174 million in purchased power and purchased gas in the same period (offset in purchased power), $43 million decrease in recoverable pension expense (offset in other expenses), an $11 million increase in property taxes (offset in taxes other than income taxes) and a $19 million increase in pass-through components, which are offset in operating expenses. Electricity and gas revenues increased by $48 million, primarily due to the impact of increased customer rates for the year ended December 31, 2019 compared to the same period of 2018. Electric and gas revenues decreased by $12 million due to higher earnings sharing during 2019 compared to the same period of 2018 and a $5 million increase in other.

Purchased power, natural gas and fuel used for the year ended December 31, 2019 decreased by $174 million, or 12%, from $1,423 million for the year ended December 31, 2018, to $1,249 million. The decrease is primarily driven by a $164 million decrease in average commodity prices and an overall decrease in electricity and gas units procured due to a decline in degree days combined with a $10 million decrease in other power supply purchases in the period, offset within operating revenues.

Operations and maintenance during the year ended December 31, 2019 increased by $45 million, or 2%, from $1,887 million for the year ended December 31, 2018, to $1,932 million. Operations and maintenance expense changed due to a $19 million increase in pass through components (offset in revenue), a $12 million increase in non-deferrable outage restoration costs and an $18 million increase in personnel costs (net of capitalized staff costs) driven by headcount and overtime increases, offset by $3 million decrease in other.

Renewables

Operating revenues for the year ended December 31, 2019 increased by $46 million, or 4% from $1,138 million for the year ended December 31, 2018, to $1,184 million. Operating revenues increased due to favorable MtM changes of $99 million on energy derivative transactions entered into for economic hedging purposes, an increase in wind production of $22 million from new capacity, an increase in thermal revenues of $28 million driven by higher average prices in the period and increased sales from Klamath (28% volume increase). These items were offset by an $69 million decrease due to prices decreasing 14% through a combination of lower merchant pricing, an adverse PPA mix, expired PPA contracts; a gain of $30 million from the sale of claims from a bankruptcy proceeding with a customer recorded in 2018; and a $4 million decrease in other revenues.

Purchased power, natural gas and fuel used for the year ended December 31, 2019 increased by $32 million, or 14%, from $228 million for the year ended December 31, 2018, to $260 million. The increase is primarily driven by an increase of $28 million and $6 million in power and thermal purchases, respectively, driven by the increase in volume and unit cost in the period, offset by favorable MtM changes on derivatives of $2 million due to market price changes in the current period.

Operations and maintenance for the year ended December 31, 2019 increased by $23 million or 6% from $369 million for the year ended December 31, 2018, to $392 million. The increase is primarily due to $34 million of increased costs resulting from headcount increases and higher maintenance costs, which are primarily attributed to growth and enhanced maintenance to increase availability. Additionally, operations and maintenance expense decreased by $11 million driven by an asset retirement obligation adjustment in 2019.

Depreciation, Amortization and Impairment

Depreciation, amortization and impairment expenses for the year ended December 31, 2019 increased by $62 million or 7% from $871 million for the year ended December 31, 2018, to $933 million. The increase is primarily due to increases of $47 million as a result of plant additions in Networks and Renewables in the period, increase of $31 million driven by accelerated depreciation from the repowering of wind farms in Renewables, offset by a loss of $16 million from remeasurement of assets held for sale driven by final purchase price negotiations and certain related working capital adjustments of Gas business recorded in 2018.

Other Income and (Expense) and Equity Earnings

Other income and (expense) and equity earnings for the year ended December 31, 2019 increased by $180 million, or 321%, from $(56) million for the year ended December 31, 2018, to $124 million, primarily due to a $30 million favorable change in allowance for funds used during construction, $43 million of favorable pension and other post-retirement expense in the period in Networks driven by lower actuarial loss amortization (offset in Networks revenue) and a $134 million gain from the sale of assets during the period in Renewables, offset by a decrease of $7 million in equity earnings, $11 million settlement

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penalty with the NYDPS in Networks and a decrease of $10 million driven by the write-off of certain development projects in Renewables in the current period.

Interest Expense, Net of Capitalization

Interest expense for the year ended December 31, 2019 increased by $7 million or 2% from $303 million for the year ended December 31, 2018, to $310 million. Networks had a $9 million increase in interest expense due to a higher average outstanding balance of debt in the period, partially offset by an $8 million decrease in carrying costs on regulatory deferrals. Other added $26 million of interest expense from new debt issued in 2019. This is offset by an interest expense decrease in Renewables of $20 million due to lower average debt balances in the current period.

Income Tax Expense

The effective tax rate, inclusive of federal and state income tax, for the year ended December 31, 2019 was 20.8%, which is below the federal statutory tax rate of 21%, primarily due to the recognition of production tax credits associated with wind production and favorable discrete tax adjustments. The effective tax rate, inclusive of federal and state income tax, for the year ended December 31, 2018, was 22.1%, which is higher than the 21% statutory federal income tax rate, predominantly due to $21 million of tax expense recorded in connection with the disposal of the Gas business and discrete adjustments recorded during the period, offset by the recognition of production tax credits associated with wind production.

Non-GAAP Financial Measures

To supplement our consolidated financial statements presented in accordance with U.S. GAAP, we consider adjusted net income and adjusted earnings per share as non-GAAP financial measures that are not prepared in accordance with U.S. GAAP. The non-GAAP financial measures we use are specific to AVANGRID and the non-GAAP financial measures of other companies may not be calculated in the same manner. We use these non-GAAP financial measures, in addition to U.S. GAAP measures, to establish operating budgets and operational goals to manage and monitor our business, evaluate our operating and financial performance and to compare such performance to prior periods and to the performance of our competitors. We believe that presenting such non-GAAP financial measures is useful because such measures can be used to analyze and compare profitability between companies and industries by eliminating the impact of certain non-cash charges. In addition, we present non-GAAP financial measures because we believe that they and other similar measures are widely used by certain investors, securities analysts and other interested parties as supplemental measures of performance.

We define adjusted net income as net income adjusted to exclude restructuring charges, mark-to-market earnings from changes in the fair value of derivative instruments, loss from held for sale measurement, accelerated depreciation derived from repowering of wind farms, impact of the Tax Act, costs incurred related to the PNMR Merger, a legal settlement, costs incurred in connection with the COVID-19 pandemic and adjustments for the non-core Gas storage business. We believe adjusted net income is more useful in understanding and evaluating actual and projected financial performance and contribution of AVANGRID core lines of business and to more fully compare and explain our results. The most directly comparable U.S. GAAP measure to adjusted net income is net income. We also define adjusted earnings per share, or adjusted EPS, as adjusted net income converted to an earnings per share amount.

The use of non-GAAP financial measures is not intended to be considered in isolation or as a substitute for, or superior to, AVANGRID's U.S. GAAP financial information, and investors are cautioned that the non-GAAP financial measures are limited in their usefulness, may be unique to AVANGRID and should be considered only as a supplement to AVANGRID's U.S. GAAP financial measures. The non-GAAP financial measures may not be comparable to other similarly titled measures of other companies and have limitations as analytical tools.

Non-GAAP financial measures are not primary measurements of our performance under U.S. GAAP and should not be considered as alternatives to operating income, net income or any other performance measures determined in accordance with U.S. GAAP.

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The following tables provide a reconciliation between Net Income attributable to AVANGRID and adjusted net income (non-GAAP) by segment for the years ended December 31, 2020, 2019 and 2018, respectively:

	Year Ended December 31, 2020			
	Total	Networks	Renewables	Corporate *
	(in millions)			
Net Income Attributable to Avangrid, Inc.	**$ 581**	**$ 546**	**$ 103**	**$ (67)**
Adjustments:				
Mark-to-market adjustments - Renewables	5	—	5	—
Restructuring charges	6	5	1	—
Accelerated depreciation from repowering	9	—	9	—
Impact of COVID-19	29	26	1	2
Merger costs	6	—	—	6
Legal settlement - Gas storage	5	—	—	5
Income tax impact of adjustments (1)	(16)	(8)	(4)	(3)
Adjusted Net Income (2)	**$ 625**	**$ 568**	**$ 115**	**$ (58)**

	Year Ended December 31, 2019			
	Total	Networks	Renewables	Corporate *
	(in millions)			
Net Income Attributable to Avangrid, Inc.	**$ 667**	**$ 463**	**$ 224**	**$ (20)**
Adjustments:				
Mark-to-market adjustments - Renewables	$ (76)	$ —	$ (76)	$ —
Restructuring charges	$ 6	$ 3	$ 1	$ 3
Accelerated depreciation from repowering	$ 33	$ —	$ 33	$ —
Income tax impact of adjustments (1)	$ 10	$ (1)	$ 11	$ (1)
Adjusted Net Income (2)	**$ 640**	**$ 465**	**$ 193**	**$ (17)**

	Year Ended December 31, 2018				
	Total	Networks	Renewables	Corporate *	Gas Storage
	(in millions)				
Net Income (Loss) Attributable to Avangrid, Inc.	**$ 587**	**$ 473**	**$ 145**	**$ (12)**	**$ (19)**
Adjustments:					
Mark-to-market adjustments - Renewables	25	—	25	—	—
Restructuring charges	4	4	—	—	—
Loss from held for sale measurement	16	—	—	—	16
Impact of the Tax Act	46	5	16	25	—
Accelerated depreciation from repowering	3	—	3	—	—
Income tax impact of adjustments (1)	6	(1)	(7)	—	14
Gas Storage, net of tax	(11)	—	—	—	(11)
Adjusted Net Income (2)	**$ 676**	**$ 481**	**$ 182**	**$ 13**	**$ —**

(1) Income tax impact of adjustments: $(1) million from MtM adjustment, $(2) million from accelerated depreciation, $(2) million from restructuring charges, $(8) million from COVID-19 impacts, $(1) million from legal settlement - gas storage and $(2) million from merger costs for the year ended December 31, 2020. $20 million from MtM adjustment, $(9) million from accelerated depreciation, $(2) million from restructuring charges, for the year ended December 31, 2019. $(6) million from MtM adjustment, $(1) million from accelerated depreciation, $(1) million from restructuring charges, $14 million from loss from held for sale measurement for the year ended December 31, 2018.

(2) Adjusted Net Income is a non-GAAP financial measure and is presented after excluding restructuring charges, loss from held for sale measurement, impact of the Tax Act, accelerated depreciation derived from the repowering wind farms, MtM activities in Renewables, costs incurred related to the PNMR Merger, costs incurred in connection with the COVID-19 pandemic, merger costs and the Gas storage businesses.

* Includes Corporate and other non-regulated entities as well as intersegment eliminations.

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Comparison of Period to Period Results of Operations

Year Ended December 31, 2020 Compared to the Year Ended December 31, 2019

Adjusted net income

Adjusted net income decreased by $15 million, or 2%, from $640 million for the year ended December 31, 2019 to $625 million for the year ended December 31, 2020. The decrease is primarily due to a $77 million decrease in Renewables as a result of gain from the sale of assets in 2019 that did not recur in 2020, a $41 million decrease in Corporate mainly driven by higher interest expenses in the period, offset by $103 million increase in Networks driven primarily by approved rate cases in the period.

Year Ended December 31, 2019 Compared to the Year Ended December 31, 2018

Adjusted net income

Adjusted net income decreased by $35 million, or 5%, from $676 million for the year ended December 31, 2018 to $640 million for the year ended December 31, 2019. The decrease is primarily due to a $16 million decrease in Networks driven by increased non-deferrable outage restoration costs and an increase in personnel costs (net of capitalized staff costs) driven by headcount and overtime increases and a $30 million decrease in Corporate mainly driven by higher interest expense, offset by a $11 million increase in Renewables driven mainly by thermal revenue increase and a gain from the sale of assets and associated change in control during the period.

The following tables reconcile Net Income attributable to AVANGRID to Adjusted Net Income (non-GAAP), and EPS attributable to AVANGRID to adjusted EPS (non-GAAP) for the years ended December 31, 2020, 2019 and 2018, respectively:

	Year Ended December 31,		
	2020	**2019**	**2018**
	(in millions)		
Networks	$ 546	$ 463	$ 473
Renewables	103	224	145
Corporate (1)	(67)	(20)	(12)
Gas Storage	—	—	(19)
Net Income	**$ 581**	**$ 667**	**$ 587**
Adjustments:			
Mark-to-market adjustments - Renewables (2)	5	(76)	25
Restructuring charges (3)	6	6	4
Loss from held for sale measurement (4)	—	—	16
Impact of the Tax Act (5)	—	—	46
Accelerated depreciation from repowering (6)	9	33	3
Impact of COVID-19 (7)	29	—	—
Merger costs (8)	6	—	—
Legal settlement - Gas storage (9)	5	—	—
Income tax impact of adjustments	(16)	10	6
Gas Storage, net of tax (9)	—	—	(11)
Adjusted Net Income (10)	**$ 625**	**$ 640**	**$ 676**

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	Year Ended December 31,		
	2020	2019	2018
Networks	$ 1.76	$ 1.50	$ 1.53
Renewables	0.33	0.72	0.47
Corporate (1)	(0.22)	(0.06)	(0.04)
Gas Storage	—	—	(0.06)
Earnings Per Share	**$ 1.88**	**$ 2.16**	**$ 1.90**
Adjustments:			
Mark-to-market adjustments - Renewables (2)	0.02	(0.25)	0.08
Restructuring charges (3)	0.02	0.02	0.01
Loss from held for sale measurement (4)	—	—	0.05
Impact of the Tax Act (5)	—	—	0.15
Accelerated depreciation from repowering (6)	0.03	0.11	0.01
Impact of COVID-19 (7)	0.09	—	—
Merger costs (8)	0.02	—	—
Legal settlement - Gas storage (9)	0.01	—	—
Income tax impact of adjustments	(0.05)	0.03	0.02
Gas Storage, net of tax (9)	—	—	(0.04)
Adjusted Earnings Per Share (10)	**$ 2.02**	**$ 2.07**	**$ 2.18**

(1) Includes corporate and other non-regulated entities as well as intersegment eliminations.
(2) Mark-to-market earnings relates to earnings impacts from changes in the fair value of Renewables' derivative instruments associated with electricity and natural gas.
(3) Restructuring and severance related charges relate to costs resulting from restructuring actions involving initial targeted voluntary workforce reductions and related costs in our plan to vacate a lease, predominantly within the Networks segment and costs to implement an initiative to mitigate costs and achieve sustainable growth.
(4) Represents loss from measurement of assets and liabilities held for sale in connection with the sale of the gas trading and storage businesses.
(5) Represents the impact from measurement of deferred income tax balances as a result of the Tax Act enacted by the U.S. federal government on December 22, 2017.
(6) Represents the amount of accelerated depreciation derived from the repowering of wind farms in Renewables.
(7) Represents costs incurred in connection with the COVID-19 pandemic.
(8) Pre-merger costs incurred.
(9) Removal of the impact from Gas activity in the reconciliation to AVANGRID Net Income.
(10) Adjusted Net Income and Adjusted Earnings Per Share are non-GAAP financial measures and are presented after excluding restructuring charges, loss from held for sale measurement, impact of the Tax Act, accelerated depreciation derived from the repowering wind farms, MtM activities in Renewables, costs incurred related to the PNMR Merger, costs incurred in connection with the COVID-19 pandemic, merger costs and the Gas storage businesses.

Liquidity and Capital Resources

Our operations, capital investment and business development require significant short-term liquidity and long-term capital resources. Historically, we have used cash from operations, and borrowings under our credit facilities and commercial paper program as our primary sources of liquidity. Our long-term capital requirements have been met primarily through retention of earnings and borrowings in the investment grade debt capital markets. Continued access to these sources of liquidity and capital are critical to us. Risks may increase due to circumstances beyond our control, such as a general disruption of the financial markets and adverse economic conditions.

Liquidity

We manage our overall liquidity position as part of the group of companies controlled by Iberdrola, or the Iberdrola Group, and are a party to a liquidity agreement with Bank of America, N.A. along with certain members of the Iberdrola Group. The liquidity agreement aids the Iberdrola Group in efficient cash management and reduces the need for external borrowing by the pool participants. Parties to the agreement, including us, may deposit funds with or borrow from the financial institution, provided that the net balance of funds deposited or borrowed by all pool participants in the aggregate is not less than zero. As of December 31, 2020 and 2019, the balance was $0 and $150 million, respectively. Any deposit amounts would be reflected in our consolidated balance sheets under cash and cash equivalents because our deposited surplus funds under the cash pooling agreement are highly-liquid short-term investments.

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We optimize our liquidity within the United States through a series of arms-length intercompany lending arrangements with our subsidiaries and among our regulated utilities to provide for lending of surplus cash to subsidiaries with liquidity needs, subject to the limitation that the regulated utilities may not lend to unregulated affiliates. At December 31, 2020, we had cash and cash equivalents of $1,463 million, as compared to $178 million at December 31, 2019. In addition to cash on hand, we have the capacity to borrow up to $2.5 billion from the lenders committed to the AVANGRID Credit Facility, $500 million from the lenders committed to the 2020 Credit Facility and $500 million from an Iberdrola Group Credit Facility, each of which are described below.

AVANGRID Commercial Paper Program

AVANGRID has a commercial paper program with a limit of $2 billion that is backstopped by the AVANGRID Credit Facility (described below). As of December 31, 2020 and February 26, 2021, there was $309 million and $0 of commercial paper outstanding, respectively.

AVANGRID Credit Facility

AVANGRID and its subsidiaries, NYSEG, RG&E, CMP, UI, CNG, SCG and BGC, each of which are joint borrowers, have a revolving credit facility with a syndicate of banks, or the AVANGRID Credit Facility, that provides for maximum borrowings of up to $2.5 billion in the aggregate.

Under the terms of the AVANGRID Credit Facility, each joint borrower has a maximum borrowing entitlement, or sublimit, which can be periodically adjusted to address specific short-term capital funding needs, subject to the maximum limit contained in the agreement. On June 29, 2020, we entered into an amendment to the AVANGRID Credit Facility, which reduced AVANGRID's maximum sublimit from $2.0 billion to $1.5 billion and added minimum sublimits for each joint borrower other than AVANGRID. Under the AVANGRID Credit Facility, each of the borrowers will pay an annual facility fee that is dependent on their credit rating. As of December 31, 2020, the facility fees ranged from 10.0 to 17.5 basis points. The AVANGRID Credit Facility matures on June 29, 2024. As of both December 31, 2020 and February 26, 2021, we had no borrowings outstanding under this credit facility.

2020 Credit Facility

On June 29, 2020, we entered into a revolving credit agreement with several lenders, or the 2020 Credit Facility, that provides maximum borrowings up to $500 million. We are required to pay an annual facility fee, which ranges from 15 to 30 basis points, dependent on AVANGRID's credit rating. As of December 31, 2020, the facility fee is 20 basis points. The 2020 Credit Facility matures on June 28, 2021. We have the right to extend, and the banks are obligated to extend, the commitments and loans outstanding under the facility for one year at a cost of 75 basis points. We may also request an extension of the facility for one year, which the banks may grant at their discretion for a fee that will be determined at the time of the request. As of both December 31, 2020 and February 26, 2021, we had no borrowings outstanding under this credit facility.

Since our credit facilities are also a backstop to the AVANGRID commercial paper program, the total amounts available under the facilities as of December 31, 2020 and February 26, 2021, were $2,691 million and $3,000 million, respectively.

Iberdrola Group Credit Facility

AVANGRID has a credit facility with Iberdrola Financiacion, S.A.U., a company of the Iberdrola Group. The facility has a limit of $500 million and matures on June 18, 2023. AVANGRID pays a facility fee of 10.5 basis points annually. As of both December 31, 2020 and February 26, 2021, there was no outstanding amount under this credit facility.

Long-Term Capital Resources

We expect to meet our long-term capital requirements through the use of our cash balances, credit facilities, cash from operations and long-term borrowings. We have investment grade ratings from Standard and Poor's, Moody's and Fitch and we believe that we can raise capital on competitive terms in the investment grade debt capital and/or bank markets.

Iberdrola Loan

On December 14, 2020, AVANGRID and Iberdrola entered into an intra-group loan agreement which provided AVANGRID with an unsecured subordinated loan in an aggregate principal amount of $3,000 million (the Iberdrola Loan).

The Iberdrola Loan bears interest (i) from December 16, 2020 until June 15, 2021, at an interest rate of 0.20%, which increases one basis point each month following the first month of the term of the Iberdrola Loan up to a maximum interest rate of 0.25%, and (ii) from June 16, 2021 until the Iberdrola Loan and any accrued and unpaid interest is repaid in its entirety, at AVANGRID's equity cost of capital as published by Bloomberg. Interest is payable on a monthly basis in arrears.

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AVANGRID is required to repay the Iberdrola Loan in full upon certain equity issuances by AVANGRID in which Iberdrola participates or a change of control of AVANGRID. In addition, on or after June 15, 2021, upon five business days' notice to Iberdrola, AVANGRID may voluntarily repay the Iberdrola Loan and any accrued and unpaid interest, in whole or in part, without prepayment premium or penalty if there is a change in AVANGRID's business plan and AVANGRID determines that the Iberdrola Loan is no longer required. The intra-group loan agreement contains certain customary affirmative and negative covenants and events of default.

Our other long-term debt issuances during 2020 were as follows:

Company	Issue Date	Type	Amount (Millions)	Interest rate	Maturity
AVANGRID	4/9/2020	Unsecured Notes	$ 750	3.20 %	2025
NYSEG (1)	5/1/2020	Pollution Control Bonds	$ 200	1.40% - 1.61%	2026 -2029
BGC	9/1/2020	Unsecured Notes	$ 25	3.68 %	2050
NYSEG	9/25/2020	Unsecured Notes	$ 200	1.95 %	2030
RG&E	11/23/2020	First Mortgage Bonds	$ 200	1.85 %	2030
UI	12/1/2020	Unsecured Notes	$ 75	2.02 %	2030
CMP	12/15/2020	First Mortgage Bonds	$ 50	1.87 %	2030
CNG	12/15/2020	Unsecured Notes	$ 30	2.02 %	2030
SCG	12/15/2020	First Mortgage Bonds	$ 50	1.87 %	2030

At December 31, 2020, Networks had $5,706 million of debt, including the current portion thereof, consisting of first mortgage bonds, senior unsecured notes, tax-exempt bonds and various other forms of debt. Networks' regulated utilities are required by regulatory order to maintain a minimum ratio of common equity to total capital that is tied to the capital structure used in the establishment of their revenue requirements. Pursuant to these requirements, each of NYSEG, RG&E, CMP and MNG must maintain a minimum equity ratio equal to the ratio in its currently effective rate plan or decision measured using a trailing 13-month average. On a monthly basis, each utility must maintain a minimum equity ratio of no less than 300 basis points below the equity ratio used to set rates. UI, SCG, CNG and BGC are restricted from paying dividends if paying such dividend would result in their respective common equity ratio being lower than 300 basis points below the equity percentage used to set rates in the most recent distribution rate proceeding as measured using a trailing 13-month average calculated as of the most recent quarter end. The regulated utilities periodically pay dividends to, or receive capital contributions from, AVANGRID in order to maintain the minimum equity ratio requirement. They each independently incur indebtedness by issuing investment grade debt securities. Networks' regulated utilities were in compliance with these regulatory orders as of December 31, 2020.

At December 31, 2020, we had a $47 million finance lease liability outstanding in the Renewables segment relating to a sale-leaseback arrangement on a solar generation facility. Renewables has also sourced capital through tax equity financing arrangements associated with certain wind farm projects. The arrangements allocate substantially all of the projects' taxable income and PTCs to the tax equity investor, along with a small percentage of cash generated by the projects, in exchange for an initial contribution. During 2020, Renewables closed on the sale of a tax equity interest in its Aeolus Wind Power VII, LLC portfolio, which resulted in proceeds of $307 million.

At December 31, 2020, corporate had $2,085 million of long-term debt, including the current portion thereof, outstanding not including the Iberdrola Loan. Long-term debt in corporate consists mainly of $600 million of 3.15% notes due in 2024, $750 million of 3.20% notes due in 2025 and $750 million of 3.80% notes due in 2029.

In our credit facilities, long-term borrowings, financing leases and tax-equity partnerships, we and our affiliates that are parties to the agreements are subject to covenants that are standard for such agreements. Affirmative covenants impose certain obligations on the borrower and negative covenants limit certain activities by the borrower. The agreements also define certain events of default, including but not limited to non-compliance with the covenants that may automatically in some circumstances, or at the option of the lenders in other circumstances, trigger acceleration of the obligations. We and our affiliates were in compliance with all such covenants at December 31, 2020.

Capital Requirements

Funding Future Common Dividend Payments

We expect to fund any quarterly shareholder dividends primarily from the cash provided by operations of our businesses in the future. We have revolving credit facilities and a commercial paper program, as described above, to fund short-term

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liquidity needs and we believe that we will have access to the capital markets should additional, long-term growth capital be necessary.

Capital Expenditures

The regulated utilities' capital expenditures over the last three years have been as follows:

	2020	2019	2018
		(in millions)	
NYSEG	$ 689	$ 574	$ 517
RG&E	387	379	283
CMP	389	299	212
MNG	3	7	7
UI	204	192	153
SCG	88	83	57
CNG	60	60	55
BGC	17	19	17
Total	**$ 1,837**	**$ 1,613**	**$ 1,301**

Networks increased its capital expenditures during the period from 2018 to 2020 to upgrade and expand electricity and natural gas transmission and distribution infrastructure. In 2020, NYSEG and RG&E continued their capital investments in a number of programs, including the grid automation project, distribution line project, FERC compliance programs, Rochester Area Reliability Project, or RARP, and Gas Distribution Mains and Leak Prone Main replacement project. In 2019, CMP's projects were mainly the NECEC Project, Spectrum Energy Management System Project, Fleet Services, Physical and Cyber Security, Line Inspection and Waterville-Winslow Reliability Project. UIL's projects were mainly driven by new customer connections, system and corrective reliability, system resiliency, infrastructure replacement and system operations.

Renewables' capital expenditures for the years set forth below were as follows:

	2020	2019	2018
		(in millions)	
Wind & solar	$ 822	$ 1,281	$ 277
Thermal	8	7	25
Corporate (1)	15	13	13
Total capital expenditures	**$ 845**	**$ 1,301**	**$ 315**

(1) Includes information technology and facilities and safety (security).

In 2020, Renewables made capital expenditures of $822 million on construction of La Joya, Tatanka Ridge, Roaring Brook, Golden Hills and other wind and solar assets and $8 million in capital expenditures on the Klamath gas-fired cogeneration facility, or the Klamath Plant.

In 2019, Renewables made capital expenditures of $1.2 billion on construction of Otter Creek, Karankawa, Montague, Tatanka Ridge and other wind and solar assets as well as the acquisition of Patriot Wind, $7 million in capital expenditures on the Klamath Plant, $15 million on improvements to operating wind assets and $31 million in development costs.

In 2018, Renewables made capital expenditures of $232 million on construction of Otter Creek, Karankawa, Montague, Wy'East Solar and other wind and solar assets, $25 million in capital expenditures on the Klamath Plant, $17 million on improvements to operating wind assets and $28 million in development costs.

Capital Projects

An important part of our business strategy involves capital projects. Networks plans to invest a total of approximately $9.6 billion from 2021 to 2025 to upgrade and expand electricity and natural gas transmission and distribution infrastructure. In the next 12 months, Networks plans to invest $704 million in Maine, including $500 million for NECEC, substation modernization, Distribution Line inspection and betterments, CMP Automation, Line Inspection and Spring Street Substation. In addition, CMP plans to continue developing its new customer relationship management and billing system and new transmission investments in MEPCO, 388 rebuild. MEPCO plans to invest $32 million in the next 12 months. NYSEG plans to invest $706 million in the next 12 months, including: NYSEG AMI Hardware/Software Project, BES Program – Binghamton Area Brightline, NYSEG Distribution Line Project, Vehicle Purchases, NWA- Java Substation, Gas Distribution Mains and Leak Prone Main replacement. RG&E plans to invest $382 million in the next 12 months, including: RGE AMI Hardware/

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Software Project, RARP, BES Program - Retail, Circuit 794 Rebuild, Pole replace (WPIT) Program, Gas Distribution Mains and Leak Prone Main replacement programs. UIL plans to invest $353 million in the next 12 months, including a number of programs and projects related to betterments, new customer connections, replacement of aging infrastructure, and improvement of system operations, reliability and resiliency. For gas operations, the most notable investments include distribution main replacements, leak prone replacement, gas meters, infrastructure expansion and the connection of new customers.

Renewables plans to invest at least a total of approximately $8.2 billion from 2021 to 2025 and add at least approximately 6,200 MW of generation capacity.

We expect to fund these capital projects through a combination of cash provided by operations and access to the capital markets, including debt borrowings at either the subsidiary or holding company level and equity issuances as needed. Additionally, we have revolving credit facilities, as described above, to fund short-term liquidity needs.

Cash Flows

Our cash flows depend on many factors, including general economic conditions, regulatory decisions, weather, commodity price movements and operating expense and capital spending control.

The following is a summary of the cash flows by activity for the years ended December 31, 2020, 2019 and 2018, respectively:

	Year Ended December 31,		
	2020	2019	2018
		(in millions)	
Cash Flows			
Net cash provided by operating activities	$ 1,288	$ 1,588	$ 1,781
Net cash used in investing activities	(2,858)	(2,708)	(1,554)
Net cash provided by (used in) from financing activities	2,853	1,261	(230)
Net increase (decrease) in cash, cash equivalents and restricted cash	**$ 1,283**	**$ 141**	**$ (3)**

Operating Activities

Our primary sources of operating cash inflows are proceeds from transmission and distribution of electricity and natural gas and sales of wholesale energy and energy related products and services. Our primary operating cash outflows are power and natural gas purchases and transmission operating and maintenance expenses, as well as personnel costs and other employee-related expenditures. As our business has expanded, our working capital requirements have grown. We expect our working capital to grow as we continue to grow our business.

The cash from operating activities for the year ended December 31, 2020 compared to the year ended December 31, 2019 decreased by $300 million, primarily attributable to higher operations and maintenance expenses including from storm and other activities, delays in the timing of the approval of the 2020 Joint Proposal and increased overdue receivables as a result of COVID-19 in Networks.

The cash from operating activities for the year ended December 31, 2019 compared to the year ended December 31, 2018 decreased by $193 million, primarily attributable to higher operations and maintenance expenses and cash interest paid in the period.

The cash from operating activities for the year ended December 31, 2018 compared to the year ended December 31, 2017 increased by $18 million, primarily attributable to increased operating revenues in the period.

Investing Activities

Our investing activities have primarily focused on enhancing, automating and reinforcing our asset base to support safety, reliability and customer growth in accordance with the regulatory markets within which we operate, as well as constructing solar and wind assets and spending on gas generation assets.

In 2020, net cash used in investing activities was $2,858 million, which was comprised of $2,781 million of capital expenditures and $370 million of other investments and equity method investments, partially offset by $48 million of contributions in aid of construction and $238 million of proceeds from the sale of assets.

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In 2019, net cash used in investing activities was $2,708 million, which was comprised of $2,735 million of capital expenditures and $176 million of other investments and equity method investments, partially offset by $74 million of contributions in aid of construction and $126 million of proceeds from the sale of assets.

In 2018, net cash used in investing activities was $1,554 million, which was comprised of $1,777 million of capital expenditures, partially offset by $60 million of contributions in aid of construction, $4 million of cash distributions from equity method investments, and proceeds from sale of assets of $204 million primarily related to the sale of assets held for sale.

Financing Activities

Our financing activities have primarily consisted of using our credit facilities and long-term debt issued or redeemed by AVANGRID and our regulated Networks subsidiaries.

In 2020, financing activities provided $2,853 million in cash reflecting primarily an issuance of non-current debt at AVANGRID and our regulated subsidiaries with the net proceeds of $1,367 million, receipt of the Iberdrola Loan of $3,000 million and tax equity financing contributions from non-controlling interests of $312 million, offset by a net decrease in non-current debt and current notes payable of $1,264 million, distributions to non-controlling interests of $5 million, payments on capital leases of $9 million and dividends of $545 million.

In 2019, financing activities provided $1,261 million in cash reflecting primarily an issuance of non-current debt at AVANGRID and our regulated subsidiaries with the net proceeds of $2,137 million and tax equity financing contributions from non-controlling interests of $133 million, offset by a net decrease in non-current debt and current notes payable of $374 million, distributions to non-controlling interests of $63 million, payments on capital leases of $27 million and dividends of $545 million.

In 2018, financing activities used $230 million in cash reflecting primarily an issuance of non-current debt at NYSEG, RG&E, CMP and UI with the net proceeds of $597 million, tax equity financing contributions from non-controlling interests of $223 million, offset by a net decrease in non-current debt and current notes payable of $418 million, distributions to non-controlling interests of $76 million, payments on capital leases of $13 million and dividends of $537 million.

Contractual Obligations

As of December 31, 2020, our contractual obligations (excluding any tax reserves) were as follows:

	Total	2021	2022	2023	2024	2025	Thereafter
				(in millions)			
Leases (1)	$ 513	$ 25	$ 20	$ 66	$ 33	$ 12	$ 357
Easements (2)	1,012	28	28	26	28	29	873
Projected future pension benefit plan contributions (3)	400	92	105	93	60	50	—
Long-term debt (including current maturities) (4)	10,791	313	363	439	612	1,107	7,957
Interest payments (5)	3,018	297	288	267	256	215	1,695
Material purchase commitments (6)	1,113	861	107	48	20	16	61
Total Contractual Obligations	**$ 16,847**	**$ 1,616**	**$ 911**	**$ 939**	**$ 1,009**	**$ 1,429**	**$ 10,943**

(1) Represents lease contracts relating to operational facilities, office building leases and vehicle and equipment leases. These amounts represent our expected unadjusted portion of the costs to pay as amounts related to contingent payments are predominantly linked to electricity generation at the respective facilities.
(2) Represents easement contracts which are not classified as leases.
(3) The qualified pension plans' contributions are generally based on the estimated minimum pension contributions required under the Employee Retirement Income Sensitivity Act of 1974, as amended, and the Pension Protection Act of 2006, as well as contributions necessary to avoid benefit restrictions and at-risk status and agreements with state regulatory agencies. These amounts represent estimates that are based on assumptions that are subject to change. The minimum required contributions for years after 2025 are not included as projections beyond 2025 are not available.
(4) Includes the Iberdrola Loan. See debt payment discussion in "Long-term Capital Resources."
(5) Interest payments are estimated based on final maturity dates of debt securities outstanding at December 31, 2020, and do not reflect anticipated future refinancing, early redemptions or debt issuances. Variable rate interest obligations are estimated based on rates as of December 31, 2020.
(6) Represents forward purchase commitments under power, gas and other arrangements and contractual obligations for material and services on order but not yet delivered at December 31, 2020.

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Critical Accounting Policies and Estimates

We have prepared the financial statements provided herein in accordance with U.S. GAAP and they include the accounts of AVANGRID and its consolidated subsidiaries. We describe our significant accounting policies in Note 3 to the consolidated financial statements.

In preparing the accompanying financial statements, our management has made certain estimates and assumptions that affect the reported amounts of assets, liabilities, shareholder's equity, revenues and expenses and the disclosures thereof. The following accounting policies represent those that management believes are particularly important to the consolidated financial statements and that require the use of estimates, assumptions and judgments to determine matters that are inherently uncertain.

Accounting for Regulated Public Utilities

U.S. GAAP allows regulated entities to give accounting recognition to the actions of regulatory authorities. We must meet certain criteria in order to apply such regulatory accounting treatment and record regulatory assets and liabilities. In determining whether we meet the criteria for our operations, our management makes significant judgments, which involve (i) determining whether rates for services provided to customers are subject to approval by an independent, third-party regulator, (ii) determining whether the regulated rates are designed to recover specific costs of providing the regulated service, (iii) considering relevant historical precedents and recent decisions of the regulatory authorities and (iv) considering the fact that decisions made by regulatory commissions or legislative changes at a later date could vary from earlier interpretations made by management and that the impact of such variations could be material. Our regulated subsidiaries have deferred recognition of costs (a regulatory asset) or have recognized obligations (a regulatory liability) if it is probable that such costs will be recovered or obligations relieved in the future through the ratemaking process. Management regularly reviews our regulatory assets and liabilities to determine we need to make whether adjustments to our previous conclusions based on the current regulatory environment as well as recent rate orders. If our regulated subsidiaries, or a portion of their assets or operations, were to cease meeting the criteria for application of these accounting rules, accounting standards for unregulated businesses in general would become applicable and immediate recognition of any previously deferred costs would be required in the year in which such criteria are no longer met.

Accounting for Pensions and Other Post-Retirement Benefits

We provide pensions and other post-retirement benefits for a significant number of employees, former employees and retirees. We account for those benefits in accordance with the accounting rules for retirement benefits. In accounting for our pension and other post-retirement benefit plans, or the AVANGRID plans, we make assumptions regarding the valuation of benefit obligations and the performance of plan assets. The primary assumptions include the discount rate, the expected long-term return on plan assets, health care cost trend rates, mortality assumptions, demographic assumptions and other factors. We apply consistent estimation techniques regarding our actuarial assumptions, where appropriate, across the AVANGRID plans of our operating subsidiaries. The estimation technique we use to develop the discount rate for the AVANGRID plans is based upon the settlement of such liabilities as of December 31, 2020, using a hypothetical portfolio of actual, high quality bonds, that would generate cash flows required to settle the liabilities. We believe such an estimate of the discount rate accurately reflects the settlement value for plan obligations and results in cash flows that closely match the expected payments to participants. The estimation technique we use to develop the long-term rate of return on plan assets is based on a projection of the long-term rates of return on plan assets that will be earned over the life of the plan, including considerations of investment strategy, historical experience and expectations for long-term rates of return.

We reflect unrecognized prior service costs and credits and unrecognized actuarial gains and losses for the regulated utilities of Networks as regulatory assets or liabilities if it is probable that such items will be recovered through the ratemaking process in future periods. Certain nonqualified plan expenses are not recoverable through the ratemaking process and we present the unrecognized prior service costs and credits and unrecognized actuarial gains and losses in Accumulated Other Comprehensive Loss.

Business Combinations and Assets Acquisitions

We apply the acquisition method of accounting to account for business combinations. The consideration transferred for an acquisition is the fair value of the assets transferred, the liabilities incurred, including contingent consideration, and the equity interests issued by the acquirer. We measure identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination initially at their fair values at the acquisition date. We record as goodwill the excess of the consideration transferred over the fair value of the identifiable net assets acquired. We recognize adjustments to provisional amounts relating to a business combination that are identified during the measurement period in the reporting period in which the adjustment amounts are determined. For business combinations, we expense acquisition-related costs as incurred.

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In contrast to a business combination (disposal), we classify a transaction as an asset acquisition (disposal) when substantially all the fair value of the gross assets acquired (disposed) is concentrated in a single identifiable asset or group of similar identifiable assets or otherwise does not meet the definition of a business. For asset acquisitions, we capitalize acquisition-related costs as a component of the cost of the assets acquired and liabilities assumed.

Goodwill

Goodwill is not amortized, but is subject to an assessment for impairment performed in the fourth quarter or more frequently if events occur or circumstances change that would more likely than not reduce the fair value of a reporting unit to which goodwill is assigned below its carrying amount. A reporting unit is an operating segment or one level below an operating segment and is the level at which we test goodwill for impairment.

In assessing goodwill for impairment, we have the option to first perform a qualitative assessment to determine whether a quantitative assessment is necessary. If we determine, based on qualitative factors, that the fair value of the reporting unit is more likely than not greater than the carrying amount, no further testing is required. If we bypass the qualitative assessment, or perform the qualitative assessment but determine it is more likely than not that its fair value is less than its carrying amount, we perform a quantitative test to compare the fair value of the reporting unit to its carrying amount, including goodwill. If the carrying amount of the reporting unit exceeds its fair value, we record an impairment loss as a reduction to goodwill and a charge to operating expenses, but the loss recognized would not exceed the total amount of goodwill allocated to the reporting unit.

Our qualitative assessment involves evaluating key events and circumstances that could affect the fair value of our reporting units, as well as other factors. Events and circumstances evaluated include macroeconomic conditions, industry, regulatory and market considerations, cost factors and their effect on earnings and cash flows, overall financial performance as compared with projected results and actual results of relevant prior periods, other relevant entity specific events, and events affecting a reporting unit.

Our quantitative impairment testing includes various assumptions, primarily the discount rate, and forecasted cash flows. We use a discount rate that is developed using market participant assumptions, which consider the risk and nature of the respective reporting unit's cash flows and the rates of return market participants would require in order to invest their capital in our reporting units. We test the reasonableness of the conclusions of our quantitative impairment testing using a range of discount rates and a range of assumptions for long-term cash flows.

Impairment of Long-Lived Assets

We evaluate property, plant and equipment and other long-lived assets for impairment when events or changes in circumstances indicate that the carrying amount may not be recoverable. If indicators of impairment are present, a recoverability test is performed based on undiscounted cash flow analysis at the lowest level to which cash flows of the long-lived assets or asset groups are largely independent of the cash flows of other assets and liabilities. An impairment loss is required to be recognized if the carrying amount of the asset exceeds the undiscounted future net cash flows associated with that asset. The impairment loss to be recognized is the amount by which the carrying value of the long-lived asset exceeds the asset's fair value.

We determine the fair value of a long-lived asset by applying the income approach prescribed under the fair value measurement accounting framework. We develop the underlying assumptions consistent with a market participant's view of the exit price of our assets. We use an internal discounted cash flow, or DCF, valuation model based on the principles of present value techniques to estimate the fair value of our long-lived assets under the income approach. The DCF model estimates fair value by discounting AVANGRID's cash flow forecasts at an appropriate market discount rate. Management applies a considerable amount of judgment in the estimation of the discount rate used in the DCF model and in selecting several input assumptions during the development of our cash flow forecasts. Examples of the input assumptions that our forecasts are sensitive to include macroeconomic factors such as growth rates, industry demand, inflation, power prices and commodity prices. Many of these input assumptions are dependent on other economic assumptions, which are often derived from statistical economic models with inherent limitations such as estimation differences. Further, several input assumptions are based on historical trends which often do not recur. The input assumptions that include significant unobservable inputs most significant to our cash flows are based on expectations of macroeconomic factors, which may be volatile. The use of a different set of input assumptions could produce significantly different cash flow forecasts.

The fair value of a long-lived asset is sensitive to both input assumptions related to our cash flow forecasts and the market discount rate. Further, estimates of long-term growth and terminal value are often critical to the fair value determination. As part of the impairment evaluation process, management analyzes the sensitivity of fair value to various underlying assumptions. The level of scrutiny increases as the gap between fair value and carrying amount decreases. Changes in any of

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these assumptions could result in management reaching a different conclusion regarding the potential impairment, which could be material. Our impairment evaluations inherently involve uncertainties from uncontrollable events that could positively or negatively impact the anticipated future economic and operating conditions.

Income Taxes

AVANGRID files a consolidated federal income tax return and various state income tax returns, some of which are unitary as required or permitted.

We use the asset and liability method of accounting for income taxes. Deferred tax assets and liabilities reflect the expected future tax consequences based on enacted tax laws of temporary differences between the tax basis of assets and liabilities and their financial reporting amounts. In accordance with U.S. GAAP for regulated industries, certain of our regulated subsidiaries have established a regulatory asset for the net revenue requirements to be recovered from customers for the related future tax expense associated with certain of these temporary differences. We defer the ITCs when earned and amortize them over the estimated lives of the related assets.

Deferred tax assets and liabilities are measured at the expected tax rate for the period in which the asset or liability will be realized or settled, based on legislation enacted as of the balance sheet date. Changes in deferred income tax assets and liabilities that are associated with components of other comprehensive income, or OCI, are charged or credited directly to OCI. Significant judgment is required in determining income tax provisions and evaluating tax positions. Our tax positions are evaluated under a more-likely-than-not recognition threshold before they are recognized for financial reporting purposes. We record valuation allowances to reduce deferred tax assets when it is more likely than not that we will not realize all or a portion of a tax benefit.

Positions taken or expected to be taken on tax returns, including the decision to exclude certain income or transactions from a return, are recognized in the financial statements when it is more likely than not the tax position can be sustained based solely on the technical merits of the position. The amount of a tax return position that is not recognized in the financial statements is disclosed as an unrecognized tax benefit. Changes in assumptions on tax benefits may also impact interest expense or interest income and may result in the recognition of tax penalties. Interest and penalties related to unrecognized tax benefits are recorded within “Interest expense, net of capitalization” and “Other income and (expense)” of the consolidated statements of income.

Uncertain tax positions have been classified as noncurrent unless expected to be paid within one year. In 2019, we netted our liability for uncertain tax positions against all same jurisdiction deferred tax assets, net operating losses and tax credit carryforwards. Our policy is to recognize interest and penalties on uncertain tax positions as a component of interest expense in the consolidated statements of income.

Federal PTCs applicable to our renewable energy facilities, that are not part of a tax equity financing arrangement, are recognized as a reduction in income tax expense with a corresponding reduction in deferred income tax liabilities due to our inability to immediately monetize the tax credits.

Our income tax expense, deferred tax assets and liabilities and liabilities for unrecognized tax benefits reflect management’s best assessment of estimated current and future taxes to be paid. Significant judgments and estimates are required in determining the consolidated income tax components of the financial statements.

Off-Balance Sheet Arrangements

At December 31, 2020, we had approximately $3,989 million of standby letters of credit, surety bonds, guarantees and indemnifications outstanding, which includes guarantees of our own performance. These instruments provide financial assurance to the business and trading partners of AVANGRID and its subsidiaries in their normal course of business. The instruments only represent liabilities if AVANGRID or its subsidiaries fail to deliver on contractual obligations. We therefore believe it is unlikely that any material liabilities associated with these instruments will be incurred and, accordingly, as of December 31, 2020, neither we nor our subsidiaries have any liabilities recorded for these instruments.

New Accounting Standards

For discussion of new accounting pronouncements that affect AVANGRID, refer to Note 3 to our consolidated financial statements contained in this Annual Report on Form 10-K.

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Item 7A. ***Quantitative and Qualitative Disclosures About Market Risk.***

We are exposed to risks associated with adverse changes in commodity prices, interest rates and equity prices. Financial instruments and positions affecting our financial statements described below are held primarily for purposes other than trading. Market risk is measured as the potential loss in fair value resulting from hypothetical reasonably possible changes in commodity prices, interest rates or equity prices over the next year. Management has established risk management policies to monitor and manage such market risks, as well as credit risks.

Commodity Price Risk

Renewables faces a number of energy market risk exposures, including fixed price, basis (both location and time) and heat rate risk.

Long-term supply contracts reduce our exposure to market fluctuations. We have electricity commodity purchases and sales contracts for energy (physical contracts) that have been designated and qualify for the normal purchase normal sale exemption in accordance with the accounting requirements concerning derivative instruments and hedging activities.

Renewables merchant wind facilities are subject to price risk, which is hedged with fixed price power trades. Its combined cycle power plant is subject to heat rate risk, which is hedged with fixed price power and fixed price gas and basis positions. Those measures mitigate our commodity price exposure, but do not completely eliminate it. Some long-term hedges do not qualify for hedge accounting. This introduces some MtM volatility into yearly profit and loss accounts.

Renewables uses a Monte Carlo simulation value-at-risk, or VaR, technique to measure and control the level of risk it undertakes. VaR is a statistical technique used to measure and quantify the level of risk within a portfolio over a given timeframe and within a specified level of confidence. VaR is primarily composed of three variables: the measured amount of potential loss, the probability of not exceeding the amount of potential loss and the portfolio holding period.

Renewables uses a 99% probability level over a five-day holding period, indicating that it can be 99% confident that losses over five days would not exceed that value. The average VaR for 2020 was $23.9 million compared to a 2019 average of $20.6 million.

As noted above, VaR is a statistical technique and is not intended to be a guarantee of the maximum loss Renewables may incur.

Networks also experiences commodity price risk, due to volatility in the wholesale energy markets. Networks manages that risk through a combination of regulatory mechanisms, such as the pass-through of the market price of electricity and natural gas to customers, and through comprehensive risk management processes. Those measures mitigate our commodity price exposure, but do not completely eliminate it. Networks also uses electricity contracts as deemed appropriate, both physical and financial, to manage fluctuations in electricity commodity prices in order to provide price stability to customers. It also uses natural gas futures and forwards to manage fluctuations in natural gas commodity prices in order to provide price stability to customers. It includes the cost or benefit of those contracts in the amount expensed for electricity or natural gas purchased when the related electricity is sold.

Because all gains or losses on Networks' commodity contracts will ultimately be passed on to retail customers, no sensitivity analysis is performed for Networks. Further information regarding the derivative financial instruments and sensitivity analysis is provided in Notes 11 and 12 of our consolidated financial statements contained in this Annual Report on Form 10-K.

Interest Rate Risk

Total debt outstanding, including commercial paper of $309 million, was $11,100 million at December 31, 2020, of which $309 million had a floating interest rate; a change of 25 basis points in this interest rate would result in an interest expense fluctuation of approximately $1 million annually. The estimated fair value of our long-term debt at December 31, 2020 was $12,166 million, in comparison to a book value of $10,791 million.

AVANGRID uses financial derivative instruments from time to time to alter its fixed and floating rate debt balances or to hedge fixed rates in anticipation of future fixed rate issuances. Further information regarding our interest rate derivative financial instruments is provided in Note 12 of our consolidated financial statements contained in this Annual Report on Form 10-K. There were no interest rate derivative contracts outstanding at December 31, 2020.

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Pension and Other Post-Retirement Plans

We provide pensions and other post-retirement benefits for a significant number of employees, former employees and retirees. In applying relevant accounting policies, we have made critical estimates related to actuarial assumptions, including assumptions of expected returns on plan assets, discount rates, health care cost trends and future compensation. The cost of pension and other post-retirement benefits in future periods will depend on actual returns on plan assets, assumptions for future periods, contributions and benefit experience. In 2020, we contributed $102 million to our pension and other post-retirement plans. Our contribution to our pension and other post-retirement plans in 2021 is expected to be approximately $92 million.

The weighted-average discount rates used in accounting for qualified pension obligations in 2020 was 2.34%. The expected rate of return on plan assets for qualified pension benefits in 2020 was 7.30%. The following tables reflect the estimated sensitivity associated with a change in certain significant actuarial assumptions (each assumption change is presented mutually exclusive of other assumption changes):

		Impact on 2020 Pension Expense Increase (Decrease)	
	Change in Assumption	Pension Benefits	Post Retirement Benefits
		(in millions)	
Increase in discount rate	50 basis points	$ (18)	$ (2)
Decrease in discount rate	50 basis points	$ 18	$ 2
Increase in return on plan assets	50 basis points	$ (14)	$ (1)
Decrease in return on plan assets	50 basis points	$ 14	$ 1

Credit Risk

This risk is defined as the risk that a third party will not fulfill its contractual obligations and, therefore, generate losses for AVANGRID. Networks is exposed to nonpayment of customer bills. Standard debt recovery procedures are in place, in accordance with best practices and in compliance with applicable state regulations and embedded tariff mechanisms to manage uncollectable expense. Our credit department, based on guidelines approved by our board, establishes and manages its counterparty credit limits. We have developed a matrix of unsecured credit thresholds that are dependent on a counterparty's or the counterparty guarantor's applicable credit rating. Credit risk is mitigated by contracting with multiple counterparties and limiting exposure to individual counterparties or counterparty families to clearly defined limits based upon the risk of counterparty default. At the counterparty level, we employ specific eligibility criteria in determining appropriate limits for each prospective counterparty and supplement this with netting and collateral agreements, including margining, guarantees, letters of credit and cash deposits, where appropriate.

Renewables is also exposed to credit risk through its energy management operations. Counterparty credit risk is managed through established credit policies by a credit department that is independent of the energy management function. Prospective and existing customers are reviewed for creditworthiness based upon established criteria. Credit limits are set in accordance with board approved guidelines, with counterparties not meeting minimum standards providing various credit enhancements such as cash prepayments, letters of credit, cash and other collateral and guarantees. Master netting agreements are used, where appropriate, to offset cash and non-cash gains and losses arising from derivative instruments with the same counterparty. Trade receivables and other financial instruments are predominately with energy, utility and financial services-related companies, as well as municipalities, cooperatives and other trading companies in the U.S., although there is a growing segment of long-term power sales (PPAs) signed with commercial and industrial customers of high credit quality.

Based on our policies and risk exposures related to credit risk from its management in Renewables, we do not anticipate a material adverse effect on our financial statements as a result of counterparty nonperformance. As of December 31, 2020, approximately 98% of our energy management counterparty credit risk exposure is associated with companies that have investment grade credit ratings.

Treasury Management (including Liquidity Risk)

We manage our overall liquidity position as part of the group of companies controlled by the Iberdrola Group, and are a party to a liquidity agreement with a financial institution, along with certain members of the Iberdrola Group. We optimize our liquidity within the United States through a series of arms-length intercompany lending arrangements with our subsidiaries and among the regulated utilities to provide for lending of surplus cash to subsidiaries with liquidity needs, subject to the limitation that the regulated utilities may not lend to unregulated affiliates. These arrangements minimize overall short-term funding costs and maximize returns on the temporary cash investments of the subsidiaries. We also have a bi-lateral demand note agreement with a Canadian affiliate of the Iberdrola Group. We have the capacity to borrow from third parties through a $2 billion

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commercial paper program, the $2.5 billion AVANGRID Credit Facility and $500 million 2020 Credit Facility, both of which backstop the commercial paper program, and $500 million from an Iberdrola Group Credit Facility. For more information, see the section entitled "—Liquidity and Capital Resources—Liquidity Resources" of this Annual Report on Form 10-K.

Networks

Networks' regulated utilities fund their operations independently, except to the extent that they borrow on a short-term basis from unregulated affiliates and from each other when circumstances warrant in order to minimize short-term funding costs and maximize returns on temporary cash investments. The regulated utilities are prohibited by regulatory order from lending to unregulated affiliates. Networks' regulated utilities each independently accesses the investment grade debt capital markets for long-term funding and each are borrowers under the AVANGRID Credit Facility described in "—Liquidity and Capital Resources—Liquidity Resources" of this Annual Report on Form 10-K.

Networks' regulated utilities are subjected by regulatory order to certain credit quality maintenance measures, including minimum equity ratios, that are linked to the level of equity assumed in the establishment of revenue requirements. The companies maintain their equity ratios at or above the minimum through dividend declarations or, when necessary, capital contributions from AVANGRID.

Renewables

Renewables historically has been financed through equity contributions, intercompany loans during construction, tax equity partnerships and, to a lesser extent, sale-leaseback arrangements. The outstanding balance of its financing lease was $47 million at December 31, 2020.

Renewables is a party to a cash pooling arrangement with Avangrid, Inc. All Renewables revenues are concentrated in and all Renewables disbursements are made from Avangrid, Inc. Net cash surpluses or deficits at Renewables are recorded as intercompany receivables or payables and these balances are periodically reduced to zero through dividends or capital contributions. In March 2020, Renewables recorded a net non-cash dividend of $1,668 million to Avangrid, Inc. to zero out account balances that had principally accumulated prior to January 2020.

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Item 8. Financial Statements and Supplementary Data

Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors
Avangrid, Inc.:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Avangrid, Inc. and subsidiaries (the Company) as of December 31, 2020 and 2019, the related consolidated statements of income, comprehensive income, changes in equity, and cash flows for each of the years in the three-year period ended December 31, 2020, and the related notes and financial statement schedule I (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2020 and 2019, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2020, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2020, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated March 1, 2021 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the consolidated financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Evaluation of the impairment of the carrying value of goodwill in the Renewables reporting unit

As discussed in Notes 3(g) and 7 to the consolidated financial statements, the goodwill balance as of December 31, 2020 was $3,119 million, of which $372 million related to the Renewables reporting unit. The Company performs goodwill impairment testing on an annual basis or more frequently if events occur or circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying amount.

We identified the evaluation of the impairment of the carrying value of goodwill in the Renewables reporting unit as a critical audit matter due to certain estimates and assumptions the Company made to determine the fair value of the Renewables reporting unit. As a result, a higher degree of auditor judgment was required to evaluate certain assumptions used in the Company's estimate of the fair value of the Renewables reporting unit. Specifically, the Company's determination of the forecasted power production and forecasted market prices, which are used to develop the revenue forecast, and the determination of the discount rates, required subjective and challenging auditor judgment.

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The following are the primary procedures we performed to address this critical audit matter. We evaluated the design and tested the operating effectiveness of certain internal controls over the Company's goodwill impairment assessment process, including controls related to the determination of the forecasted power production, forecasted market prices and discount rates used to estimate the fair value of the Renewables reporting unit. To assess the Company's ability to forecast revenues, we compared the Renewables reporting unit's historical revenue forecasts to actual revenues. We compared the Renewables reporting unit's forecasted power production to historical power production. We also evaluated the forecasted market prices by comparing them to third-party published reports by industry analysts. In addition, we involved valuation professionals with specialized skills and knowledge, who assisted in testing the selected discount rates by independently developing discount rates using publicly available market data for comparable entities and comparing them to the Company's discount rates.

Evaluation of regulatory assets and liabilities

As discussed in Notes 3(c) and 6 to the consolidated financial statements, the Company accounts for their regulated operations in accordance with Financial Accounting Standards Board Accounting Standard Codification Topic 980, Regulated Operations (ASC Topic 980). Pursuant to the requirements of ASC Topic 980, the financial statements of a rate-regulated enterprise reflect the actions of regulators. The Company capitalizes, as regulatory assets, incurred and accrued costs that are probable of recovery in future electric and natural gas rates. In addition, obligations to refund previously collected revenue or to spend revenue collected from customers on future costs are recorded as regulatory liabilities. The Company's regulated utilities are subject to complex and comprehensive federal, state and local regulation and legislation, including regulations promulgated by state utility commissions and the Federal Energy Regulatory Commission.

We have identified the evaluation of regulatory assets and liabilities as a critical audit matter. This was due to the extent of audit effort required in the evaluation of regulatory assets and liabilities in each of the relevant jurisdictions.

The following are the primary procedures we performed to address this critical audit matter. We evaluated the design and tested the operating effectiveness of certain internal controls over the Company's regulatory accounting process, including controls related to the Company's application of ASC Topic 980 in each jurisdiction and the Company's calculation and review of regulatory assets and liabilities. We selected regulatory assets and liabilities and assessed the Company's application of ASC Topic 980 in the relevant jurisdiction by evaluating the underlying orders, statutes, rulings, memorandums, filings or publications issued by the respective regulators. We selected a sample of the regulatory assets and liabilities activity and using the methodologies approved by the relevant regulatory commissions, recalculated the activity and agreed the data used in the calculations to the Company's underlying books and records. We compared the amounts calculated by the Company to the amounts recorded in the consolidated financial statements.

Evaluation of tax equity financing arrangements

As discussed in Notes 3(e), 3(p) and 20 to the consolidated financial statements, the Company participates in certain tax equity financing arrangements (TEFs) that qualify as variable interest entities (VIEs). For TEFs where the economic allocations of income are not based on pro rata ownership percentages, a balance sheet-oriented hypothetical liquidation at book value (HLBV) method is used to reflect the substantive profit sharing arrangement. Under the HLBV method, the amounts reported as noncontrolling interests and net income (loss) attributable to noncontrolling interests in the consolidated balance sheets and consolidated statements of income represent the amounts the noncontrolling interest would hypothetically receive at each balance sheet date under the liquidation provisions of each partnership's ownership agreement assuming the net assets of the projects were liquidated at recorded amounts and distributed to the equity holders. Noncontrolling interests and net loss attributable to noncontrolling interests as of and for the year ended December 31, 2020 were $617 and $42 million, respectively.

We identified the evaluation of tax equity financing arrangements as a critical audit matter. This was due to the nature and extent of audit effort required to evaluate the HLBV methodology, which included specialized skills and knowledge to evaluate that the HLBV methodology used was consistent with the liquidation provisions of the underlying operating and partnership agreements, which can be based on complex income tax rules and regulations.

The following are the primary procedures we performed to address this critical audit matter. We evaluated the design and tested the operating effectiveness of certain internal controls over the Company's review of the HLBV model, including controls related to review of the setup and accounting of the partnership liquidation model in relation to the operating and partnership agreement provisions, as well as the applicable tax regulations. We read the operating and partnership agreements and compared them against the Company's partnership liquidation model for the corresponding

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tax equity financing arrangement. We involved tax professionals with specialized skills and knowledge, who assisted in:

- analyzing the tax status of the entities and the requirements of the operating and partnership agreement provisions, as well as the partnership tax regulations
- evaluating the Company's methodology for calculating the hypothetical liquidation amounts for a partnership in accordance with the operating and partnership agreement provisions, as well as the partnership tax regulations.

/s/ KPMG LLP

We have served as the Company's auditor since 2017.

New York, New York
March 1, 2021

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Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors
Avangrid, Inc.:

Opinion on Internal Control Over Financial Reporting

We have audited Avangrid, Inc. and subsidiaries' (the Company) internal control over financial reporting as of December 31, 2020, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2020, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2020 and 2019, the related consolidated statements of income, comprehensive income, changes in equity, and cash flows for each of the years in the three-year period ended December 31, 2020, and the related notes and financial statement schedule I (collectively, the consolidated financial statements), and our report dated March 1, 2021 expressed an unqualified opinion on those consolidated financial statements.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Report of Management on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ KPMG LLP

New York, New York
March 1, 2021

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Avangrid, Inc. and Subsidiaries
Consolidated Statements of Income

Years Ended December 31,	2020	2019	2018
(Millions, except for number of shares and per share data)			
Operating Revenues	**$ 6,320**	**$ 6,336**	**$ 6,477**
Operating Expenses			
Purchased power, natural gas and fuel used	1,379	1,509	1,653
Operations and maintenance	2,466	2,305	2,258
Loss from assets held for sale	—	—	16
Depreciation and amortization	987	933	855
Taxes other than income taxes, net	619	591	579
Total Operating Expenses	**5,451**	**5,338**	**5,361**
Operating Income	**869**	**998**	**1,116**
Other Income and (Expense)			
Other income (expense)	18	121	(66)
(Losses) earnings from equity method investments	(3)	3	10
Interest expense, net of capitalization	(316)	(310)	(303)
Income Before Income Tax	**568**	**812**	**757**
Income tax expense	29	169	167
Net Income	**539**	**643**	**590**
Net loss (income) attributable to noncontrolling interests	42	24	(3)
Net Income Attributable to Avangrid, Inc.	**$ 581**	**$ 667**	**$ 587**
Earnings Per Common Share, Basic:	**$ 1.88**	**$ 2.16**	**$ 1.90**
Earnings Per Common Share, Diluted:	**$ 1.88**	**$ 2.16**	**$ 1.89**
Weighted-average Number of Common Shares Outstanding:			
Basic	309,494,939	309,491,082	309,503,319
Diluted	309,559,387	309,514,910	309,712,628

The accompanying notes are an integral part of our consolidated financial statements.

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Avangrid, Inc. and Subsidiaries
Consolidated Statements of Comprehensive Income

Years Ended December 31, (Millions)	2020	2019	2018
Net Income	**$ 539**	**$ 643**	**$ 590**
Other Comprehensive Income			
Gain on defined benefit plans, net of income taxes of $0, $0 and $1, respectively	—	1	3
Amortization of pension cost for nonqualified plans, net of income taxes of $3, $(1) and $0, respectively	(13)	(1)	1
Unrealized loss during the year on derivatives qualifying as cash flow hedges, net of income taxes of $(7), $(9) and $(7), respectively	(22)	(22)	(21)
Reclassification to net income of losses (gains) on cash flow hedges, net of income taxes of $2, $3 and $(7), respectively	19	11	(8)
Other Comprehensive Loss	**(16)**	**(11)**	**(25)**
Comprehensive Income	523	632	565
Net loss (income) attributable to noncontrolling interests	42	24	(3)
Comprehensive Income Attributable to Avangrid, Inc.	**$ 565**	**$ 656**	**$ 562**

The accompanying notes are an integral part of our consolidated financial statements.

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Avangrid, Inc. and Subsidiaries
Consolidated Balance Sheets

As of December 31,	2020	2019
(Millions)		
Assets		
Current Assets		
Cash and cash equivalents	$ 1,463	$ 178
Accounts receivable and unbilled revenues, net	1,187	1,082
Accounts receivable from affiliates	12	10
Derivative assets	18	11
Fuel and gas in storage	93	110
Materials and supplies	169	141
Prepayments and other current assets	525	199
Regulatory assets	310	294
Total Current Assets	**3,777**	**2,025**
Total Property, Plant and Equipment ($1,637 and $787 related to VIEs, respectively)	**26,751**	**25,196**
Operating lease right-of-use assets	153	70
Equity method investments	668	645
Other investments	68	63
Regulatory assets	2,572	2,567
Other Assets		
Goodwill	3,119	3,119
Intangible assets	305	314
Derivative assets	79	84
Other	331	311
Total Other Assets	**3,834**	**3,828**
Total Assets	**$ 37,823**	**$ 34,394**

The accompanying notes are an integral part of our consolidated financial statements.

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Avangrid, Inc. and Subsidiaries
Consolidated Balance Sheets

As of December 31,	2020	2019
(Millions, except share information)		
Liabilities		
Current Liabilities		
Current portion of debt	$ 313	$ 730
Notes payable	307	560
Interest accrued	70	72
Accounts payable and accrued liabilities	1,453	1,361
Accounts payable to affiliates	50	64
Dividends payable	136	136
Taxes accrued	73	56
Operating lease liabilities	8	12
Derivative liabilities	17	20
Other current liabilities	368	336
Regulatory liabilities	274	242
Total Current Liabilities	**3,069**	**3,589**
Regulatory liabilities	3,137	3,281
Other Non-current Liabilities		
Deferred income taxes	1,919	1,837
Deferred income	1,204	1,274
Pension and other postretirement	1,007	1,100
Operating lease liabilities	154	65
Derivative liabilities	79	85
Asset retirement obligations	210	190
Environmental remediation costs	292	338
Other	448	380
Total Other Non-current Liabilities	**5,313**	**5,269**
Non-current debt	7,478	6,716
Non-current debt to affiliate	3,000	—
Total Non-current Liabilities	**18,928**	**15,266**
Total Liabilities	**21,997**	**18,855**
Commitments and Contingencies	—	—
Equity		
Stockholders' Equity:		
Common stock, $.01 par value, 500,000,000 shares authorized, 309,794,917 and 309,752,140 shares issued; 309,077,300 and 309,005,272 shares outstanding, respectively	3	3
Additional paid-in capital	13,665	13,660
Treasury stock	(14)	(12)
Retained earnings	1,666	1,634
Accumulated other comprehensive loss	(111)	(95)
Total Stockholders' Equity	**15,209**	**15,190**
Noncontrolling interests	617	349
Total Equity	**15,826**	**15,539**
Total Liabilities and Equity	**$ 37,823**	**$ 34,394**

The accompanying notes are an integral part of our consolidated financial statements.

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Avangrid, Inc. and Subsidiaries
Consolidated Statements of Cash Flows

Years Ended December 31, (Millions)	2020	2019	2018
Cash Flow from Operating Activities			
Net income	**$ 539**	**$ 643**	**$ 590**
Adjustments to reconcile net income to net cash provided by operating activities			
Depreciation and amortization	987	933	855
Loss from assets held for sale	—	—	16
Accretion expenses	11	12	12
Regulatory assets/liabilities amortization and carrying cost	(13)	64	73
Pension cost	82	91	123
Earnings from equity method investments	3	(3)	(10)
Distribution of earnings from equity method investments	19	12	14
Unrealized losses (gains) on marked to market derivative contracts	5	(76)	22
Gain from divestment and disposal of property	(10)	(135)	(10)
Deferred taxes	17	164	148
Other non-cash items	(83)	(51)	(27)
Changes in operating assets and liabilities:			
Current assets	(173)	126	(117)
Noncurrent assets	(170)	(152)	(87)
Current liabilities	160	(2)	99
Noncurrent liabilities	(86)	(38)	80
Net Cash Provided by Operating Activities	**1,288**	**1,588**	**1,781**
Cash Flow from Investing Activities			
Capital expenditures	(2,781)	(2,735)	(1,777)
Contributions in aid of construction	48	74	60
Proceeds from sale of equity method and other investment	238	108	186
Proceeds from sale of property, plant and equipment	7	18	18
Payments to affiliates	(3)	(2)	—
Cash distribution from equity method investments	3	5	4
Other investments and equity method investments, net	(370)	(176)	(45)
Net Cash Used in Investing Activities	**(2,858)**	**(2,708)**	**(1,554)**
Cash Flow from Financing Activities			
Non-current debt issuances	1,367	2,137	597
Non-current debt issuance with affiliate	3,000	—	—
Repayments of non-current debt	(1,011)	(346)	(217)
Repayments of other short-term debt, net	(253)	(28)	(201)
Repayments of financing leases	(9)	(27)	(13)
Repurchase of common stock	(2)	—	(4)
Issuance of common stock	(1)	—	(2)
Distributions to noncontrolling interests	(5)	(63)	(76)
Contributions from noncontrolling interests	312	133	223
Dividends paid	(545)	(545)	(537)
Net Cash Provided by (Used in) Financing Activities	**2,853**	**1,261**	**(230)**
Net Increase (Decrease) in Cash, Cash Equivalents and Restricted Cash	**1,283**	**141**	**(3)**
Cash, Cash Equivalents and Restricted Cash, Beginning of Year	**184**	**43**	**46**
Cash, Cash Equivalents and Restricted Cash, End of Year	**$ 1,467**	**$ 184**	**$ 43**
Supplemental Cash Flow Information			
Cash paid for interest, net of amounts capitalized	$ 278	$ 270	$ 224
Cash paid (refunded) for income taxes	$ 8	$ 2	$ (13)

The accompanying notes are an integral part of our consolidated financial statements.

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Avangrid, Inc. and Subsidiaries
Consolidated Statements of Changes in Equity

	Avangrid, Inc. Stockholders								
(Millions, except for number of shares)	**Number of shares (*)**	**Common Stock**	**Additional paid-in capital**	**Treasury Stock**	**Retained Earnings**	**Accumulated Other Comprehensive Income (Loss)**	**Total Stockholders' Equity**	**Non-controlling Interests**	**Total Equity**
Balances, December 31, 2017	**309,005,272**	**$ 3**	**$ 13,653**	**$ (8)**	**$ 1,469**	**$ (46)**	**$ 15,071**	**$ 19**	**$ 15,090**
Adoption of accounting standards	—	—	—	—	(3)	(1)	(4)	140	136
Net income	—	—	—	—	587	—	587	3	590
Other comprehensive income, net of tax of $(13)	—	—	—	—	—	(25)	(25)	—	(25)
Comprehensive income									565
Dividends declared, $1.744/share	—	—	—	—	(540)	—	(540)	—	(540)
Issuance of common stock	81,208	—	1	—	(3)	—	(2)	—	(2)
Repurchase of common stock	(81,208)	—	—	(4)	—	—	(4)	—	(4)
Stock-based compensation	—	—	3	—	—	—	3	—	3
Distributions to noncontrolling interests	—	—	—	—	—	—	—	(76)	(76)
Contributions from noncontrolling interests	—	—	—	—	4	—	4	213	217
Balances, December 31, 2018	**309,005,272**	**3**	**13,657**	**(12)**	**1,514**	**(72)**	**15,090**	**299**	**15,389**
Adoption of accounting standards	—	—	—	—	11	(12)	(1)	—	(1)
Net income	—	—	—	—	667	—	667	(24)	643
Other comprehensive income, net of tax of $(7)	—	—	—	—	—	(11)	(11)	—	(11)
Comprehensive income									632
Dividends declared, $1.76/share	—	—	—	—	(545)	—	(545)	—	(545)
Stock-based compensation	—	—	3	—	—	—	3	—	3
Distributions to noncontrolling interests	—	—	—	—	(4)	—	(4)	(59)	(63)
Contributions from noncontrolling interests	—	—	—	—	(9)	—	(9)	133	124
Balances, December 31, 2019	**309,005,272**	**3**	**13,660**	**(12)**	**1,634**	**(95)**	**15,190**	**349**	**15,539**
Adoption of accounting standards	—	—	—	—	(1)	—	(1)	—	(1)
Net income	—	—	—	—	581	—	581	(42)	539
Other comprehensive income, net of tax of $(2)	—	—	—	—	—	(16)	(16)	—	(16)
Comprehensive income									523
Dividends declared, $1.76/share	—	—	—	—	(545)	—	(545)	—	(545)
Release of common stock held in trust	72,028	—	—	—	—	—	—	—	—
Issuance of common stock	42,777	—	(1)	—	—	—	(1)	—	(1)
Repurchase of common stock	(42,777)	—	—	(2)	—	—	(2)	—	(2)
Stock-based compensation	—	—	6	—	—	—	6	—	6
Distributions to noncontrolling interests	—	—	—	—	—	—	—	(5)	(5)
Contributions from noncontrolling interests	—	—	—	—	(3)	—	(3)	315	312
Balances, December 31, 2020	**309,077,300**	**$ 3**	**$ 13,665**	**$ (14)**	**$ 1,666**	**$ (111)**	**$ 15,209**	**$ 617**	**$ 15,826**

(*) Par value of share amounts is $.01

The accompanying notes are an integral part of our consolidated financial statements.

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Note 1. Background and Nature of Operations

Avangrid, Inc. (AVANGRID, we or the Company) is an energy services holding company engaged in the regulated energy transmission and distribution business through its principal subsidiary Avangrid Networks, Inc. (Networks), and in the renewable energy generation business through its principal subsidiary, Avangrid Renewables Holding, Inc. (ARHI). ARHI in turn holds subsidiaries including Avangrid Renewables, LLC (Renewables). Iberdrola, S.A. (Iberdrola), a corporation organized under the laws of the Kingdom of Spain, owns 81.5% of the outstanding common stock of AVANGRID. The remaining outstanding shares are publicly-traded on the New York Stock Exchange and owned by various shareholders.

Proposed Merger with PNMR

On October 20, 2020, AVANGRID, PNM Resources, Inc., a New Mexico corporation (PNMR) and NM Green Holdings, Inc., a New Mexico corporation and wholly-owned subsidiary of AVANGRID (Merger Sub), entered into an Agreement and Plan of Merger (Merger Agreement), pursuant to which Merger Sub is expected to merge with and into PNMR, with PNMR surviving the Merger as a direct wholly-owned subsidiary of AVANGRID (Merger). Pursuant to the Merger Agreement, each issued and outstanding share of the common stock of PNMR (PNMR common stock) (other than (i) the issued shares of PNMR common stock that are owned by AVANGRID, Merger Sub, PNMR or any wholly-owned subsidiary of AVANGRID or PNMR, which will be automatically cancelled at the time the Merger is consummated and (ii) shares of PNMR common stock held by a holder who has not voted in favor of, or consented in writing to, the Merger who is entitled to, and who has demanded, payment for fair value of such shares) will be converted, at the time the Merger is consummated, into the right to receive $50.30 in cash (Merger Consideration).

Consummation of the Merger (Closing) is subject to the satisfaction or waiver of certain customary closing conditions, including, without limitation, the approval of the Merger Agreement by the holders of at least a majority of the outstanding shares of PNMR common stock entitled to vote thereon, the absence of any material adverse effect on PNMR, the receipt of certain required regulatory approvals (including approvals from the Public Utility Commission of Texas (PUCT), the New Mexico Public Regulation Commission (NMPRC), the FERC, the Federal Communications Commission (FCC), the Committee on Foreign Investment in the United States (CFIUS), the Nuclear Regulatory Commission (NRC) and approval under the Hart-Scott-Rodino Antitrust Improvements Act of 1976), the Four Corners Divestiture Agreements (as defined below) being in full force and effect and all applicable regulatory filings associated therewith being made, as well as holders of no more than 15% of the outstanding shares of PNMR common stock validly exercising their dissenters' rights. On February 12, 2021, the shareholders of PNMR approved the proposed Merger. The Merger is currently expected to close in the second half of 2021.

The Merger Agreement also contains representations, warranties and covenants of PNMR, AVANGRID and Merger Sub, which are customary for transactions of this type. In addition, among other things, the Merger Agreement contains a covenant requiring PNMR to, prior to the Closing, enter into agreements (Four Corners Divestiture Agreements) providing for, and to make filings required to, exit from all ownership interests in the Four Corners Power Plant, all with the objective of having the closing date for such exit be no later than December 31, 2024.

In connection with the Merger, Iberdrola, S.A. has provided AVANGRID a commitment letter (Iberdrola Funding Commitment Letter), pursuant to which Iberdrola has unilaterally agreed to provide to AVANGRID, or arrange the provision to AVANGRID of, funds to the extent necessary for AVANGRID to consummate the Merger, including the payment of the aggregate Merger Consideration. To the extent AVANGRID wishes to effect a funding transaction under the Iberdrola Funding Commitment Letter in order to pay the Merger Consideration, the specific terms of any such transaction will be negotiated between Iberdrola and AVANGRID on an arm's length basis and must be approved by both (i) a majority of the members of the unaffiliated committee of the board of directors of AVANGRID, and (ii) a majority of the board of directors of AVANGRID. Under the terms of such commitment letter, Iberdrola S.A. has agreed to negotiate with AVANGRID the specific terms of any transaction effecting such funding commitment promptly and in good faith, with the objective that such terms shall be commercially reasonable and approved by AVANGRID. AVANGRID's and Merger Sub's obligations under the Merger Agreement are not conditioned upon AVANGRID obtaining financing.

The Merger Agreement provides for certain customary termination rights including the right of either party to terminate the Merger Agreement if the Merger is not completed on or before January 20, 2022 (subject to a three-month extension by either party if all of the conditions to the closing, other than the conditions related to obtaining regulatory approvals, have been satisfied or waived). The Merger Agreement further provides that, upon termination of the Merger Agreement under certain specified circumstances (including if AVANGRID terminates the Merger Agreement due to a change in recommendation of the board of directors of PNMR or if PNMR terminates the Merger Agreement to accept a superior proposal (as defined in the

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Merger Agreement)), PNMR will be required to pay AVANGRID a termination fee of $130 million. In addition, the Merger Agreement provides that (i) if the Merger Agreement is terminated by either party due to a failure of a regulatory closing condition and such failure is the result of AVANGRID's breach of its regulatory covenants, or (ii) AVANGRID fails to effect the Closing when all closing conditions have been satisfied and it is otherwise obligated to do so under the Merger Agreement, then, in either such case, upon termination of the Merger Agreement, AVANGRID will be required to pay PNMR a termination fee of $184 million as the sole and exclusive remedy. Upon the termination of the Merger Agreement under certain specified circumstances involving a breach of the Merger Agreement, either PNMR or AVANGRID will be required to reimburse the other party's reasonable and documented out-of-pocket fees and expenses up to $10 million (which amount will be credited toward, and offset against, the payment of any applicable termination fee).

Note 2. Basis of Presentation

The accompanying consolidated financial statements have been prepared in accordance with U.S. GAAP and are presented on a consolidated basis, and therefore include the accounts of AVANGRID and its consolidated subsidiaries, Networks and ARHI. All intercompany transactions and accounts have been eliminated in consolidation in all periods presented.

Immaterial Corrections to Prior Periods

We have identified various immaterial corrections to prior periods primarily related to property, plant and equipment and deferred tax liabilities that originated in prior periods. We evaluated the effects of these corrections on our previously-issued consolidated financial statements, individually and in the aggregate, in accordance with the guidance in ASC Topic 250, Accounting Changes and Error Corrections, ASC Topic 250-10-S99-1, Assessing Materiality, and ASC Topic 250-10-S99-2, Considering the Effects of Prior Year Misstatements when Quantifying Misstatements in Current Year Financial Statements, and concluded that no prior period is materially misstated. Accordingly, we have revised our consolidated financial statements for the prior periods presented herein. The revision decreased retained earnings by $6 million as of December 31, 2018.

A summary of the effect of the correction on the consolidated balance sheet as of December 31, 2019 is as follows:

As of December 31, 2019	As reported	Correction	As Revised
(Millions)			
Assets			
Total Property, Plant and Equipment	$ 25,218	$ (22)	$ 25,196
Total Assets	$ 34,416	$ (22)	$ 34,394
Liabilities			
Other current liabilities	$ 334	$ 2	$ 336
Total Current Liabilities	$ 3,587	$ 2	$ 3,589
Deferred income taxes	$ 1,814	$ 23	$ 1,837
Total Other Non-current Liabilities	$ 5,246	$ 23	$ 5,269
Total Non-current Liabilities	$ 15,243	$ 23	$ 15,266
Total Liabilities	$ 18,830	$ 25	$ 18,855
Equity			
Retained earnings	$ 1,681	$ (47)	$ 1,634
Total Stockholders' Equity	$ 15,237	$ (47)	$ 15,190
Total Equity	$ 15,586	$ (47)	$ 15,539
Total Liabilities and Equity	$ 34,416	$ (22)	$ 34,394

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A summary of the effect of the correction on the consolidated statements of income for the year ended December 31, 2019 is as follows:

Year Ended December 31, 2019	As reported	Correction	As Revised
(Millions)			
Operating Revenues	$ 6,338	$ (2)	$ 6,336
Operations and maintenance	$ 2,301	$ 4	$ 2,305
Depreciation and amortization	$ 934	$ (1)	$ 933
Total Operating Expenses	$ 5,335	$ 3	$ 5,338
Operating Income	$ 1,003	$ (5)	$ 998
Other income	$ 119	$ 2	$ 121
Interest expense, net of capitalization	$ (306)	$ (4)	$ (310)
Income Before Income Tax	$ 819	$ (7)	$ 812
Income tax expense	$ 143	$ 26	$ 169
Net Income	$ 676	$ (33)	$ 643
Net Income Attributable to Avangrid, Inc.	$ 700	$ (33)	$ 667
Earnings per common share, Basic	$ 2.26	$ (0.10)	$ 2.16
Earnings per common share, Diluted	$ 2.26	$ (0.10)	$ 2.16

A summary of the effect of the correction on the consolidated statements of income for the year ended December 31, 2018 is as follows:

Year Ended December 31, 2018	As reported	Correction	As Revised
(Millions)			
Operating Revenues	$ 6,478	$ (1)	$ 6,477
Operations and maintenance	$ 2,248	$ 10	$ 2,258
Total Operating Expenses	$ 5,351	$ 10	$ 5,361
Operating Income	$ 1,127	$ (11)	$ 1,116
Income Before Income Tax	$ 768	$ (11)	$ 757
Income tax expense	$ 170	$ (3)	$ 167
Net Income	$ 598	$ (8)	$ 590
Net Income Attributable to Avangrid, Inc.	$ 595	$ (8)	$ 587
Earnings per common share, Basic	$ 1.92	$ (0.02)	$ 1.90
Earnings per common share, Diluted	$ 1.92	$ (0.03)	$ 1.89

A summary of the effect of the correction on the consolidated statements of cash flows for the years ended December 31, 2019 and 2018 is as follows:

Years Ended December 31,	2019			2018		
(Millions)	As Reported	Correction	As Revised	As Reported	Correction	As Revised
Net income	$ 676	$ (33)	$ 643	$ 598	$ (8)	$ 590
Depreciation and amortization	$ 934	$ (1)	$ 933	$ 855	$ —	$ 855
Deferred taxes	$ 138	$ 26	$ 164	$ 151	$ (3)	$ 148
Current liabilities	$ (5)	$ 3	$ (2)	$ 98	$ 1	$ 99
Net Cash Provided by Operating Activities	$ 1,593	$ (5)	$ 1,588	$ 1,791	$ (10)	$ 1,781
Capital expenditures	$ (2,740)	$ 5	$ (2,735)	$ (1,787)	$ 10	$ (1,777)
Net Cash Used in Investing Activities	$ (2,713)	$ 5	$ (2,708)	$ (1,564)	$ 10	$ (1,554)
Cash paid for interest, net of amounts capitalized	$ 266	$ 4	$ 270	$ 224	$ —	$ 224

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Note 3. Summary of Significant Accounting Policies, New Accounting Pronouncements and Use of Estimates

Significant Accounting Policies

We consider the following policies to be the most significant in understanding the judgments that are involved in preparing our consolidated financial statements:

(a) Principles of consolidation

We consolidate the entities in which we have a controlling financial interest, after the elimination of intercompany transactions. We account for investments in common stock where we have the ability to exercise significant influence, but not control, using the equity method of accounting.

(b) Revenue recognition

We recognize revenues when we transfer control of promised goods or services to our customers in an amount that reflects the consideration we expect to be entitled to in exchange for those goods or services. Refer to Note 4 for further details.

(c) Regulatory accounting

We account for our regulated utilities' operations in accordance with the authoritative guidance applicable to entities with regulated operations that meet the following criteria: (i) rates are established or approved by an independent, third-party regulator; (ii) rates are designed to recover the entity's specific costs of providing the regulated services or products and; (iii) there is a reasonable expectation that rates are set at levels that will recover the entity's costs and can be collected from customers. Regulatory assets represent incurred costs that have been deferred because of their probable future recovery from customers through regulated rates. Regulatory liabilities represent: (i) the excess recovery of costs or accrued credits that have been deferred because it is probable such amounts will be returned to customers through future regulated rates; or (ii) billings in advance of expenditures for approved regulatory programs.

We amortize regulatory assets and liabilities and recognize the related expense or revenue in our consolidated statements of income consistent with the recovery or refund included in customer rates. We believe it is probable that our currently recorded regulatory assets and liabilities will be recovered or settled in future rates.

(d) Business combinations and assets acquisitions (disposals)

We apply the acquisition method of accounting to account for business combinations. The consideration transferred for an acquisition is the fair value of the assets transferred, the liabilities incurred, including contingent consideration, and the equity interests issued by the acquirer. We measure identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination initially at their fair values at the acquisition date. We record as goodwill the excess of the consideration transferred over the fair value of the identifiable net assets acquired. We recognize adjustments to provisional amounts relating to a business combination that are identified during the measurement period in the reporting period in which the adjustment amounts are determined. For business combinations, we expense acquisition-related costs as incurred.

In contrast to a business combination (disposal), we classify a transaction as an asset acquisition (disposal) when substantially all the fair value of the gross assets acquired (disposed) is concentrated in a single identifiable asset or group of similar identifiable assets or otherwise does not meet the definition of a business. For asset acquisitions, we capitalize acquisition-related costs as a component of the cost of the assets acquired and liabilities assumed.

(e) Noncontrolling interests

Noncontrolling interests represent the portion of our net income (loss), comprehensive income (loss) and net assets that is not allocable to us and is calculated based on our ownership percentage. For holdings where the economic allocations are not based pro rata on ownership percentages, we use the balance sheet-oriented hypothetical liquidation at book value (HLBV) method, to reflect the substantive profit sharing arrangement.

Under the HLBV method, the amounts we report as "Noncontrolling interests" and "Net income (loss) attributable to noncontrolling interests" in our consolidated balance sheets and consolidated statements of income represent the amounts the noncontrolling interest would hypothetically receive at each balance sheet reporting date under the liquidation provisions of each holding's ownership agreement assuming we were to liquidate the net assets of the projects at recorded amounts determined in accordance with U.S. GAAP and distribute those amounts to the investors. We determine the noncontrolling interest in our statements of income and comprehensive income as the difference in noncontrolling interests on our consolidated balance sheets at the start, or at inception of the noncontrolling interest if applicable, and end of each reporting period, after taking into account any capital transactions between the holdings and the third party. We report the noncontrolling interest balances in the holdings as a component of equity on our consolidated balance sheets.

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(f) Equity method investments

We account for joint ventures that do not meet consolidation criteria using the equity method. We reflect earnings (losses) recognized under the equity method in the consolidated statements of income as "Earnings (losses) from equity method investments." We recognize dividends received from joint ventures as a reduction in the carrying amount of the investment and not as dividend income. We assess and record an impairment of our equity method investments in earnings for a decline in value that we determine to be other than temporary.

(g) Goodwill and other intangible assets

Goodwill represents future economic benefits arising from other assets acquired in a business combination that are not individually identified and separately recognized. Goodwill is initially measured at cost, being the excess of the aggregate of the consideration transferred, the fair value of any noncontrolling interest and the acquisition date fair value of any previously held equity interest in the acquiree over the fair value of the net identifiable assets acquired and liabilities assumed.

Goodwill is not amortized, but is subject to an assessment for impairment performed in the fourth quarter or more frequently if events occur or circumstances change that would more likely than not reduce the fair value of a reporting unit to which goodwill is assigned below its carrying amount. A reporting unit is an operating segment or one level below an operating segment and is the level at which we test goodwill for impairment. In assessing goodwill for impairment, we have the option to first perform a qualitative assessment to determine whether a quantitative assessment is necessary. If we determine, based on qualitative factors, that the fair value of the reporting unit is more likely than not greater than the carrying amount, no further testing is required. If we bypass the qualitative assessment, or perform the qualitative assessment but determine it is more likely than not that its fair value is less than its carrying amount, we perform a quantitative test to compare the fair value of the reporting unit to its carrying amount, including goodwill. If the carrying amount of the reporting unit exceeds its fair value, we record an impairment loss as a reduction to goodwill and a charge to operating expenses, but the loss recognized would not exceed the total amount of goodwill allocated to the reporting unit.

Intangible assets acquired separately are measured on initial recognition at cost. The cost of intangible assets acquired in a business combination is their fair value at the date of acquisition. Following initial recognition, intangible assets are carried at cost less any accumulated amortization and impairment losses. The useful lives of intangible assets are assessed as either finite or indefinite.

Intangible assets with finite lives are amortized on a straight-line basis over the useful economic life, which ranges from four to forty years, and assessed for impairment whenever there is an indication that the intangible asset may be impaired. The amortization expense on intangible assets with finite lives is recognized in our consolidated statements of income within the expense category that is consistent with the function of the intangible assets.

(h) Property, plant and equipment

We account for property, plant and equipment at historical cost. In cases where we are required to dismantle installations or to recondition the site on which they are located, we record the estimated cost of removal or reconditioning as an asset retirement obligation (ARO) and add an equal amount to the carrying amount of the asset.

Development and construction of our various facilities are carried out in stages. We expense project costs during early stage development activities. Once we achieve certain development milestones and it is probable that we can obtain future economic benefits from a project, we capitalize salaries and wages for persons directly involved in the project, and engineering, permits, licenses, wind measurement and insurance costs. We periodically review development projects in construction for any indications of impairment.

We transfer assets from “Construction work in progress” to “Property, plant and equipment” when they are available for service.

We capitalize wind turbine and related equipment costs, other project construction costs and interest costs related to the project during the construction period through substantial completion. We record AROs at the date projects achieve commercial operation.

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We depreciate the cost of plant and equipment in use on a straight-line basis, less any estimated residual value. The main asset categories are depreciated over the following estimated useful lives:

Major class	Asset Category	Estimated Useful Life (years)
Plant	Combined cycle plants	35-55
	Hydroelectric power stations	45-90
	Wind power stations	25-40
	Solar power stations	25
	Transport facilities	40-75
	Distribution facilities	15-80
Equipment	Conventional meters and measuring devices	7-60
	Computer software	4-25
Other	Buildings	30-82
	Operations offices	5-75

Networks determines depreciation expense using the straight-line method, based on the average service lives of groups of depreciable property, which include estimated cost of removal, in service at each operating company. Consistent with FERC accounting requirements, Networks charges the original cost of utility plant retired or otherwise disposed to accumulated depreciation. Networks' composite rate of depreciation was 2.9% of average depreciable property for both 2020 and 2019.

We charge repairs and minor replacements to operating expenses, and capitalize renewals and betterments, including certain indirect costs.

Allowance for funds used during construction (AFUDC), applicable to Networks' entities that apply regulatory accounting, is a noncash item that represents the allowed cost of capital, including a return on equity (ROE), used to finance construction projects. We record the portion of AFUDC attributable to borrowed funds as a reduction of interest expense and record the remainder as other income.

(i) Leases

We determine if an arrangement is a lease at inception. We classify a lease as a finance lease if it meets any one of specified criteria that in essence transfers ownership of the underlying asset to us by the end of the lease term. If a lease does not meet any of those criteria, we classify it as an operating lease. On our consolidated balance sheets, we include, for operating leases: "Operating lease right-of-use (ROU) assets" and "Operating lease liabilities (current and non-current)"; and for finance leases: finance lease ROU assets in "Other assets" and liabilities in "Other current liabilities" and "Other liabilities."

ROU assets represent our right to use an underlying asset for the lease term and lease liabilities represent our obligation to make lease payments arising from the lease. We recognize lease ROU assets and liabilities at commencement of an arrangement based on the present value of lease payments over the lease term. Most of our leases do not provide an implicit rate, so we use our incremental borrowing rate based on the information available at the lease commencement date to determine the present value of future payments. A lease ROU asset also includes any lease payments made at or before commencement date, minus any lease incentives received, and includes initial direct costs incurred. We do not record leases with an initial term of 12 months or less on the balance sheet for all classes of underlying assets, and we recognize lease expense for those leases on a straight-line basis over the lease term. We include variable lease payments that depend on an index or a rate in the ROU asset and lease liability measurement based on the index or rate at the commencement date, or upon a modification. We do not include variable lease payments that do not depend on an index or a rate in the ROU asset and lease liability measurement. A lease term includes an option to extend or terminate the lease when it is reasonably certain that we will exercise that option. We recognize lease (rent) expense for operating lease payments on a straight-line basis over the lease term, or for our regulated companies we recognize the amount eligible for recovery under their rate plans, such as actual amounts paid. We amortize finance lease ROU assets on a straight-line basis over the lease term and recognize interest expense based on the outstanding lease liability.

We have lease agreements with lease and non-lease components, and account for lease components and associated non-lease components together as a single lease component, for all classes of underlying assets.

(j) Impairment of long-lived assets

We evaluate property, plant and equipment and other long-lived assets for impairment when events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment evaluation is based on undiscounted cash flow

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analysis at the lowest level to which cash flows of the long-lived assets or asset groups are largely independent of the cash flows of other assets and liabilities. We are required to recognize an impairment loss if the carrying amount of the asset exceeds the undiscounted future net cash flows associated with that asset.

The impairment loss to be recognized is the amount by which the carrying amount of the long-lived asset exceeds the asset's fair value. Depending on the asset, fair value may be determined by use of a discounted cash flow (DCF) model, with assumptions consistent with a market participant's view of the exit price of the asset.

(k) Fair value measurement

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants as of the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place in either the principal market for the asset or liability, or, in the absence of a principal market, in the most advantageous market for the asset or liability.

The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest. A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset according to its highest and best use, or by selling it to another market participant that would use the asset according to its highest and best use.

We use valuation techniques that are appropriate in the circumstances and for which sufficient data is available to measure fair value, maximizing the use of relevant observable inputs and minimizing the use of unobservable inputs. All assets and liabilities for which fair value is measured or disclosed in the consolidated financial statements are categorized within the fair value hierarchy based on the transparency of input to the valuation of an asset or liability as of the measurement date.

The three input levels of the fair value hierarchy are as follows:

- Level 1 - inputs to the valuation methodology are quoted prices (unadjusted) for identical assets or liabilities in active markets.
- Level 2 - inputs to the valuation methodology include quoted prices for similar assets and liabilities in active markets, and inputs that are observable for the asset or liability either directly or indirectly, for substantially the full term of the contract.
- Level 3 - one or more inputs to the valuation methodology are unobservable or cannot be corroborated with market data.

Categorization within the fair value hierarchy is based on the lowest level of input that is significant to the fair value measurement. Certain investments are not categorized within the fair value hierarchy. These investments are measured based on the fair value of the underlying investments but may not be readily redeemable at that fair value.

(l) Equity investments with readily determinable fair values

We measure equity investments with readily determinable fair values at fair value, with changes in fair value reported in net income.

(m) Derivatives and hedge accounting

Derivatives are recognized on our consolidated balance sheets at their fair value, except for certain electricity commodity purchases and sales contracts for both capacity and energy (physical contracts) that qualify for, and are elected under, the normal purchases and normal sales exception. To be a derivative under the accounting standards for derivatives and hedging, an agreement would need to have a notional and an underlying, require little or no initial net investment and could be net settled. We recognize changes in the fair value of a derivative contract in earnings unless specific hedge accounting criteria are met.

Derivatives that qualify and are designated for hedge accounting are classified as cash flow hedges. We report the gain or loss on the derivative instrument as a component of Other Comprehensive Income (OCI) and later reclassify amounts into earnings when the underlying transaction occurs, which we present in the same income statement line item as the earnings effect of the hedged item. For all designated and qualifying hedges, we maintain formal documentation of the hedge and effectiveness testing in accordance with the accounting standards for derivatives and hedging. If we determine that the derivative is no longer highly effective as a hedge, we will discontinue hedge accounting prospectively. For cash flow hedges of forecasted transactions, we estimate the future cash flows of the forecasted transactions and evaluate the probability of the occurrence and timing of such transactions. If we determine it is probable that the forecasted transaction will not occur, we immediately recognize in earnings hedge gains and losses previously recorded in OCI.

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Changes in conditions or the occurrence of unforeseen events could require discontinuance of the hedge accounting or could affect the timing of the reclassification of gains or losses on cash flow hedges from OCI into earnings. For our regulated operations, we record changes in the fair value of electric and natural gas hedge contracts derivative assets or liabilities with an offset to regulatory assets or regulatory liabilities.

We offset fair value amounts recognized for derivative instruments and fair value amounts recognized for the right to reclaim cash collateral or the obligation to return cash collateral arising from derivative instruments executed with the same counterparty under a master netting arrangement.

(n) Cash and cash equivalents

Cash and cash equivalents include cash, bank accounts and other highly-liquid short-term investments. We consider all highly liquid investments with a maturity date of three months or less when acquired to be cash equivalents and include those investments in "Cash and cash equivalents." Restricted cash represents cash legally set aside for a specified purpose or as part of an agreement with a third party. Restricted cash is included in "Other non-current assets" on our consolidated balance sheets. We classify book overdrafts representing outstanding checks in excess of funds on deposit as "Accounts payable and accrued liabilities" on our consolidated balance sheets. We report changes in book overdrafts in the operating activities section of our consolidated statements of cash flows.

(o) Trade receivable and unbilled revenue, net of allowance for credit losses

We record trade receivables at amounts billed to customers and we record unbilled revenues based on an estimate of energy delivered or services provided to customers. Certain trade receivables and payables related to our wholesale activities associated with generation and delivery of electric energy and associated environmental attributes, origination and marketing, natural gas storage, hub services and energy management, are subject to master netting agreements with counterparties, whereby we have the legal right to offset the balances and they are settled on a net basis. We present receivables and payables subject to such agreements on a net basis on our consolidated balance sheets.

Trade receivables include amounts due under Deferred Payment Arrangements (DPA). A DPA allows the account balance to be paid in installments over an extended period without interest, which generally exceeds one year, by negotiating mutually acceptable payment terms. The utility companies generally must continue to serve a customer who cannot pay an account balance in full if the customer (i) pays a reasonable portion of the balance; (ii) agrees to pay the balance in installments; and (iii) agrees to pay future bills within 30 days until the DPA is paid in full. Failure to make payments on a DPA results in the full amount of a receivable under a DPA being due. These accounts are part of the regular operating cycle and we classify them as short term. Due to COVID-19, the UIL companies' regulators require them to offer to customers, through early February 2021, a 24-month repayment plan.

We establish our allowance for credit losses, including for unbilled revenue (also referred to as contract assets), by using both historical average loss percentages to project future losses, and by establishing a specific allowance for known credit issues or for specific items not considered in the historical average calculation. Due to our adoption of Accounting Standards Codification (ASC) 326 effective January 1, 2020, we now also consider whether we need to adjust historical loss rates to reflect the effects of current conditions and forecasted changes considering various economic indicators (e.g., Gross Domestic Product, Personal Income, Consumer Price Index, Unemployment Rate) over the contractual life of the trade receivables. We write off amounts when we have exhausted reasonable collection efforts.

(p) Variable interest entities

An entity is considered to be a variable interest entity (VIE) when its total equity investment at risk is not sufficient to permit the entity to finance its activities without additional subordinated financial support, or its equity investors, as a group, lack the characteristics of having a controlling financial interest. A reporting company is required to consolidate a VIE as its primary beneficiary when it has both the power to direct the activities of the VIE that most significantly impact the VIE's economic performance, and the obligation to absorb losses of or the right to receive benefits from the VIE that could potentially be significant to the VIE. We evaluate whether an entity is a VIE whenever reconsideration events occur as defined by the accounting guidance (See Note 20).

We have undertaken several structured institutional partnership investment transactions that bring in external investors in certain of our wind farms in exchange for cash. Following an analysis of the economic substance of these transactions, we classify the consideration received at the inception of the arrangement as noncontrolling interests on our consolidated balance sheets. Subsequently, we use the HLBV method to allocate earnings to the noncontrolling interest, taking into consideration the cash and tax benefits provided to the tax equity investors.

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(q) Debentures, bonds and bank borrowings

We record bonds, debentures and bank borrowings as a liability equal to the proceeds of the borrowings. We treat the difference between the proceeds and the face amount of the issued liability as discount or premium and accrete the amounts as interest expense or income over the life of the instrument. We defer incremental costs associated with the issuance of debt instruments and amortize them over the same period as debt discount or premium. We present bonds, debentures and bank borrowings net of unamortized discount, premium and debt issuance costs on our consolidated balance sheets.

(r) Inventory

Inventory comprises fuel and gas in storage and materials and supplies. Through our gas operations, we own natural gas that is stored in third-party owned underground storage facilities, which we record as inventory. We price injections of inventory into storage at the market purchase cost at the time of injection, and price withdrawals of working gas from storage at the weighted-average cost in storage. We continuously monitor the weighted-average cost of gas value to ensure it remains at the lower of cost and net realizable value. We report inventories to support gas operations on our consolidated balance sheets within "Fuel and gas in storage."

We also have materials and supplies inventories that we use for construction of new facilities and repairs of existing facilities. These inventories are carried and withdrawn at the lower of cost and net realizable value and reported on our consolidated balance sheets within "Materials and supplies."

In addition, stand-alone renewable energy credits that are generated or purchased and held for sale are recorded at the lower of cost or net realizable value and are reported on our consolidated balance sheets within "Materials and supplies."

(s) Government grants

Our unregulated subsidiaries record government grants related to depreciable assets within deferred income and subsequently amortize them to earnings as an offset to depreciation and amortization expense over the useful life of the related asset. Our regulated subsidiaries record government grants as a reduction to the related utility plant to be recovered through rate base, in accordance with the prescribed FERC accounting.

In accounting for government grants related to operating and maintenance costs, we recognize amounts receivable as an offset to expenses in our consolidated statements of income in the period in which we incur the expenses.

(t) Deferred income

Apart from government grants, we occasionally receive revenues from transactions in advance of the resulting performance obligations arising from the transaction. It is our policy to defer such revenues on our consolidated balance sheets and amortize them into earnings when revenue recognition criteria are met.

(u) Asset retirement obligations

We record the fair value of the liability for an ARO and a conditional ARO in the period in which it is incurred, capitalizing the cost by increasing the carrying amount of the related long-lived asset. The ARO is associated with our long-lived assets and primarily consists of obligations related to removal or retirement of asbestos, polychlorinated biphenyl-contaminated equipment, gas pipeline, cast iron gas mains and electricity generation facilities. We adjust the liability periodically to reflect revisions to either the timing or amount of the original estimated undiscounted cash flows over time. The liability is accreted to its present value each period and the capitalized cost is depreciated over the useful life of the related asset. Upon settlement, we will either settle the obligation at its recorded amount or incur a gain or a loss. Our regulated utilities defer any timing differences between rate recovery and depreciation expense and accretion as either a regulatory asset or a regulatory liability.

The term conditional ARO refers to an entity's legal obligation to perform an asset retirement activity in which the timing or method of settlement are conditional on a future event that may or may not be within the entity's control. If an entity has sufficient information to reasonably estimate the fair value of the liability for a conditional ARO, it must recognize that liability at the time the liability is incurred.

Our regulated utilities meet the requirements concerning accounting for regulated operations and we recognize a regulatory liability for the difference between removal costs collected in rates and actual costs incurred. We classify these as accrued removal obligations.

(v) Environmental remediation liability

In recording our liabilities for environmental remediation costs the amount of liability for a site is the best estimate, when determinable; otherwise it is based on the minimum liability or the lower end of the range when there is a range of estimated

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losses. We record our environmental liabilities on an undiscounted basis. We expect to pay our environmental liability accruals through the year 2056.

(w) Post-employment and other employee benefits

We sponsor defined benefit pension plans that cover eligible employees. We also provide health care and life insurance benefits through various postretirement plans for eligible retirees.

We evaluate our actuarial assumptions on an annual basis and consider changes based on market conditions and other factors. All of our qualified defined benefit plans are funded in amounts calculated by independent actuaries, based on actuarial assumptions proposed by management.

We account for defined benefit pension or other postretirement plans, recognizing an asset or liability for the overfunded or underfunded plan status. For a pension plan, the asset or liability is the difference between the fair value of the plan's assets and the projected benefit obligation. For any other postretirement benefit plan, the asset or liability is the difference between the fair value of the plan's assets and the accumulated postretirement benefit obligation. Our utility operations generally reflect all unrecognized prior service costs and credits and unrecognized actuarial gains and losses as regulatory assets rather than in other comprehensive income, as management believes it is probable that such items will be recoverable through the ratemaking process. We use a December 31st measurement date for our benefits plans.

We amortize prior service costs for both the pension and other postretirement benefits plans on a straight-line basis over the average remaining service period of participants expected to receive benefits. Unrecognized actuarial gains and losses related to the pension and other postretirement benefits plans are amortized over the average remaining service period or 10 years, considering any requirement by the regulators for our Networks subsidiaries. Our policy is to calculate the expected return on plan assets using the market related value of assets. That value is determined by recognizing the difference between actual returns and expected returns over a five-year period.

(x) Income taxes

We use the asset and liability method of accounting for income taxes. Deferred tax assets and liabilities reflect the expected future tax consequences, based on enacted tax laws, of temporary differences between the tax basis of assets and liabilities and their financial reporting amounts. In accordance with U.S. GAAP for regulated industries, certain of our regulated subsidiaries have established a regulatory asset for the net revenue requirements to be recovered from customers for the related future tax expense associated with certain of these temporary differences. We defer the investment tax credits (ITCs) when earned and amortize them over the estimated lives of the related assets. We also recognize the income tax consequences of intra-entity transfers of assets other than inventory when the transfer occurs.

Deferred tax assets and liabilities are measured at the expected tax rate for the period in which the asset or liability will be realized or settled, based on legislation enacted as of the balance sheet date. Changes in deferred income tax assets and liabilities that are associated with components of OCI are charged or credited directly to OCI. Significant judgment is required in determining income tax provisions and evaluating tax positions. Our tax positions are evaluated under a more-likely-than-not recognition threshold before they are recognized for financial reporting purposes. We record valuation allowances to reduce deferred tax assets when it is more likely than not that we will not realize all or a portion of a tax benefit. Deferred tax assets and liabilities are netted and classified as non-current on our consolidated balance sheets.

We record the excess of state franchise tax computed as the higher of a tax based on income or a tax based on capital in "Taxes other than income taxes" and "Taxes accrued" in our consolidated financial statements.

Positions taken or expected to be taken on tax returns, including the decision to exclude certain income or transactions from a return, are recognized in the financial statements when it is more likely than not the tax position can be sustained based solely on the technical merits of the position. The amount of a tax return position that is not recognized in the financial statements is disclosed as an unrecognized tax benefit. Changes in assumptions on tax benefits may also impact interest expense or interest income and may result in the recognition of tax penalties. Interest and penalties related to unrecognized tax benefits are recorded within "Interest expense, net of capitalization" and "Other income and (expense)" in our consolidated statements of income.

Uncertain tax positions have been classified as non-current unless expected to be paid within one year. In 2019, we netted our liability for uncertain tax positions against all same jurisdiction deferred tax assets, net operating losses and tax credit carryforwards. Our policy is to recognize interest and penalties on uncertain tax positions as a component of interest expense in the consolidated statements of income.

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Federal production tax credits applicable to our renewable energy facilities, that are not part of a tax equity financing arrangement, are recognized as a reduction in income tax expense with a corresponding reduction in deferred income tax liabilities.

Our income tax expense, deferred tax assets and liabilities, and liabilities for unrecognized tax benefits reflect management's best assessment of estimated current and future taxes to be paid. Significant judgments and estimates are required in determining the consolidated income tax components of the financial statements.

(y) Stock-based compensation

Stock-based compensation represents costs related to stock-based awards granted to employees. We account for stock-based payment transactions based on the estimated fair value of awards reflecting forfeitures when they occur. The recognition period for these costs begins at either the applicable service inception date or grant date and continues throughout the requisite service period, or until the employee becomes retirement eligible, if earlier.

Adoption of New Accounting Pronouncements

(a) Measurement of credit losses on financial instruments, amendments and updates

The FASB issued an accounting standards update in June 2016 that requires more timely recording of credit losses on loans and other financial instruments (ASC 326). The amendments affect entities that hold financial assets and net investment in leases that are not accounted for at fair value through net income (loans, debt securities, trade receivables, net investments in leases, off-balance-sheet credit exposures, etc.). They require an entity to present a financial asset (or group of financial assets) that is measured at amortized cost basis at the net amount expected to be collected. The allowance for credit losses is a valuation account that is deducted from the amortized cost basis of the financial asset(s) to present the net carrying value at the amount expected to be collected on the financial asset. The income statement reflects the measurement of credit losses for newly recognized financial assets, as well as the expected increases or decreases of expected credit losses that have taken place during the period. The measurement of expected credit losses is based on relevant information about past events, including historical experience, current conditions and reasonable and supportable forecasts that affect the collectability of the reported amount. An entity must use judgment in determining the relevant information and estimation methods appropriate in its circumstances. The FASB subsequently issued various updates to ASC 326 to clarify transition and scope requirements, make narrow-scope codification improvements, including in March 2020, and corrections and provide targeted transition relief. We adopted the amendments effective January 1, 2020, including the narrow-scope improvements issued in March 2020, and recorded a cumulative-effect adjustment of $1 million to retained earnings at the beginning of the period of adoption, with no material effect to our consolidated results of operations, financial position, cash flows and disclosures.

(b) Simplifying the test for goodwill impairment

In January 2017, the FASB issued amendments to simplify the test for goodwill impairment, which is required for public entities and certain other entities that have goodwill reported in their financial statements. The amendments simplify the subsequent measurement of goodwill by eliminating Step 2 from the goodwill impairment test, which requires the valuation of assets acquired and liabilities assumed using business combination accounting guidance. Under the new guidance, an entity should perform its annual, or interim, goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount. An entity should recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit's fair value; but the loss recognized should not exceed the total amount of goodwill allocated to that reporting unit. Also, an entity should consider income tax effects from any tax-deductible goodwill on the carrying amount of the reporting unit when measuring the goodwill impairment loss, if applicable. Certain requirements are eliminated for any reporting unit with a zero or negative carrying amount; therefore, the same impairment assessment applies to all reporting units. An entity still has the option to perform the qualitative assessment for a reporting unit to determine if the quantitative impairment test is necessary. We adopted the amendments effective January 1, 2020, with no material effect to our consolidated results of operations, financial position, cash flows and disclosures. As required, we are applying the amendments on a prospective basis.

(c) Changes to the disclosure requirements for fair value measurement and defined benefit plans

In August 2018, the FASB issued amendments related to disclosure requirements for both fair value measurement and defined benefit plans.

The amendments concerning fair value measurement remove, modify and add certain disclosure requirements in order to improve the overall usefulness of the disclosures and reduce unnecessary costs to companies to prepare the disclosures. We adopted the amendments effective January 1, 2020, with no material effect to our disclosures. Certain amendments are to be applied prospectively, and all others are to be applied retrospectively.

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The amendments concerning disclosure requirements for defined benefit plans are narrow in scope and apply to all employers that sponsor defined benefit pension or other postretirement plans. The amendments change annual disclosures requirements, including removal of disclosures that are no longer considered cost beneficial, adding certain new relevant disclosures and clarifying specific requirements of disclosures concerning information for defined benefit pension plans. We adopted the amendments effective January 1, 2020, and they will not materially affect the disclosures for our fiscal year ending December 31, 2020. As required, we applied the amendments on a retrospective basis.

(d) Targeted improvements to related party guidance for VIEs

In October 2018, the FASB issued amendments that affect reporting entities that are required to determine whether they should consolidate a legal entity under the consolidation guidance applicable to VIEs. The targeted improvements specifically applicable to public business entities clarify that indirect interests held through related parties in common control arrangements should be considered on a proportional basis for determining whether fees paid to decision makers and service providers are variable interests. We adopted the amendments effective January 1, 2020, with no material effect to our consolidated results of operations, financial position, cash flows and disclosures.

(e) Clarifying guidance for certain collaborative arrangements with respect to revenue recognition

The FASB issued amendments in November 2018 to clarify the interaction between the guidance for certain collaborative arrangements and the guidance applicable to ASC 606. A collaborative arrangement is a contractual arrangement under which two or more parties actively participate in a joint operating activity and are exposed to significant risks and rewards that depend on the activity's commercial success. The targeted improvements clarify that certain transactions between collaborative arrangement participants are within the scope of ASC 606 and thus subject to all its guidance. We adopted the amendments effective January 1, 2020, with no material effect to our consolidated results of operations, financial position, cash flows and disclosures. As required, we retrospectively applied the amendments to the date of our initial application of ASC 606.

Accounting Pronouncements Issued But Not Yet Adopted

The following are new accounting pronouncements not yet adopted that we have evaluated or are evaluating to determine their effect on our consolidated financial statements.

(a) Simplifying the accounting for income taxes

In December 2019, the FASB issued an accounting standards update that is intended to reduce complexity in accounting for income taxes. The amendments remove specific exceptions to the general principles in ASC 740, *Income Taxes*, eliminating the need for an entity to analyze whether the following apply in a given period: (1) exception to the incremental approach for intra-period tax allocation, (2) exceptions to accounting for basis differences in equity method investments when there are ownership changes in foreign investments and (3) exception in interim period income tax accounting for year-to-date losses that exceed anticipated losses. The amendments also improve financial statement preparers' application of income-tax related guidance and simplify U. S. GAAP for (1) franchise taxes that are partially based on income, (2) transactions with a government that result in a step up in the tax basis of goodwill, (3) separate financial statements of legal entities that are not subject to tax and (4) enacted changes in tax laws in interim periods. The amendments are effective for public business entities for fiscal years beginning after December 15, 2020, and interim periods within those fiscal years. Early adoption is permitted, including adoption in any interim period for which financial statements have not been issued, with adoption of all amendments in the same period. Application is on a retrospective and/or modified retrospective basis, or a prospective basis, depending on the amendment aspect. We expect our adoption will not materially affect our consolidated results of operations, financial position and cash flows.

(b) Facilitation of the effects of reference rate reform on financial reporting, and subsequent scope clarification

In March 2020, the FASB issued amendments and created ASC 848 to provide temporary optional guidance to entities to ease the potential burden in accounting for, or recognizing the effects of, reference rate reform on financial reporting. The amendments respond to concerns about structural risks of interbank offered rates, and particularly, the risk of cessation of the London Interbank Offered Rate (LIBOR). The guidance is elective and applies to all entities, subject to meeting certain criteria, that have contracts, hedging relationships, and other transactions that reference LIBOR or another reference rate expected to be discontinued due to reference rate reform, around the end of 2021. The guidance applies to contracts that have modified terms that affect, or have the potential to affect, the amount or timing of contractual cash flows resulting from the discontinuance of the reference rate reform. The amendments are effective for all entities as of March 12, 2020, through December 31, 2022, although the FASB has indicated it will monitor developments in the marketplace and consider whether developments warrant an extension.

In January 2021, the FASB issued amendments to clarify the scope of ASC 848 and respond to questions from stakeholders about whether ASC 848 can be applied to derivative instruments that do not reference a rate that is expected to be discontinued

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but that use an interest rate for margining, discounting, or contract price alignment that is modified because of reference rate reform. The modification, commonly referred to as the "discounting transition," may have accounting implications, raising concerns about the need to reassess previous accounting determinations related to those derivatives and about the possible hedge accounting consequences of the discounting transition. The amendments clarify that certain optional expedients and exceptions in ASC 848 for contract modifications and hedge accounting apply to derivatives that are affected by the discounting transition, capture the incremental consequences of the scope clarification and tailor the existing guidance to derivative instruments affected by the discounting transition. The amendments are effective immediately, and may be elected retrospectively to eligible modifications as of any date from the beginning of the interim period that includes March 12, 2020, or prospectively to new modifications made on or after any date within the interim period that includes January 7, 2021.

We expect our adoption of reference rate reform and the subsequent scope clarification will not materially affect our consolidated results of operations, financial position and cash flows.

Use of Estimates and Assumptions

The preparation of our consolidated financial statements in conformity with U.S. GAAP requires the use of estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the consolidated financial statements, and the reported amounts of revenues and expenses during the reporting periods. Significant estimates and assumptions are used for, but not limited to: (1) allowance for credit losses and unbilled revenues; (2) asset impairments, including goodwill; (3) investments in equity instruments; (4) depreciable lives of assets; (5) income tax valuation allowances; (6) uncertain tax positions; (7) reserves for professional, workers' compensation and comprehensive general insurance liability risks; (8) contingency and litigation reserves; (9) fair value measurements; (10) earnings sharing mechanisms; (11) environmental remediation liabilities; (12) AROs; (13) pension and other postretirement employee benefits and (14) noncontrolling interest balances. Future events and their effects cannot be predicted with certainty; accordingly, our accounting estimates require the exercise of judgment. The accounting estimates we use in the preparation of our consolidated financial statements will change as new events occur, as more experience is acquired, as additional information is obtained and as our operating environment changes. We evaluate and update our assumptions and estimates on an ongoing basis and may employ outside specialists to assist in our evaluations, as necessary. Actual results could differ from those estimates.

We continue to utilize information reasonably available to us; however, the business and economic uncertainty resulting from COVID-19 has made such estimates and assumptions more difficult to assess and calculate. Affected estimates include, but are not limited to, evaluations of certain long-lived assets and goodwill for impairment, expected credit losses and potential regulatory deferral or recovery of certain costs. While we have not yet had material effects of COVID-19 on our financial results, actual results could differ from those estimates, which could result in material effects to our consolidated financial statements in future reporting periods.

Union collective bargaining agreements

We have approximately 48.8% of our employees covered by a collective bargaining agreement. Agreements expiring in the coming year apply to approximately 16.0% of our employees.

Note 4. Revenue

We recognize revenue when we have satisfied our obligations under the terms of a contract with a customer, which generally occurs when the control of promised goods or services transfers to the customer. We measure revenue as the amount of consideration we expect to receive in exchange for providing those goods or services. Contracts with customers may include multiple performance obligations. For such contracts, we allocate revenue to each performance obligation based on its relative standalone selling price. We generally determine standalone selling prices based on the prices charged to customers. Certain revenues are not within the scope of ASC 606, such as revenues from leasing, derivatives, other revenues that are not from contracts with customers and other contractual rights or obligations, and we account for such revenues in accordance with the applicable accounting standards. We exclude from revenue amounts collected on behalf of third parties, including any such taxes collected from customers and remitted to governmental authorities. We do not have any significant payment terms that are material because we receive payment at or shortly after the point of sale.

The following describes the principal activities, by reportable segment, from which we generate revenue. For more detailed information about our reportable segments, refer to Note 24.

Networks Segment

Networks derives its revenue primarily from tariff-based sales of electricity and natural gas service to customers in New York, Connecticut, Maine and Massachusetts with no defined contractual term. For such revenues, we recognize revenues in an

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amount derived from the commodities delivered to customers. Other major sources of revenue are electricity transmission and wholesale sales of electricity and natural gas.

Tariff-based sales are subject to the corresponding state regulatory authorities, which determine prices and other terms of service through the ratemaking process. The applicable tariffs are based on the cost of providing service. The utilities' approved base rates are designed to recover their allowable operating costs, including energy costs, finance costs, and the costs of equity, the last of which reflect our capital ratio and a reasonable return on equity. They traditionally invoice their customers by applying approved base rates to usage. Maine state law prohibits the utility from providing the electricity commodity to customers. In New York, Connecticut and Massachusetts, customers have the option to obtain the electricity or natural gas commodity directly from the utility or from another supplier. For customers that receive their commodity from another supplier, the utility acts as an agent and delivers the electricity or natural gas provided by that supplier. Revenue in those cases is only for providing the service of delivery of the commodity. Networks entities calculate revenue earned but not yet billed based on the number of days not billed in the month, the estimated amount of energy delivered during those days and the estimated average price per customer class for that month. Differences between actual and estimated unbilled revenue are immaterial.

Transmission revenue results from others' use of the utility's transmission system to transmit electricity and is subject to Federal Energy Regulatory Commission (FERC) regulation, which establishes the prices and other terms of service. Long-term wholesale sales of electricity are based on individual bilateral contracts. Short-term wholesale sales of electricity are generally on a daily basis based on market prices and are administered by the Independent System Operator-New England (ISO-NE) and the New York Independent System Operator (NYISO), or PJM Interconnection, L.L.C. (PJM), as applicable. Wholesale sales of natural gas are generally short-term based on market prices through contracts with the specific customer.

The performance obligation in all arrangements is satisfied over time because the customer simultaneously receives and consumes the benefits as Networks delivers or sells the electricity or natural gas or provides the delivery or transmission service. We record revenue for all of such sales based upon the regulatory-approved tariff and the volume delivered or transmitted, which corresponds to the amount that we have a right to invoice. There are no material initial incremental costs of obtaining a contract in any of the arrangements. Networks does not adjust the promised consideration for the effects of a significant financing component if it expects, at contract inception, that the time between the delivery of promised goods or service and customer payment will be one year or less. For its New York and Connecticut utilities, Networks assesses its DPAs at each balance sheet date for the existence of significant financing components, but has had no material adjustments as a result.

Certain Networks entities record revenue from Alternative Revenue Programs (ARPs), which is not ASC 606 revenue. Such programs represent contracts between the utilities and their regulators. The Networks ARPs include revenue decoupling mechanisms, other ratemaking mechanisms, annual revenue requirement reconciliations and other demand side management programs. The Networks entities recognize and record only the initial recognition of "originating" ARP revenues (when the regulatory-specified conditions for recognition have been met). When they subsequently include those amounts in the price of utility service billed to customers, they record such amounts as a recovery of the associated regulatory asset or liability. When they owe amounts to customers in connection with ARPs, they evaluate those amounts on a quarterly basis and include them in the price of utility service billed to customers and do not reduce ARP revenues.

Networks also has various other sources of revenue including billing, collection, other administrative charges, sundry billings, rent of utility property and miscellaneous revenue. It classifies such revenues as other ASC 606 revenues to the extent they are not related to revenue generating activities from leasing, derivatives or ARPs.

Renewables Segment

Renewables derives its revenue primarily from the sale of energy, transmission, capacity and other related charges from its renewable wind, solar and thermal energy generating sources. For such revenues, we will recognize revenues in an amount derived from the commodities delivered and from services as they are made available. Renewables has bundled power purchase agreements consisting of electric energy, transmission, capacity and/or renewable energy credits (RECs). The related contracts are generally long-term with no stated contract amount, that is, the customer is entitled to all the unit's output. Renewables also has unbundled sales of electric energy and capacity, RECs and natural gas, which are generally for periods of less than a year. The performance obligations in substantially all of both bundled and unbundled arrangements for electricity and natural gas are satisfied over time, for which we record revenue based on the amount invoiced to the customer for the actual energy delivered. The performance obligation for stand-alone RECs is satisfied at a point in time, for which we record revenue when the performance obligation is satisfied upon delivery of the REC. There are no material initial incremental costs of obtaining a contract or significant financing elements in any of the arrangements.

Renewables classifies certain contracts for the sale of electricity as derivatives, in accordance with the applicable accounting standards. Renewables also has revenue from its energy trading operations, which it generally classifies as derivative revenue. However, trading contracts not classified as derivatives are within the scope of ASC 606, with the performance obligation of

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the delivery of energy (electricity, natural gas) and settlement of the contracts satisfied at a point in time at which time we recognize the revenue. Renewables also has other ASC 606 revenue, which we recognize based on the amount invoiced to the customer.

Certain customers may receive cash credits, which we account for as variable consideration. Renewables estimates those amounts based on the expected amount to be provided to customers and reduces revenues recognized. We believe that there will not be significant changes to our estimates of variable consideration.

Other

Other, which does not represent a segment, derives its revenues primarily from miscellaneous Corporate revenues including intersegment eliminations, and in 2018 also had revenues from providing natural gas storage services to customers, gas trading operations generally classified as derivative revenue in accordance with the applicable accounting standards and gas trading contracts not classified as derivatives.

Contract Costs, Contract Liabilities and Practical Expedient

We recognize an asset for incremental costs of obtaining a contract with a customer when we expect the benefit of those costs to be longer than one year. We have contract assets for costs from development success fees, which we paid during the solar asset development period in 2018, and will amortize ratably into expense over the 15-year life of the power purchase agreement (PPA), expected to commence in December 2021 upon commercial operation. Contract assets totaled $9 million and $12 million at December 31, 2020 and 2019, respectively, and are presented in "Other non-current assets" on our consolidated balance sheets.

We have contract liabilities for revenue from transmission congestion contract (TCC) auctions, for which we receive payment at the beginning of an auction period and amortize ratably each month into revenue over the applicable auction period. The auction periods range from six months to two years. TCC contract liabilities totaled $9 million and $10 million at December 31, 2020 and 2019, respectively, and are presented in "Other current liabilities" on our consolidated balance sheets. For both the years ended December 31, 2020 and 2019, we recognized $21 million as revenue related to contract liabilities and for the year ended December 31, 2018, we recognized $13 million.

We apply a practical expedient to expense as incurred costs to obtain a contract when the amortization period is one year or less. We record costs incurred to obtain a contract within operating expenses, including amortization of capitalized costs.

Revenues disaggregated by major source for our reportable segments for the years ended December 31, 2020, 2019 and 2018 are as follows:

	Year Ended December 31, 2020			
	Networks	Renewables	Other (b)	Total
(Millions)				
Regulated operations – electricity	$ 3,642	$ —	$ —	$ 3,642
Regulated operations – natural gas	1,311	—	—	1,311
Nonregulated operations – wind	—	822	—	822
Nonregulated operations – solar	—	19	—	19
Nonregulated operations – thermal	—	39	—	39
Other (a)	58	101	—	159
Revenue from contracts with customers	**5,011**	**981**	**—**	**5,992**
Leasing revenue	6	—	—	6
Derivative revenue	—	136	—	136
Alternative revenue programs	157	—	—	157
Other revenue	14	15	—	29
Total operating revenues	**$ 5,188**	**$ 1,132**	**$ —**	**$ 6,320**

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	Year Ended December 31, 2019			
	Networks	Renewables	Other (b)	Total
(Millions)				
Regulated operations – electricity	$ 3,485	$ —	$ —	$ 3,485
Regulated operations – natural gas	1,479	—	—	1,479
Nonregulated operations – wind	—	803	—	803
Nonregulated operations – solar	—	26	—	26
Nonregulated operations – thermal	—	29	—	29
Other (a)	91	62	(12)	141
Revenue from contracts with customers	**5,055**	**920**	**(12)**	**5,963**
Leasing revenue	6	—	—	6
Derivative revenue	—	244	—	244
Alternative revenue programs	75	—	—	75
Other revenue	28	20	—	48
Total operating revenues	**$ 5,164**	**$ 1,184**	**$ (12)**	**$ 6,336**

	Year Ended December 31, 2018			
	Networks	Renewables	Other (b)	Total
(Millions)				
Regulated operations – electricity	$ 3,641	$ —	$ —	$ 3,641
Regulated operations – natural gas	1,473	—	—	1,473
Nonregulated operations – wind	—	636	—	636
Nonregulated operations – solar	—	17	—	17
Nonregulated operations – thermal	—	47	—	47
Nonregulated operations – gas storage	—	—	10	10
Other (a)	58	(68)	9	(1)
Revenue from contracts with customers	**5,172**	**632**	**19**	**5,823**
Leasing revenue	38	346	—	384
Derivative revenue	—	124	10	134
Alternative revenue programs	80	—	—	80
Other revenue	20	36	—	56
Total operating revenues	**$ 5,310**	**$ 1,138**	**$ 29**	**$ 6,477**

(a) Primarily includes certain intra-month trading activities, billing, collection and administrative charges, sundry billings and other miscellaneous revenue.
(b) Does not represent a segment. Includes Corporate, Gas (for 2018 only) and intersegment eliminations.

As of December 31, 2020 and 2019, trade receivable balances related to contracts with customers were approximately $1,151 million and $1,050 million, respectively, including $341 million and $345 million of unbilled revenue, which are included in “Accounts receivable and unbilled revenues, net” on our consolidated balance sheets.

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As of December 31, 2020, the aggregate amount of the transaction price allocated to performance obligations that are unsatisfied (or partially unsatisfied) were as follows:

As of December 31, 2020	2021	2022	2023	2024	2025	Thereafter	Total
(Millions)							
Revenue expected to be recognized on multiyear retail energy sales contracts in place	$ 1	$ 1	$ 1	$ 1	$ —	$ —	$ 4
Revenue expected to be recognized on multiyear capacity and carbon-free energy sale contracts	31	23	13	4	3	5	79
Revenue expected to be recognized on multiyear renewable energy credit sale contracts	40	24	16	14	12	75	182
Total operating revenues	**$ 72**	**$ 48**	**$ 30**	**$ 19**	**$ 15**	**$ 80**	**$ 265**

We do not disclose information about remaining performance obligations for contracts for which we recognize revenue in the amount to which we have the right to invoice (e.g., usage-based pricing terms).

Note 5. Industry Regulation

Electricity and Natural Gas Distribution – Maine, New York, Connecticut and Massachusetts

Each of Networks' eight regulated utility companies must comply with regulatory procedures that differ in form but in all cases conform to the basic framework outlined below. Generally, tariff reviews cover various years and provide for a reasonable ROE, protection from, and automatic adjustments for, exceptional costs incurred and efficiency incentives. The distribution rates and allowed ROEs for Networks' regulated utilities in New York are subject to regulation by the New York Public Service Commission (NYPSC), in Maine by the Maine Public Utilities Commission (MPUC), in Connecticut by the Connecticut Public Utilities Regulatory Authority (PURA) and in Massachusetts by the Department of Public Utilities (DPU).

The revenues of Networks companies are essentially regulated, being based on tariffs established in accordance with administrative procedures set by the various regulatory bodies. The tariffs applied to the Networks companies are approved by the regulatory commissions of the different states and are based on the cost of providing service. The revenues of each of the Networks companies are set to be sufficient to cover its operating costs, including energy costs, finance costs and the costs of equity, the last of which reflects our capital ratio and a reasonable ROE.

Energy costs that are incurred in the New York and New England wholesale markets are passed on to consumers. The difference between energy costs that are budgeted and those that are actually incurred by the utilities is offset by applying compensation procedures that result in either immediate or deferred tariff adjustments. These procedures apply to other costs, which are in most cases exceptional, such as the effects of extreme weather conditions, environmental factors, regulatory and accounting changes, and treatment of vulnerable customers, that are offset in the tariff process. Any New York and Connecticut revenues that allow a utility to exceed target returns, usually the result of better than expected cost efficiency, are generally shared between the utility and its customers, resulting in future tariff reductions.

The NYSEG and RG&E rate plans, the Maine distribution rate plan and associated proceedings, the Federal Energy Regulatory Commission (FERC) Transmission Return on Equity (ROE) case, the Connecticut rate plans, Reforming Energy Vision (REV), the storm proceedings in New York and the Tax Act are some of the most important specific regulatory processes that currently affect Networks.

CMP Distribution Rate Case

In an order issued on February 19, 2020, the MPUC authorized an increase in CMP's distribution revenue requirement of $17 million, or approximately 7%, based on an allowed ROE of 9.25% and a 50% equity ratio. The rate increase was effective March 1, 2020. The MPUC also imposed a 1.00% ROE reduction (to 8.25%) for management efficiency associated with CMP's customer service performance following the implementation of its new billing system in 2017. The management efficiency adjustment will remain in effect until CMP has demonstrated satisfactory customer service performance on four specified service quality measures for a rolling average period of 18 months, which commenced on March 1, 2020. CMP is meeting the required rolling average benchmarks on all four of these quality measures.

The order provided additional funding for staffing increases, vegetation management programs and storm restoration costs, while retaining the basic tiered structure for storm cost recovery implemented in the 2014 stipulation. The MPUC order also retained the RDM implemented in 2014. The order denied CMP's request to increase rates for higher costs associated with

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services provided by its affiliates and ordered the initiation of a management audit to evaluate whether CMP's current management structure, and the management and other services from its affiliates, are appropriate and in the interest of Maine customers. The management audit was commenced in July 2020 by the MPUC's consultants and is expected to conclude in 2021.

CMP Revenue Decoupling Mechanism Investigation

On June 9, 2020, the MPUC issued a Notice of Investigation to open an investigation into the effects of the COVID-19 pandemic on customers' electricity-usage patterns and whether CMP's RDM should be suspended for the annual distribution rate change that is expected to occur on July 1, 2021, for electricity delivered in calendar year 2020. On June 24, 2020, the MPUC issued a procedural order setting forth initial steps in this proceeding. On July 21, 2020, CMP filed testimony presenting electricity-usage data for its two RDM classes (residential and commercial/industrial) through June 2020, along with testimony explaining the data and the reasons why the current RDM should remain in place without alteration. On August 11, 2020, a technical conference was held and CMP filed electricity-usage data on August 20, 2020. On December 16, 2020, the MPUC issued an order that retains CMP's RDM but the RDM should be simplified by merging the two RDM classes into a single class. There is no impact to existing RDM balances as a result of the order issued by the MPUC.

NYSEG and RG&E Rate Plans

2016 Joint Proposal

On June 15, 2016, the NYPSC approved NYSEG's and RG&E's 2016 Joint Proposal for a three-year rate plan for electric and gas service which balanced the varied interests of the signatory parties including but not limited to maintaining the companies' credit quality and mitigating the rate impacts to customers. The 2016 Joint Proposal reflected many customer benefits including: acceleration of the companies' natural gas leak prone main replacement programs and increased funding for electric vegetation management to provide continued safe and reliable service. The delivery rate increases for the last year of the 2016 Joint Proposal can be summarized as follows:

	May 1, 2018	
Utility	Rate Increase (Millions)	Delivery Rate Increase %
NYSEG Electric	$ 30	4.10 %
NYSEG Gas	$ 15	7.30 %
RG&E Electric	$ 26	5.70 %
RG&E Gas	$ 10	5.20 %

The allowed rate of return on common equity for NYSEG Electric, NYSEG Gas, RG&E Electric and RG&E Gas was 9.00%. The equity ratio for each company was 48%; however, the equity ratio was set at the actual up to 50% for earnings sharing calculation purposes. The customer share of any earnings above allowed levels increased as the ROE increased, with customers receiving 50%, 75% and 90% of earnings in rate year three (May 1, 2018 – April 30, 2019) above 9.75%, 10.25% and 10.75% ROE, respectively. The rate plans also included the implementation of a rate adjustment mechanism (RAM) designed to return or collect certain defined reconciled revenues and costs, new depreciation rates and continuation of the existing RDM for each business. The 2016 Joint Proposal reflected the recovery of deferred NYSEG Electric storm costs of approximately $262 million, of which $123 million is being amortized over ten years and the remaining $139 million is being amortized over five years. The proposal also continues reserve accounting for qualifying Major Storms ($21 million annually for NYSEG Electric and $3 million annually for RG&E Electric). Incremental maintenance costs incurred to restore service in qualifying divisions will be chargeable to the Major Storm Reserve provided they meet certain thresholds.

The 2016 Joint Proposal maintained NYSEG's and RG&E's current electric reliability performance measures (and associated potential negative revenue adjustments for failing to meet established performance levels) which include the system average interruption frequency index (SAIFI) and the customer average interruption duration index (CAIDI). The 2016 Joint Proposal also modified certain gas safety performance measures at the companies, including those relating to the replacement of leak prone mains, leak backlog management, emergency response and damage prevention. The proposal established threshold performance levels for designated aspects of customer service quality and continued and expanded NYSEG's and RG&E's bill reduction and arrears forgiveness Low Income Programs with increased funding levels. The 2016 Joint Proposal provided for the implementation of NYSEG's Energy Smart Community (ESC) Project in the Ithaca region which serves as a test-bed for implementation and deployment of Reforming the Energy Vision (REV) initiatives. The ESC Project is supported by NYSEG's planned Distribution Automation upgrades and Advanced Metering Infrastructure (AMI) implementation for customers on circuits in the Ithaca region. The companies also are pursuing Non-Wires Alternative projects as described in the proposal. Other REV-related incremental costs and fees were included in the RAM to the extent cost recovery is not provided for

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elsewhere. Under the proposal, the RAM was applicable to all customers and serves to return or collect RAM Eligible Deferrals and Costs, including: (1) property taxes; (2) Major Storm deferral balances; (3) gas leak prone pipe replacement; (4) REV costs and fees which are not covered by other recovery mechanisms; and (5) NYSEG Electric Pole Attachment revenues. RG&E implemented a RAM in July 2018 since certain eligibility thresholds were exceeded.

The 2016 Joint Proposal provided for partial or full reconciliation of certain expenses including, but not limited to: pensions and other postretirement benefits; property taxes; variable rate debt and new fixed rate debt; gas research and development; environmental remediation costs; major storms; nuclear electric insurance limited credits; economic development; and low income programs. The 2016 Joint Proposal also included a downward-only Net Plant reconciliation. In addition, the 2016 Joint Proposal included downward-only reconciliations for the costs of electric distribution and gas vegetation management, pipeline integrity and incremental maintenance. The 2016 Joint Proposal provided that NYSEG and RG&E continue their electric RDMs on a total revenue per class basis and their gas RDMs on a revenue per customer basis.

2020 Joint Proposal

On June 22, 2020, NYSEG and RG&E filed a joint proposal with the NYPSC for a new three-year rate plan (2020 Joint Proposal). On November 19, 2020, the NYPSC approved the 2020 Joint Proposal, with modifications to the rate increases at the two electric businesses. The modifications were made to limit the overall bill impacts, to a level at or below 2% per year, in consideration of the current impacts of COVID-19 on the economic climate. The effective date of new tariffs was December 1, 2020 with a make-whole provision back to April 17, 2020. The proposed rates facilitate the companies' transition to a cleaner energy future while allowing for important initiatives such as COVID-19 relief for customers and additional funding for vegetation management, hardening/resiliency and emergency preparedness. The rate plans continue the RAM designed to return or collect certain defined reconciled revenues and costs, have new depreciation rates and continue existing RDMs for each business. The 2020 Joint Proposal bases delivery revenues on an 8.80% ROE and 48% equity ratio; however, for the proposed earnings sharing mechanism, the equity ratio is the lower of the actual equity ratio or 50%. The below table provides a summary of the approved delivery rate increases and delivery rate percentages, including rate levelization and excluding energy efficiency, which is a pass-through, for all four businesses:

	Year 1		Year 2		Year 3	
Utility	Rate Increase (Millions)	Delivery Rate Increase %	Rate Increase (Millions)	Delivery Rate Increase %	Rate Increase (Millions)	Delivery Rate Increase %
NYSEG Electric	$ 34	4.6 %	$ 46	5.9 %	$ 36	4.2 %
NYSEG Gas	$ —	— %	$ 2	0.8 %	$ 3	1.6 %
RG&E Electric	$ 17	3.8 %	$ 14	3.2 %	$ 16	3.3 %
RG&E Gas	$ —	— %	$ —	— %	$ 2	1.3 %

UI, CNG, SCG and BGC Rate Plans

Under Connecticut law, The United Illuminating Company's (UI) retail electricity customers are able to choose their electricity supplier while UI remains their electric distribution company. UI purchases power for those of its customers under standard service rates who do not choose a retail electric supplier and have a maximum demand of less than 500 kilowatts and its customers under supplier of last resort service for those who are not eligible for standard service and who do not choose to purchase electric generation service from a retail electric supplier. The cost of the power is a "pass-through" to those customers through the Generation Service Charge on their bills.

UI has wholesale power supply agreements in place for its entire standard service load for the first half of 2021, 70% of its standard service load for the second half of 2021 and 20% of its standard service load for the first half of 2022. Supplier of last resort service is procured on a quarterly basis and UI has a wholesale power supply agreement in place for the second quarter of 2021. However, from time to time, there are no bidders in the procurement process for supplier of last resort service and UI manages the load directly.

In December 2016, the PURA approved new distribution rate schedules for UI for three years, which became effective January 1, 2017 and, among other things, provide for annual tariff increases and an ROE of 9.10% based on a 50% equity ratio, continued UI's existing ESM pursuant to which UI and its customers share on a 50/50 basis all distribution earnings above the allowed ROE in a calendar year, continued the existing decoupling mechanism and approved the continuation of the requested storm reserve. Any dollars due to customers from the ESM continue to be first applied against any storm regulatory asset balance (if one exists at that time) or refunded to customers through a bill credit if such storm regulatory asset balance does not exist.

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In December 2017, PURA approved new tariffs for the Southern Connecticut Gas Company (SCG) effective January 1, 2018 for a three-year rate plan with annual rate increases. The new tariffs also include an RDM and Distribution Integrity Management Program (DIMP) mechanism, ESM, the amortization of certain regulatory liabilities (most notably accumulated hardship deferral balances and certain accumulated deferred income taxes) and tariff increases based on a ROE of 9.25% and approximately 52% equity level. Any dollars due to customers from the ESM will be first applied against any environmental regulatory asset balance as defined in the settlement agreement (if one exists at that time) or refunded to customers through a bill credit if such environmental regulatory asset balance does not exist.

In December 2018, PURA approved new tariffs for Connecticut Natural Gas Corporation (CNG) effective January 1, 2019 for a three-year rate plan with annual rate increases. The new tariffs continued the RDM and DIMP mechanism, ESM and tariff increases based on an ROE of 9.30% and an equity ratio of 54% in 2019, 54.50% in 2020 and 55% in 2021.

On January 18, 2019, the DPU approved new distribution rates for BGC. The distribution rate increase is based on a 9.70% ROE and 54% equity ratio. The new tariffs provide for the implementation of an RDM and pension expense tracker and also provide that BGC will not file to change base distribution rates to become effective before November 1, 2021.

REV

In April 2014, the NYPSC commenced a proceeding entitled REV, which is a wide-ranging initiative to reform New York State's energy industry and regulatory practices. REV has been divided into two tracks, Track 1 for Market Design and Technology, and Track 2 for Regulatory Reform. REV and its related proceedings have and will continue to propose regulatory changes that are intended to promote more efficient use of energy, deeper penetration of renewable energy resources such as wind and solar and wider deployment of distributed energy resources (DER), such as micro grids, on-site power supplies and storage.

REV is also intended to promote greater use of advanced energy management products to enhance demand elasticity and efficiencies. Track 1 of this initiative involves a collaborative process to examine the role of distribution utilities in enabling market-based deployment of DER to promote load management and greater system efficiency, including peak load reductions. NYSEG is participating in the initiative with other New York utilities. The NYPSC issued a 2015 order in Track 1, which acknowledges the utilities' role as a Distribution System Platform provider, and required the utilities to file an initial Distribution System Implementation Plan (DSIP) by June 30, 2016, followed by bi-annual updates. The companies filed the initial DSIP, which also included information regarding the potential deployment of Automated Metering Infrastructure (AMI) across its entire service territory. In December 2016, the companies filed a petition to the NYPSC requesting approval for cost recovery associated with the full deployment of AMI. A collaborative associated with this petition began in the first quarter of 2017, was suspended in the second quarter of 2017, subsequently resumed in the first quarter of 2018 and then further suspended and was been included in the companies' May 20, 2019 rate filing. The companies also filed their first bi-annual update of the DSIP on July 31, 2018 and filed their next bi-annual update on June 30, 2020.

Other various proceedings have also been initiated by the NYPSC which are REV related, and each proceeding has its own schedule. These proceedings include the Clean Energy Standard, Value of DER and Net Energy Metering, Demand Response Tariffs and Community Choice Aggregation. As part of the Clean Energy Standard proceeding, all electric utilities were ordered to begin payments to New York State Energy Research and Development Authority (NYSERDA) for RECs and Zero Emissions Credits beginning in 2017.

Track 2 of the REV initiative is also underway, and through a NYPSC staff whitepaper review process, is examining potential changes in current regulatory, tariff, market design and incentive structures that could better align utility interests with achieving New York state and NYPSC's policy objectives. New York utilities will also be addressing related regulatory issues in their individual rate cases. A Track 2 order was issued in May 2016, and includes guidance related to the potential for Earnings Adjustment Mechanisms (EAMs), Platform Service Revenues, innovative rate designs and data utilization and security. The companies, in December 2016, filed a proposal for the implementation of EAMs in the areas of System Efficiency, Energy Efficiency, Interconnections and Clean Air. A collaborative process to review the companies' petition was suspended in 2017. The approved 2020 Joint Proposal includes EAMs.

In March 2017, the NYPSC issued three separate REV-related orders. These orders created a series of filing requirements for NYSEG and RG&E beginning in March 2017 and extending through the end of 2018. The three orders involve: 1) modifications to the electric utilities' proposed interconnection EAM framework; 2) further DSIP requirements, including filing of an updated DSIP plan by mid-2018 and implementing two energy storage projects at each company by the end of 2018; and 3) Net Energy Metering Transition including implementation of Phase One of the Value of DER. In September 2017, the NYPSC issued another order related to the Value of DER, requiring tariff filings, changes to Standard Interconnection Requirements and planning for the implementation of automated consolidated billing. As of the end of 2018, both NYSEG and RG&E had deployed two energy storage projects each, consistent with the March 2017 NYPSC order requirements. In

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December 2018, the NYPSC staff submitted whitepapers on standby and buyback service rate design, future value stack compensation and capacity value compensation. The NYPSC ruled on the proposals set forth in the whitepapers on May 16, 2019. NYSEG and RG&E filed proposed standby and buyback rates with the NYPSC in September 2019. On November 25, 2020, DPS Staff, jointly with NYSERDA, issued a whitepaper on further recommendations regarding standby and buyback rates that were based on the electric utilities' September 23, 2019 filings. Comments on the recommendations in the whitepaper are due February 22, 2021, and reply comments are due March 8, 2021.

On April 18, 2019, the NYPSC issued an order on future value stack compensation and capacity value compensation. The order established a new Community Credit in place of the Market Transition Credit for certain CDG projects in NYSEG's and RGE's territories and expanded eligibility for Phase One Net Metering for projects that have a rated capacity of 750 kW AC or lower. The changes became effective on June 1, 2019. The NYPSC also issued an order on value stack compensation for high-capacity-factor Resources on December 12, 2019, modifying the treatment of certain high-capacity-factor DER in the Value Stack compensation framework. The modification per the December 12, 2019 Order became effective February 1, 2020. On March 19, 2020, the Commission issued an additional Order regarding Value Stack Compensation. The Order directs National Grid, NYSEG and RGE to reallocate capacity from closed tranches where available capacity remained due to projects being canceled since the issuance of the VDER Compensation Order, and to assign that capacity to a new Community Credit Tranche with compensation at 2 cents per kWh. The utilities must also continue to reallocate capacity to this new Tranche for the next six months when there are cancellations of projects that have received a Market Transition Credit (MTC) or Community Credit allocation. The new provisions per the March 19, 2020 Order became effective May 1, 2020.

On May 14, 2020, the Commission issued an Order extending and expanding distributed solar incentives. In addition to authorizing the extension of and additional funding for the NY-Sun program, the Commission modified certain program rules related to the NY-Sun program and the VDER policy. As part of the ordered modifications, the Commission directed the electric utilities with VDER tariffs to add tariff language for a Remote Crediting program that will allow Value-Stack-eligible generation resources to distribute the credits they receive for generation injected into the utility system to the utility bills of multiple, separately sited, non-residential customers. The Commission ordered the utilities to submit tariff leaves that implement the modifications associated with the Remote Crediting program to become effective November 1, 2020. Given the complexity of the program changes, the utilities have petitioned the Commission for tariffs filings to be made on February 15, 2021, with an effective date of March 1, 2021.

On July 16, 2020, the Commission issued an Order establishing a net metering successor tariff. The Order continues Phase One NEM for all eligible mass market and commercial projects under 750 kW interconnected after January 1, 2022 and implements a modest customer benefit contribution (CBC) for onsite DERs to address cost recovery of certain public benefit programs. Customers that install DERs interconnected after January 1, 2022 shall be charged a monthly per kW fee based on the nameplate rating of the DER. Draft tariff leaves implementing the Commission's Order and proposed CBC calculations were filed on November 1, 2020.

On April 24, 2018, the NYPSC instituted a proceeding to consider the role of utilities in providing infrastructure and rate design to encourage the expansion electric vehicles and electric vehicle supply equipment. The Commission issued an Order on February 2, 2019 to establish a Direct Current Fast Charger incentive program, with subsequent clarifications provided in Orders issued on July 12, 2019 and March 3, 2020. On July 16, 2020, the NYPSC issued an Order on an electric vehicle make-ready program.

The make-ready program will be funded by investor-owned utilities in New York State and creates a cost-sharing program that incentivizes utilities and charging station developers to site electric vehicle charging infrastructure in places that will provide a maximal benefit to consumers.

CMP Customer Billing System Investigation

On March 1, 2018, the MPUC issued a Notice of Investigation initiating a summary investigation into CMP's metering, billing and customer communications practices. Due to the highly technical nature of CMP's customer billing system the MPUC ordered a forensic audit of CMP's customer billing system to identify any errors that have, or continue to result in billing inaccuracies, and to review CMP's customer communication practices. On December 20, 2018, the MPUC released the findings of the forensic audit of CMP's customer billing system and customer communication practices. On January 9, 2020, the hearing examiners issued their report whereby they recommended that the Commission find that the evidence in the record shows that there is no systemic problem within CMP's metering and billing systems that has caused erroneous high usage on customers' bills. Instead, the evidence-including the detailed forensic audit conducted by an independent third-party auditor-demonstrates that CMP's metering and billing systems have been, and continue to be, recording and transmitting customer usage data accurately, and, with the exception of discrete billing calculation and presentation issues, customers' billed amounts have been accurate. On January 30, 2020, the MPUC Commissioners deliberated and based on the verbal discussion, the Commissioners indicated that CMP's Metering and Billing system is accurately reporting data; there is no systemic root cause for high usage

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complaints and errors related to CMP's metering and billing system are localized and random, not systemic. The Commissioners were critical of CMP finding that CMP failed to implement proper testing of the SmartCare system prior to go-live; CMP's implementation of SmartCare was imprudent; CMP's SmartCare implementation experienced an unacceptable number of billing errors, delayed or estimated bills, bill presentment issues and unreasonable time required to address these issues; and the implementation issues were compounded by inadequate staffing, resulting in the inability of customers to contact a CMP representative. In its February 19, 2020 order in the CMP's distribution rate case proceeding discussed above the MPUC imposed a reduction of 100 basis points in ROE, as a management efficiency adjustment, to address concerns with CMP's customer service performance following the implementation of its new billing system in 2017 and on February 24, 2020 issued an order in the metering and billing investigation. Each order reflected the MPUC's conclusion that CMP's Metering and Billing system is accurately reporting data, there is no systemic root cause for high usage complaints and errors related to CMP's metering and billing system are localized and random, not systemic. The management efficiency adjustment will remain in effect until CMP has demonstrated satisfactory customer service performance on four specified service quality measures for a rolling average period of 18 months, which commenced on March 1, 2020. CMP is meeting the required rolling average benchmarks on all four of these quality measures. On April 27, 2020, the MPUC issued an order requiring that CMP pay for the costs of the metering, billing and customer service practices audit, which were less than $1 million.

Tax Cuts and Jobs Act

On December 22, 2017, the Tax Cuts and Jobs Act of 2017 (the Tax Act) was signed into law. The Tax Act significantly changed the federal taxation of business entities including, among other things, implementing a federal corporate tax rate decrease from 35% to 21% for tax years beginning after December 31, 2017. Reductions in accumulated deferred income tax balances due to the reduction in the corporate income tax rates will result in amounts previously and currently collected from utility customers for these deferred taxes to be refundable to such customers, generally through reductions in future rates. The NYPSC, MPUC, PURA, DPU and the FERC have instituted separate proceedings in New York, Maine, Connecticut, Massachusetts and the FERC, respectively, to review and address the implications of the Tax Act on the utilities.

In New York, the NYPSC issued an order requiring sur-credits to return benefits reflecting the lower effective tax rate of 21% to customers effective October 1, 2018. For NYSEG Gas, RG&E Electric and RG&E Gas the NYPSC also required the sur-credit to include the return to customers of the January - September 2018 Tax Act savings over three years. The remaining deferred amounts associated with the recognition of the effects of the Tax Act are being used as rate moderators in the approved 2020 Joint Proposal. In Connecticut, UI and SCG expect Tax Act savings to be deferred until they are reflected in tariffs in a future rate case, unless PURA determines otherwise. CNG and BGC include Tax Act savings in their current rate plans. In Maine, CMP adjusted rates beginning July 1, 2018 to pass back to customers the Tax Act savings after offsetting for recovery of deferred 2017 storm costs. In its February 19, 2020 order in the CMP's distribution rate case proceeding discussed above, the MPUC approved CMP's distribution related accumulated deferred income tax balances associated with the Tax Act as well as the authorized amortization periods for the return of regulatory liabilities and the recovery regulatory assets. At the FERC, CMP transmission and UI transmission adjusted their tariffs in June 2018 to reflect the income statement value of Tax Act savings.

Power Tax Audits

Previously, CMP, NYSEG and RG&E implemented Power Tax software to track and measure their respective deferred tax amounts. In connection with this change, we identified historical updates needed with deferred taxes recognized by CMP, NYSEG and RG&E and increased our deferred tax liabilities, with a corresponding increase to regulatory assets, to reflect the updated amounts calculated by the Power Tax software. Since 2015, the NYPSC and MPUC accepted certain adjustments to deferred taxes and associated regulatory assets for this item in recent distribution rate cases, resulting in regulatory asset balances of approximately $148 million and $153 million for this item at December 31, 2020 and 2019, respectively.

In 2017, audits of the power tax regulatory assets were commenced by the NYPSC and MPUC. On January 11, 2018, the NYPSC issued an order opening an operations audit on NYSEG and RG&E and certain other New York utilities regarding tax accounting. The NYPSC audit report is expected to be completed during 2021. In January 2018, the MPUC published the Power Tax audit report with respect to CMP, which indicated the auditor was unable to verify the asset "acquisition value" used to calculate the Power Tax regulatory asset. The audit report requires that CMP must provide support for the beginning balance of the regulatory assets or it will be unable to recover the value of the assets, which is approximately $11 million, excluding carrying costs. CMP responded to the audit report in its rate case filing by providing additional acquisition value support and, therefore, requested full recovery of the Power Tax regulatory asset. MPUC staff expressed concerns about the value CMP has attributed to this issue. The MPUC had an outside firm conduct an audit of CMP's filing and acquisition values, and the auditor found CMP's information was reasonable. In September 2019, CMP filed a report in response to the audit report and addressed MPUC staff concerns. On December 17, 2019, CMP filed a stipulation with the MPUC providing for recovery of the Power Tax regulatory asset and adjusting the carrying costs values for the period of July 1, 2017 through June 30, 2019. The MPUC approved the stipulation on January 21, 2020, which allowed CMP to start collecting the Power Tax Regulatory asset over the next 32.5 years beginning in July 2020.

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Minimum Equity Requirements for Regulated Subsidiaries

Our regulated utility subsidiaries of Maine and New York (NYSEG, RG&E, CMP and MNG) are each subject to a minimum equity ratio requirement that is tied to the capital structure assumed in establishing revenue requirements. Pursuant to these requirements, each of NYSEG, RG&E, CMP and MNG must maintain a minimum equity ratio equal to the ratio in its currently effective rate plan or decision measured using a trailing 13-month average. On a monthly basis, each utility must maintain a minimum equity ratio of no less than 300 basis points below the equity ratio used to set rates. The minimum equity ratio requirement has the effect of limiting the amount of dividends that may be paid and may, under certain circumstances, require that the parent contribute equity capital. In addition, NYSEG and RG&E equity distributions that would result in a 13-month average common equity less than the maximum equity ratio utilized for the earnings sharing mechanism, or ESM, are prohibited if the credit rating of NYSEG, RG&E, AVANGRID or Iberdrola are downgraded by a nationally recognized rating agency to the lowest investment grade with a negative watch or downgraded to non-investment grade. These regulated utility subsidiaries are prohibited by regulation from lending to unregulated affiliates. These regulated utility subsidiaries have also agreed to minimum equity ratio requirements in certain borrowing agreements. These requirements are lower than the regulatory requirements.

Pursuant to agreements with the relevant utility commission, UI, SCG, CNG and BGC are restricted from paying dividends if paying such dividend would result in a common equity ratio lower than 300 basis points below the equity percentage used to set rates in the most recent distribution rate proceeding as measured using a trailing 13-month average calculated as of the most recent quarter end. In addition, UI, SCG, CNG and BGC are prohibited from paying dividends to their parent if the utility's credit rating, as rated by any of the three major credit rating agencies, falls below investment grade, or if the utility's credit rating, as determined by two of the three major credit rating agencies, falls to the lowest investment grade and there is a negative watch or review downgrade notice.

We had restricted net assets of approximately $5,408 million associated with the minimum equity requirements as of December 31, 2020.

Movement of capital from our wholly owned unregulated subsidiaries is unrestricted.

New Renewable Source Generation

Under Connecticut Public Act (PA) 11-80, Connecticut electric utilities are required to enter into long-term contracts to purchase Connecticut Class I RECs from renewable generators located on customer premises. Under this program, UI was initially required to enter into contracts totaling approximately $200 million in commitments over an approximate 21-year period. The obligations were initially expected to phase in over a six-year solicitation period and peak at an annual commitment level of about $14 million per year after all selected projects are online. PA 17-144, PA 18-50 and PA 19-35 extended the original six-year solicitation period of the program by adding seventh, eighth, ninth, and tenth years, and increased the original funding level of this program by adding up to $64 million in additional commitments by UI. Upon purchase, UI accounts for the RECs as inventory. UI expects to partially mitigate the cost of these contracts through the resale of the RECs. PA 11-80 provides that the remaining costs (and any benefits) of these contracts, including any gain or loss resulting from the resale of the RECs, are fully recoverable from (or credited to) customers through electric rates.

In October of 2018, UI entered into five PPAs totaling approximately 50 MW from developers of offshore wind and fuel cell generation pursuant to state law that provides the net costs of the PPAs are recoverable through electric rates. On December 19, 2018, PURA approved the PPAs, and approved UI's use of the non-bypassable federally mandated congestion charges for all customers to recover the net costs of the PPAs.

In 2019, UI entered into PPAs with 11 projects, totaling approximately 12 million MWh, pursuant to state law that provides that the net costs of the PPAs are recoverable through electric rates.

In 2020, Pursuant to Connecticut Act Concerning the Procurement of Energy Derived From Offshore Wind, UI entered into a PPA with Vineyard Wind, an affiliate of UI, to provide 804 MW of offshore wind through the development of its Park City Wind Project. Similar to the case with the zero carbon PPAs discussed above, the net costs of the PPAs are recoverable through electric rates.

Pursuant to Maine law, the MPUC is authorized to conduct periodic requests for proposals seeking long-term supplies of energy, capacity or RECs, from qualifying resources. The MPUC is further authorized to order Maine transmission and distribution utilities to enter into contracts with sellers selected from the MPUC's competitive solicitation process. Pursuant to a MPUC Order dated October 8, 2009, CMP entered into a 20-year agreement with Evergreen Wind Power III, LLC, on March 31, 2010, to purchase capacity and energy from Evergreen's 60 Megawatt (MW) Rollins wind farm. CMP's purchase obligations under the Rollins contract are approximately $7 million per year. Pursuant to a MPUC Order dated December 18, 2017, CMP entered into a 20-year agreement with Dirigo Solar, LLC on September 10, 2018, to purchase capacity and energy

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from multiple Dirigo solar facilities throughout CMP's service territory. CMP's purchase obligations under the Dirigo contract will increase as additional solar facilities are brought on line, eventually reaching a level of approximately $4 million per year. Pursuant to a MPUC Order dated November 6, 2019, CMP entered into a 20-year agreement with Maine Aqua Ventus I GP LLC on December 9, 2019, to purchase capacity and energy from an off-shore wind under development near Monhegan Island, Maine. CMP's purchase obligations under the Maine Aqua Ventus contract will be approximately $12 million per year once the facility begins commercial operation. Pursuant to Maine law, the MPUC must conduct two competitive solicitation processes to procure, in the aggregate, an amount of energy or RECs from Class 1A resources that is equal to 14% of retail electricity sales in the State during calendar year 2018, or 1.715 million MWh. Of that 14% total, the MPUC must acquire at least 7%, but not more than 10%, through contracts approved by December 31, 2020 (Tranche 1), and acquire the remaining amount (Tranche 2) through a solicitation process that started on January 15, 2021. Pursuant to Maine law, on September 23, 2020, the MPUC issued an order accepting term sheet proposals from 14 projects in CMP's service territory and ordered the MPUC Staff and CMP to negotiate and execute contracts to implement the accepted terms. As of December 31, 2020, one project has withdrawn from the solicitation and CMP has executed contracts with 5 of the remaining 13 projects for 20-year terms. In accordance with MPUC orders, CMP either sells the purchased energy from these facilities in the ISO New England markets or periodically auctions the purchased output to wholesale buyers in the New England regional market. Under Maine law, CMP is assured recovery of any differences between power purchase costs and achieved market revenues through a reconcilable component of its retail distribution rates. Although the MPUC has conducted multiple requests for proposals under Maine law, and has tentatively accepted long-term proposals from other sellers, these selections have not yet resulted in additional currently effective contracts with CMP.

Connecticut Storm Reimbursement Legislation

On October 7, 2020, the Governor of Connecticut signed into law an energy bill that, among other things, instructs PURA to revise the rate-making structure in Connecticut to adopt performance-based rates for each electric distribution company, increases the maximum civil penalties assessable for failures in emergency preparedness, and provides certain penalties and reimbursements to customers after storm outages greater than 96 hours and extends rate case timelines.

Note 6. Regulatory Assets and Liabilities

Pursuant to the requirements concerning accounting for regulated operations, our utilities capitalize as regulatory assets incurred and accrued costs that are probable of recovery in future electric and natural gas rates. We base our assessment of whether recovery is probable on the existence of regulatory orders that allow for recovery of certain costs over a specific period, or allow for reconciliation or deferral of certain costs. When costs are not treated in a specific regulatory order, we use regulatory precedent to determine if recovery is probable. Our operating utilities also record, as regulatory liabilities, obligations to refund previously collected revenue or to spend revenue collected from customers on future costs. The primary items that are not included in rate base or accruing carrying costs are regulatory assets for qualified pension and other postretirement benefits, which reflect unrecognized actuarial gains and losses; debt premium; environmental remediation costs, which are primarily the offset of accrued liabilities for future spending; unfunded future income taxes, which are the offset to the unfunded future deferred income tax liability recorded; asset retirement obligations; hedge losses; and contracts for differences. The total net amount of these items is approximately $1,484 million.

The regulatory assets and regulatory liabilities shown in the tables below result from various regulatory orders that allow for the deferral and/or reconciliation of specific costs. Regulatory assets and regulatory liabilities are classified as current when recovery or refund in the coming year is allowed or required through a specific order or when the rates related to a specific regulatory asset or regulatory liability are subject to automatic annual adjustment.

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Regulatory assets as of December 31, 2020 and 2019 consisted of:

As of December 31,	2020	2019
(Millions)		
Pension and other post-retirement benefits cost deferrals	$ 105	$ 125
Pension and other post-retirement benefits	927	1,061
Storm costs	451	272
Rate adjustment mechanism	33	79
Revenue decoupling mechanism	58	19
Transmission revenue reconciliation mechanism	31	5
Contracts for differences	86	92
Hardship programs	20	29
Plant decommissioning	3	5
Deferred purchased gas	30	25
Deferred transmission expense	26	11
Environmental remediation costs	247	277
Debt premium	83	97
Unamortized losses on reacquired debt	26	29
Unfunded future income taxes	373	399
Federal tax depreciation normalization adjustment	148	153
Asset retirement obligation	21	17
Deferred meter replacement costs	33	27
COVID-19 cost recovery	1	—
Other	180	139
Total regulatory assets	**2,882**	**2,861**
Less: current portion	310	294
Total non-current regulatory assets	**$ 2,572**	**$ 2,567**

“Pension and other post-retirement benefits” represent the actuarial losses on the pension and other post-retirement plans that will be reflected in customer rates when they are amortized and recognized in future pension expenses. “Pension and other post-retirement benefits cost deferrals” include the difference between actual expense for pension and other post-retirement benefits and the amount provided for in rates for certain of our regulated utilities. A portion of this balance is amortized through current rates, the remaining portion will be refunded in future periods through future rate cases.

“Storm costs” for CMP, NYSEG, RG&E and UI are allowed in rates based on an estimate of the routine costs of service restoration. The companies are also allowed to defer unusually high levels of service restoration costs resulting from major storms when they meet certain criteria for severity and duration. A portion of this balance is amortized through current rates, and the remaining portion will be determined through future rate cases.

“Rate adjustment mechanism” represents an interim rate change to return or collect certain defined reconciled revenues and costs for NYSEG and RG&E following the approval of the Joint Proposal by the NYPSC. The RAM, when triggered, is implemented in rates on July 1 of each year for return or collection over a twelve-month period.

“Reliability support services” represents the difference between actual expenses for reliability support services and the amount provided for in rates.

"Revenue decoupling mechanism" represents the mechanism established to disassociate the utility's profits from its delivery/commodity sales.

"Transmission revenue reconciliation mechanism" reflects differences in actual costs in the rate year from those used to set rates. This mechanism contains the Annual Transmission True up (ATU), which is recovered over the subsequent June to May period.

“Contracts for Differences” represent the deferral of unrealized gains and losses on contracts for differences derivative contracts. The balance fluctuates based upon quarterly market analysis performed on the related derivatives. The amounts,

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which do not earn a return, are fully offset by a corresponding derivative asset/liability.

“Hardship Programs” represent hardship customer accounts deferred for future recovery to the extent they exceed the amount in rates.

“Deferred Purchased Gas” represents the difference between actual gas costs and gas costs collected in rates.

“Deferred Transmission Expense” represents deferred transmission income or expense and fluctuates based upon actual revenues and revenue requirements.

“Environmental remediation costs” includes spending that has occurred and is eligible for future recovery in customer rates. Environmental costs are currently recovered through a reserve mechanism whereby projected spending is included in rates with any variance recorded as a regulatory asset or a regulatory liability. The amortization period will be established in future proceedings and will depend upon the timing of spending for the remediation costs. It also includes the anticipated future rate recovery of costs that are recorded as environmental liabilities since these will be recovered when incurred. Because no funds have yet been expended for the regulatory asset related to future spending, it does not accrue carrying costs and is not included within rate base.

“Debt premium” represents the regulatory asset recorded to offset the fair value adjustment to the regulatory component of the non-current debt of UIL at the acquisition date. This amount is being amortized to interest expense over the remaining term of the related outstanding debt instruments.

“Unamortized losses on reacquired debt” represent deferred losses on debt reacquisitions that will be recovered over the remaining original amortization period of the reacquired debt.

“Unfunded future income taxes” represent unrecovered federal and state income taxes primarily resulting from regulatory flow through accounting treatment and are the offset to the unfunded future deferred income tax liability recorded. The income tax benefits or charges for certain plant related timing differences, such as removal costs, are immediately flowed through to, or collected from, customers. This amount is being amortized as the amounts related to temporary differences that give rise to the deferrals are recovered in rates. These amounts are being collected over a period of forty-six years and the NYPSC staff has initiated an audit, as required, of the unfunded future income taxes and other tax assets to verify the balances.

“Federal tax depreciation normalization adjustment” represents the revenue requirement impact of the difference in the deferred income tax expense required to be recorded under the IRS normalization rules and the amount of deferred income tax expense that was included in cost of service for rate years covering 2011 forward. The recovery period in New York is from 25 to 35 years and for CMP 32.5 years beginning in 2020.

“Asset retirement obligations” represents the differences in timing of the recognition of costs associated with our AROs and the collection of such amounts through rates. This amount is being amortized at the related depreciation and accretion amounts of the underlying liability.

“Deferred meter replacement costs” represent the deferral of the book value of retired meters which were replaced or are planned to be replaced by AMI meters. This amount is being amortized over the initial depreciation period of related retired meters.

"COVID-19 cost recovery" represents deferred COVID-19-related costs in the state of Connecticut based on the order issued by PURA on April 29, 2020, requiring utilities to track COVID-19-related expenses and lost revenue and create a regulatory asset.

“Other” includes post-term amortization deferrals and various items subject to reconciliation including hedge losses and deferred property tax.

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Regulatory liabilities as of December 31, 2020 and 2019 consisted of:

As of December 31,	2020	2019
(Millions)		
Energy efficiency portfolio standard	$ 58	$ 72
Gas supply charge and deferred natural gas cost	3	11
Pension and other post-retirement benefits cost deferrals	59	80
Carrying costs on deferred income tax bonus depreciation	34	49
Carrying costs on deferred income tax - Mixed Services 263(a)	11	15
2017 Tax Act	1,435	1,548
Rate change levelization	55	10
Revenue decoupling mechanism	9	17
Accrued removal obligations	1,184	1,173
Asset sale gain account	7	10
Economic development	28	27
Positive benefit adjustment	30	37
Theoretical reserve flow thru impact	10	14
Deferred property tax	31	17
Net plant reconciliation	20	23
Debt rate reconciliation	63	67
Rate refund – FERC ROE proceeding	33	32
Transmission congestion contracts	22	23
Merger-related rate credits	14	16
Accumulated deferred investment tax credits	25	13
Asset retirement obligation	18	14
Earnings sharing provisions	17	28
Middletown/Norwalk local transmission network service collections	18	18
Low income programs	28	33
Non-firm margin sharing credits	14	16
New York 2018 winter storm settlement	9	11
Other	176	149
Total regulatory liabilities	**3,411**	**3,523**
Less: current portion	274	242
Total non-current regulatory liabilities	**$ 3,137**	**$ 3,281**

“Energy efficiency portfolio standard” represents the costs of energy efficiency programs deferred for future recovery to the extent they exceed the amount in rates. A portion of this balance is amortized through current rates, the remaining portion will be refunded in future periods through future rate cases. The amortization period in current rates is three years and began in 2020.

"Gas supply charge and deferred natural gas cost" reflects the actual costs of purchasing, transporting and storing of natural gas. Gas supply reconciliation is determined by comparing actual gas supply expenses to the monthly gas cost recoveries in rates. Prior rate year balances are collected/ returned to customers beginning the next calendar year.

“Pension and other postretirement benefits cost deferrals” include the difference between actual expense for pension and other post-retirement benefits and the amount provided for in rates for certain of our regulated utilities. A portion of this balance is amortized through current rates, the remaining portion will be refunded in future periods through future rate cases.

“Carrying costs on deferred income tax bonus depreciation” represent the carrying costs benefit of increased accumulated deferred income taxes created by the change in tax law allowing bonus depreciation. A portion of this balance is amortized through current rates, the remaining portion will be refunded in future periods through future rate cases. The amortization period in current rates is three years and began in 2020.

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"Carrying costs on deferred income tax - Mixed Services 263(a)" represent the carrying costs benefit of increased accumulated deferred income taxes created by Section 263 (a) IRC. A portion of this balance is amortized through current rates, the remaining portion will be refunded in future periods through future rate cases. The amortization period in current rates is three years and began in 2020.

“2017 Tax Act” represents the impact from remeasurement of deferred income tax balances as a result of the Tax Act enacted by the U.S. federal government on December 22, 2017. Reductions in accumulated deferred income tax balances due to the reduction in the corporate income tax rates from 35% to 21% under the provisions of the Tax Act will result in amounts previously and currently collected from utility customers for these deferred taxes to be refundable to such customers, generally through reductions in future rates. The NYPSC, MPUC, PURA and DPU have instituted separate proceedings in New York, Maine, Connecticut and Massachusetts, respectively, to review and address the implications associated with the Tax Act on the utilities providing service in such states.

"Rate change levelization" adjusts the New York delivery rate increases across the three-year plan to avoid unnecessary spikes and offsetting dips in customer rates. A portion of this balance is amortized through current rates, the remaining portion will be refunded in future periods through future rate cases. The amortization period in current rates is five years and began in 2020.

"Revenue decoupling mechanism" represents the mechanism established to disassociate the utility's profits from its delivery/commodity sales.

“Accrued removal obligations” represent the differences between asset removal costs recorded and amounts collected in rates for those costs. The amortization period is dependent upon the asset removal costs of underlying assets and the life of the utility plant.

“Asset sale gain account” represents the net gain on the sale of certain assets that will be used for the future benefit of customers. The amortization period in current rates is three years for NYSEG and two years for RG&E and began in 2020.

“Economic development” represents the economic development program, which enables NYSEG and RG&E to foster economic development through attraction, expansion and retention of businesses within its service territory. If the level of actual expenditures for economic development allocated to NYSEG and RG&E varies in any rate year from the level provided for in rates, the difference is refunded to customers. A portion of this balance is amortized through current rates, the remaining portion will be refunded in future periods through future rate cases. The amortization period in current rates is three years and began in 2020.

“Positive benefit adjustment” resulted from Iberdrola’s 2008 acquisition of AVANGRID (formerly Energy East Corporation). This is being used to moderate increases in rates. A portion of this balance is amortized through current rates, the remaining portion will be refunded in future periods through future rate cases. The amortization period in current rates is three to five years and began in 2020.

“Theoretical reserve flow thru impact” represents the differences from the rate allowance for applicable federal and state flow through impacts related to the excess depreciation reserve amortization. It also represents the carrying cost on the differences. A portion of this balance is amortized through current rates, the remaining portion will be refunded in future periods through future rate cases. The amortization period in current rates is three to five years and began in 2020.

"Deferred property tax" represents the difference between actual expense for property taxes recoverable from customers and the amount provided for in rates. A portion of this balance is amortized through current rates, the remaining portion will be refunded in future periods through future rate cases. The amortization period in current rates is five years and began in 2020.

"Net plant reconciliation" represents the reconciliation of the actual electric and gas net plant and book depreciation to the targets set forth in the 2020 Joint Proposal. A portion of this balance is amortized through current rates, the remaining portion will be refunded in future periods through future rate cases. The amortization period in current rates is five years and began in 2020.

"Debt rate reconciliation" represents the over/under collection of costs related to debt instruments identified in the rate case. Costs would include interest, commissions and fees versus amounts included in rates.

"Rate refund - FERC ROE proceeding" represents the reserve associated with the FERC proceeding around the base return on equity (ROE) reflected in ISO New England, Inc.’s (ISO-NE) open access transmission tariff (OATT). See Note 14 for more details.

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"Transmission congestion contracts" represents deferral of the Nine Mile 2 Nuclear Plant transmission congestion contract at RGE. A portion of this balance is amortized through current rates, the remaining portion will be refunded in future periods through future rate cases. The amortization period in current rates is five years and began in 2020.

“Merger-related rate credits” resulted from the acquisition of UIL. This is being used to moderate increases in rates. In the years ended December 31, 2020 and 2019, respectively, $2 million and $2 million of rate credits were applied against customer bills.

"Earning sharing provisions" represents the annual earnings over the earning sharing threshold. A portion of this balance is amortized through current rates, the remaining portion will be refunded in future periods through future rate cases.

"Middletown/Norwalk local transmission network service collections" represents allowance for funds used during construction of the Middletown/Norwalk transmission line, which is being amortized over the useful life of the project.

“Low income programs” represent various hardship and payment plan programs approved for recovery.

"New York 2018 winter storm settlement" represents the settlement amount with the NYSPSC following the comprehensive investigation of New York’s major utility companies’ preparation and response to March 2018 storms. This balance is being amortized through current rates over an amortization period of three years, beginning in 2020.

“Other” includes cost of removal being amortized through rates and various items subject to reconciliation.

Note 7. Goodwill and Intangible assets

Goodwill by reportable segment as of December 31, 2020 and 2019 consisted of:

As of December 31,	2020	2019
(Millions)		
Networks	$ 2,747	$ 2,747
Renewables	372	372
Total	**$ 3,119**	**$ 3,119**

During 2020, there were no changes in gross amounts and accumulated losses of goodwill for the Networks and Renewables reportable segments. During 2019, Renewables' goodwill was reduced by $8 million as a result of the sale of a 50% interest in the Poseidon projects described in Note 22.

Goodwill Impairment Assessment

For impairment testing purposes, our reporting units are the same as operating segments, except for Networks, which contains three reporting units, Maine, New York and UIL. Goodwill for the Maine reporting unit is $325 million from the purchase of CMP by Energy East Corporation in 2000. Goodwill for the New York reporting unit is $654 million primarily from the purchase of RG&E by Energy East in 2002. Goodwill for the UIL reporting unit is $1,768 million from the 2015 acquisition of UIL.

We perform our annual impairment testing in the fourth quarter, as of October 1. Our qualitative assessment involves evaluating key events and circumstances that could affect the fair value of our reporting units, as well as other factors. Events and circumstances evaluated include macroeconomic conditions, industry, regulatory and market considerations, cost factors and their effect on earnings and cash flows, overall financial performance as compared with projected results and actual results of relevant prior periods, other relevant entity specific events and events affecting a reporting unit.

Our quantitative impairment testing includes various assumptions, primarily the discount rate, and forecasted cash flows. We use a discount rate that is developed using market participant assumptions, which consider the risk and nature of the respective reporting unit’s cash flows and the rates of return market participants would require in order to invest their capital in our reporting units. We test the reasonableness of the conclusions of our quantitative impairment testing using a range of discount rates and a range of assumptions for long-term cash flows.

We had no impairment of goodwill in 2020 and 2019 as a result of our impairment testing.

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Intangible assets

Intangible assets include those assets acquired in business acquisitions and intangible assets acquired and developed from external third parties and from affiliated companies. Following is a summary of intangible assets as of December 31, 2020 and 2019:

As of December 31, 2020	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
(Millions)			
Wind development	$ 593	$ (290)	$ 303
Other	31	(29)	2
Total Intangible Assets	**$ 624**	**$ (319)**	**$ 305**

As of December 31, 2019	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
(Millions)			
Wind development	$ 591	$ (289)	$ 302
Other	28	(16)	12
Total Intangible Assets	**$ 619**	**$ (305)**	**$ 314**

Wind development costs, with the exception of future 'pipeline' development costs, are amortized on a straight-line basis in accordance with the life of the related assets once placed in service. For the year ended December 31, 2020, amortization expense was for $14 million, and for both the years ended December 31, 2019 and 2018 amortization expense was $15 million. We believe our future cash flows will support the recoverability of our intangible assets.

We expect amortization expense for the five years subsequent to December 31, 2020, to be as follows:

Year ending December 31,	Amount
(Millions)	
2021	$ 14
2022	$ 13
2023	$ 12
2024	$ 12
2025	$ 12

Note 8. Property, Plant and Equipment

Property, plant and equipment as of December 31, 2020, consisted of:

As of December 31, 2020	Regulated	Nonregulated	Total
(Millions)			
Electric generation, distribution, transmission and other	$ 16,364	$ 12,854	$ 29,218
Natural gas transportation, distribution and other	4,637	13	4,650
Other common operating property	—	274	274
Total Property, Plant and Equipment in Service	**21,001**	**13,141**	**34,142**
Total accumulated depreciation	(5,363)	(4,436)	(9,799)
Total Net Property, Plant and Equipment in Service	**15,638**	**8,705**	**24,343**
Construction work in progress	1,384	1,024	2,408
Total Property, Plant and Equipment	**$ 17,022**	**$ 9,729**	**$ 26,751**

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Property, plant and equipment as of December 31, 2019, consisted of:

As of December 31, 2019 (Millions)	Regulated	Nonregulated	Total
Electric generation, distribution, transmission and other	$ 15,092	$ 12,360	$ 27,452
Natural gas transportation, distribution and other	4,373	13	4,386
Other common operating property	—	258	258
Total Property, Plant and Equipment in Service	**19,465**	**12,631**	**32,096**
Total accumulated depreciation	(4,968)	(4,090)	(9,058)
Total Net Property, Plant and Equipment in Service	**14,497**	**8,541**	**23,038**
Construction work in progress	1,271	887	2,158
Total Property, Plant and Equipment	**$ 15,768**	**$ 9,428**	**$ 25,196**

Capitalized interest costs were $51 million, $51 million and $26 million for the years ended December 31, 2020, 2019 and 2018, respectively. Accrued liabilities for property, plant and equipment additions were $285 million, $357 million and $154 million as of December 31, 2020, 2019 and 2018, respectively.

We impaired or wrote off amounts of $7 million, $11 million and $0 for the years ended December 31, 2020, 2019 and 2018, respectively, resulting from reassessment of the economic feasibility of our various Renewables development projects under construction.

Depreciation expense for the years ended December 31, 2020, 2019 and 2018, amounted to $973 million, $918 million and $840 million, respectively.

Note 9. Asset retirement obligations

AROs are intended to meet the costs for dismantling and restoration work that we have committed to carry out at our operational facilities.

The reconciliation of ARO carrying amounts for the years ended December 31, 2020 and 2019 consisted of:

(Millions)	
As of December 31, 2018	**$ 217**
Liabilities settled during the year	(5)
Liabilities incurred during the year	6
Accretion expense	12
Revisions in estimated cash flows (a)	(40)
As of December 31, 2019	**$ 190**
Liabilities settled during the year	(2)
Liabilities incurred during the year	9
Accretion expense	11
Revisions in estimated cash flows (a)	2
As of December 31, 2020	**$ 210**

(a) Represents a reduction in our estimate of expected cash flows required for retirement activities related to our renewable energy facilities.

Several of the wind generation facilities have restricted cash for purposes of settling AROs. As of December 31, 2020 and 2019, restricted cash related to AROs was $3 million and $2 million, respectively. These amounts have been included in “Other Assets” on our consolidated balance sheets. Accretion expenses are included in “Operations and maintenance” in our consolidated statements of income.

We have AROs for which a liability has not been recognized because the fair value cannot be reasonably estimated due to indeterminate settlement dates, including for the removal of hydroelectric dams due to structural inadequacy or for decommissioning; the removal of property upon termination of an easement, right-of-way or franchise; and costs for abandonment of certain types of gas mains.

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Note 10. Debt

Long-term debt as of December 31, 2020 and 2019 consisted of:

As of December 31,		2020		2019	
	Maturity Dates	Balances	Interest Rates	Balances	Interest Rates
(Millions)					
First mortgage bonds - fixed (a)	2021-2049	$ 2,575	1.85%-8.00%	$ 2,218	3.07%-8.00%
Unsecured pollution control notes - fixed	2023-2029	478	1.40%-3.50%	538	2.00%-3.50%
Term loan - variable		—		500	2.40%
Other various non-current debt - fixed	2021-2050	4,785	1.95%-7.80%	4,228	2.80%-10.48%
Unamortized debt issuance costs and discount		(47)		(38)	
Total Debt		**7,791**		**7,446**	
Less: debt due within one year, included in current liabilities		313		730	
Total Non-current Debt		**$ 7,478**		**$ 6,716**	

(a) The first mortgage bonds have pledged collateral of substantially all the respective utility's in service properties of approximately $7,483 million.

Iberdrola Loan

On December 14, 2020, AVANGRID and Iberdrola entered into an intra-group loan agreement which provided AVANGRID with an unsecured subordinated loan in an aggregate principal amount of $3,000 million (the Iberdrola Loan).

The Iberdrola Loan bears interest (i) from December 16, 2020 until June 15, 2021, at an interest rate of 0.20%, which increases one basis point each month following the first month of the term of the Iberdrola Loan up to a maximum interest rate of 0.25%, and (ii) from June 16, 2021 until the Iberdrola Loan and any accrued and unpaid interest is repaid in its entirety, at AVANGRID's equity cost of capital as published by Bloomberg. Interest is payable on a monthly basis in arrears.

AVANGRID is required to repay the Iberdrola Loan in full upon certain equity issuances by AVANGRID in which Iberdrola participates or a change of control of AVANGRID. In addition, on or after June 15, 2021, upon five business days' notice to Iberdrola, AVANGRID may voluntarily repay the Iberdrola Loan and any accrued and unpaid interest, in whole or in part, without prepayment premium or penalty if there is a change in AVANGRID's business plan and AVANGRID determines that the Iberdrola Loan is no longer required. The intra-group loan agreement contains certain customary affirmative and negative covenants and events of default.

As of December 31, 2020, the Iberdrola Loan had no current maturities and is included in "Non-current debt with affiliate" on our consolidated balance sheet as we do not intend on repaying the Iberdrola Loan with current assets. Proceeds from the Iberdrola Loan of $1,438 million and $300 million, respectively, are included in "cash and cash equivalents" and "prepayments and other current assets" on our consolidated balance sheet as of December 31, 2020. The remainder of the proceeds reduced our commercial paper balance.

Other 2020 Long-Term Debt Issuances

Company	Issue Date	Type	Amount (Millions)	Interest rate	Maturity
AVANGRID	4/9/2020	Unsecured Notes	$ 750	3.20 %	2025
NYSEG (1)	5/1/2020	Pollution Control Bonds	$ 200	1.40% - 1.61%	2026 -2029
BGC	9/1/2020	Unsecured Notes	$ 25	3.68 %	2050
NYSEG	9/25/2020	Unsecured Notes	$ 200	1.95 %	2030
RG&E	11/23/2020	First Mortgage Bonds	$ 200	1.85 %	2030
UI	12/1/2020	Unsecured Notes	$ 75	2.02 %	2030
CMP	12/15/2020	First Mortgage Bonds	$ 50	1.87 %	2030
CNG	12/15/2020	Unsecured Notes	$ 30	2.02 %	2030
SCG	12/15/2020	First Mortgage Bonds	$ 50	1.87 %	2030

(1) Non-cash remarketing of bonds to reset interest rates.

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Long-term debt maturities, including sinking fund obligations, due over the next five years consist of:

2021	2022	2023	2024	2025	Total
(Millions)					
$ 313	$ 363	$ 439	$ 612	$ 1,107	$ 2,834

We make certain standard covenants to lenders in our third-party debt agreements, including, in certain agreements, covenants regarding the ratio of indebtedness to total capitalization. A breach of any covenant in the existing credit facilities or the agreements governing our other indebtedness would result in an event of default. Certain events of default may trigger automatic acceleration. Other events of default may be remedied by the borrower within a specified period or waived by the lenders and, if not remedied or waived, give the lenders the right to accelerate. Neither we nor any of our subsidiaries were in breach of covenants or of any obligation that could trigger the early redemption of our debt as of both December 31, 2020 and 2019.

Fair Value of Debt

As of December 31, 2020 and 2019, the estimated fair value of long-term debt, including the Iberdrola Loan, was $12,166 million and $8,168 million, respectively. The estimated fair value was determined, in most cases, by discounting the future cash flows at market interest rates. The interest rate curve used to make these calculations takes into account the risks associated with the electricity industry and the credit ratings of the borrowers in each case. The fair value of debt is considered Level 2 within the fair value hierarchy.

Short-term Debt

AVANGRID has a commercial paper program with a limit of $2 billion which is backstopped by the AVANGRID credit facilities described below.

AVANGRID had $307 million and $560 million of notes payable as of December 31, 2020 and 2019, respectively. As of December 31, 2020 and 2019, the balance consisted of $309 million and $562 million, respectively, of commercial paper, presented net of discounts on the balance sheet. As of December 31, 2020 and 2019, the weighted-average interest rate on outstanding commercial paper was 0.32% and 2.07%, respectively.

AVANGRID Credit Facility

AVANGRID and its subsidiaries, NYSEG, RG&E, CMP, UI, CNG, SCG and BGC have a revolving credit facility with a syndicate of banks, or the AVANGRID Credit Facility, that provides for maximum borrowings of up to $2,500 million in the aggregate.

Under the terms of the AVANGRID Credit Facility, each joint borrower has a maximum borrowing entitlement, or sublimit, which can be periodically adjusted to address specific short-term capital funding needs, subject to the maximum limit contained in the agreement. On June 29, 2020, we entered into an amendment to the AVANGRID Credit Facility, which reduced AVANGRID's maximum sublimit from $2,000 million to $1,500 million and added minimum sublimits for each joint borrower other than AVANGRID. Under the AVANGRID Credit Facility, each of the borrowers pays an annual facility fee that is dependent on their credit rating. As of December 31, 2020, the facility fees ranged from 10.0 to 17.5 basis points. The AVANGRID Credit Facility matures on June 29, 2024.

2020 Credit Facility

On June 29, 2020, we entered into a revolving credit agreement with several lenders (the 2020 Credit Facility), that provides maximum borrowings up to $500 million. We pay an annual facility fee, which ranges from 15 to 30 basis points, dependent on AVANGRID’s credit rating. As of December 31, 2020, the facility fee is 20 basis points. The 2020 Credit Facility matures on June 28, 2021. We have the right to extend, and the banks are obligated to extend, the commitments and loans outstanding under the facility for one year at a cost of 75 basis points. We may also request an extension of the facility for one year, which the banks may grant at their discretion for a fee that will be determined at the time of the request. As of December 31, 2020, there were no borrowings outstanding under this credit facility.

Since our credit facilities are also a backstop to the AVANGRID commercial paper program, the amount available under the facilities as of December 31, 2020 and December 31, 2019 was $2,691 million and $1,938 million, respectively.

Iberdrola Group Credit Facility

AVANGRID has a credit facility with Iberdrola Financiacion, S.A.U., a company of the Iberdrola Group. The facility has a limit of $500 million and matures on June 18, 2023. AVANGRID pays a facility fee of 10.5 basis points annually on the facility. As of both December 31, 2020 and 2019, there was no outstanding amount under this credit facility.

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Note 11. Fair Value of Financial Instruments and Fair Value Measurements

We determine the fair value of our derivative assets and liabilities and non-current equity investments associated with Networks' activities utilizing market approach valuation techniques:

- Our equity and other investments consist of Rabbi Trusts for deferred compensation plans and a supplemental retirement benefit life insurance trust. The Rabbi Trusts primarily include equity securities, fixed income and money market funds. We measure the fair value of our Rabbi Trust portfolio using observable, unadjusted quoted market prices in active markets for identical assets and include the measurements in Level 1. We measure the fair value of the supplemental retirement benefit life insurance trust based on quoted prices in the active markets for the various funds within which the assets are held and include the measurement in Level 2.
- NYSEG and RG&E enter into electric energy derivative contracts to hedge the forecasted purchases required to serve their electric load obligations. They hedge their electric load obligations using derivative contracts that are settled based upon Locational Based Marginal Pricing published by the NYISO. NYSEG and RG&E hedge approximately 70% of their electric load obligations using contracts for a NYISO location where an active market exists. The forward market prices used to value the companies' open electric energy derivative contracts are based on quoted prices in active markets for identical assets or liabilities with no adjustment required and therefore we include the fair value measurements in Level 1.
- NYSEG and RG&E enter into natural gas derivative contracts to hedge their forecasted purchases required to serve their natural gas load obligations. The forward market prices used to value open natural gas derivative contracts are exchange-based prices for the identical derivative contracts traded actively on the New York Mercantile Exchange (NYMEX). Because we use prices quoted in an active market we include the fair value measurements in Level 1.
- NYSEG, RG&E and CMP enter into fuel derivative contracts to hedge their unleaded and diesel fuel requirements for their fleet vehicles. Exchange-based forward market prices are used, but because an unobservable basis adjustment is added to the forward prices, we include the fair value measurement for these contracts in Level 3.
- UI enters into CfDs, which are marked-to-market based on a probability-based expected cash flow analysis that is discounted at risk-free interest rates and an adjustment for non-performance risk using credit default swap rates. We include the fair value measurement for these contracts in Level 3 (See Note 12 for further discussion of CfDs).

We determine the fair value of our derivative assets and liabilities associated with Renewables activities utilizing market approach valuation techniques. Exchange-traded transactions, such as NYMEX futures contracts, that are based on quoted market prices in active markets for identical products with no adjustment are included in fair value Level 1. Contracts with delivery periods of two years or less which are traded in active markets and are valued with or derived from observable market data for identical or similar products such as over-the-counter NYMEX, foreign exchange swaps, and fixed price physical and basis and index trades are included in fair value Level 2. Contracts with delivery periods exceeding two years or that have unobservable inputs or inputs that cannot be corroborated with market data for identical or similar products are included in fair value Level 3. The unobservable inputs include historical volatilities and correlations for tolling arrangements and extrapolated values for certain power swaps. The valuation for this category is based on our judgments about the assumptions market participants would use in pricing the asset or liability since limited market data exists.

We determine the fair value of our foreign currency exchange derivative instruments based on current exchange rates compared to the rates at inception of the hedge. We include the fair value measurement for these contracts in Level 2.

The carrying amounts for cash and cash equivalents, the short-term investment from the proceeds of the Iberdrola Loan, restricted cash, accounts receivable, accounts payable, notes payable, lease obligations and interest accrued approximate their estimated fair values and are considered Level 1.

Restricted cash was $4 million and $6 million as of December 31, 2020 and 2019, respectively and is included in "Other Assets" on our consolidated balance sheets.

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The financial instruments measured at fair value as of December 31, 2020 and 2019 consisted of:

As of December 31, 2020 (Millions)	Level 1	Level 2	Level 3	Netting	Total
Equity and other investments with readily determinable fair values	**$ 49**	**$ 14**	**$ —**	**$ —**	**$ 63**
Derivative assets					
Derivative financial instruments - power	$ 5	$ 31	$ 105	$ (54)	$ 87
Derivative financial instruments - gas	—	24	19	(35)	8
Contracts for differences	—	—	2	—	2
Total	**$ 5**	**$ 55**	**$ 126**	**$ (89)**	**$ 97**
Derivative liabilities					
Derivative financial instruments - power	$ (23)	$ (31)	$ (23)	$ 72	$ (5)
Derivative financial instruments - gas	(1)	(9)	(2)	9	(3)
Contracts for differences	—	—	(88)	—	(88)
Derivative financial instruments – Other	—	—	—	—	—
Total	**$ (24)**	**$ (40)**	**$ (113)**	**$ 81**	**$ (96)**

As of December 31, 2019 (Millions)	Level 1	Level 2	Level 3	Netting	Total
Equity and other investments with readily determinable fair values	**$ 38**	**$ 13**	**$ —**	**$ —**	**$ 51**
Derivative assets					
Derivative financial instruments - power	$ 4	$ 23	$ 120	$ (54)	$ 93
Derivative financial instruments - gas	—	40	31	(71)	—
Contracts for differences	—	—	2	—	2
Total	**$ 4**	**$ 63**	**$ 153**	**$ (125)**	**$ 95**
Derivative liabilities					
Derivative financial instruments - power	$ (28)	$ (43)	$ (29)	$ 92	$ (8)
Derivative financial instruments - gas	(4)	(26)	(5)	33	(2)
Contracts for differences	—	—	(94)	—	(94)
Derivative financial instruments – Other	—	(1)	—	—	(1)
Total	**$ (32)**	**$ (70)**	**$ (128)**	**$ 125**	**$ (105)**

The reconciliation of changes in the fair value of financial instruments based on Level 3 inputs for the years ended December 31, 2020, 2019 and 2018 consisted of:

(Millions)	2020	2019	2018
Fair value as of January 1,	**$ 25**	**$ (15)**	**$ 6**
Gains for the year recognized in operating revenues	8	53	18
Losses for the year recognized in operating revenues	(2)	(2)	(9)
Total gains or losses for the period recognized in operating revenues	6	51	9
Gains recognized in OCI	1	2	—
Losses recognized in OCI	(3)	(3)	(5)
Total gains or losses recognized in OCI	(2)	(1)	(5)
Net change recognized in regulatory assets and liabilities	6	5	(5)
Purchases	(2)	(22)	(6)
Settlements	(15)	4	(10)
Transfers out of Level 3 (a)	(5)	3	(4)
Fair value as of December 31,	**$ 13**	**$ 25**	**$ (15)**
Gains for the year included in operating revenues attributable to the change in unrealized gains relating to financial instruments still held at the reporting date	$ 6	$ 51	$ 9

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(a) Transfers out of Level 3 were the result of increased observability of market data.

Level 3 Fair Value Measurement

The table below illustrates the significant sources of unobservable inputs used in the fair value measurement of our Level 3 derivatives and the variability in prices for those transactions classified as Level 3 derivatives as of December 31, 2020.

Index	Avg.	Max.	Min.
NYMEX ($/MMBtu)	$ 2.53	$ 3.47	$ 1.48
AECO ($/MMBtu)	$ 1.45	$ 3.24	$ (0.17)
Ameren ($/MWh)	$ 26.12	$ 40.53	$ 14.73
COB ($/MWh)	$ 33.30	$ 95.00	$ 8.20
ComEd ($/MWh)	$ 24.10	$ 39.26	$ 12.65
ERCOT N hub ($/MWh)	$ 32.19	$ 196.95	$ 11.25
ERCOT S hub ($/MWh)	$ 32.55	$ 203.37	$ 11.41
Indiana hub ($/MWh)	$ 28.23	$ 43.58	$ 16.36
Mid C ($/MWh)	$ 29.76	$ 95.00	$ 4.00
Minn hub ($/MWh)	$ 22.82	$ 37.78	$ 11.52
NoIL hub ($/MWh)	$ 24.00	$ 39.01	$ 12.70
PJM W hub ($/MWh)	$ 28.46	$ 59.53	$ 14.28

Our Level 3 valuations primarily consist of NYMEX gas and fixed price power swaps with delivery periods extending through 2024 and 2032, respectively. The gas swaps are used to hedge merchant wind positions. The power swaps are used to hedge merchant wind production in the West and Midwest.

We considered the measurement uncertainty regarding the Level 3 gas and power positions to changes in the valuation inputs. Given the nature of the transactions in Level 3, the only material input to the valuation is the market price of gas or power for transactions with delivery periods exceeding two years. The fixed price power swaps are economic hedges of future power generation, with decreases in power prices resulting in unrealized gains and increases in power prices resulting in unrealized losses. The gas swaps are economic hedges of merchant generation, with decreases in gas prices resulting in unrealized gains and increases in gas prices resulting in unrealized losses. As all transactions are economic hedges of the underlying position, any changes in the fair value of these transactions will be offset by changes in the anticipated purchase/sales price of the underlying commodity.

Two elements of the analytical infrastructure employed in valuing transactions are the price curves used in the calculation of market value and the models themselves. We maintain and document authorized trading points and associated forward price curves, and we develop and document models used in valuation of the various products.

Transactions are valued in part on the basis of forward price, correlation and volatility curves. We maintain and document descriptions of these curves and their derivations. Forward price curves used in valuing the transactions are applied to the full duration of the transaction.

The determination of fair value of the CfDs (see Note 12 for further details on CfDs) was based on a probability-based expected cash flow analysis that was discounted at risk-free interest rates, as applicable, and an adjustment for non-performance risk using credit default swap rates. Certain management assumptions were required, including development of pricing that extends over the term of the contracts. We believe this methodology provides the most reasonable estimates of the amount of future discounted cash flows associated with the CfDs. Additionally, on a quarterly basis, we perform analytics to ensure that the fair value of the derivatives is consistent with changes, if any, in the various fair value model inputs. Significant isolated changes in the risk of non-performance, the discount rate or the contract term pricing would result in an inverse change in the fair value of the CfDs. Additional quantitative information about Level 3 fair value measurements of the CfDs is as follows:

Unobservable Input	Range at December 31, 2020
Risk of non-performance	0.50% - 0.51%
Discount rate	0.17% - 0.36%
Forward pricing ($ per KW-month)	$2.00 - $5.30

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Note 12. Derivative Instruments and Hedging

Our operating and financing activities are exposed to certain risks, which are managed by using derivative instruments. All derivative instruments are recognized as either assets or liabilities at fair value on our consolidated balance sheets in accordance with the accounting requirements concerning derivative instruments and hedging activities.

(a) Networks activities

The tables below present Networks' derivative positions as of December 31, 2020 and 2019, respectively, including those subject to master netting agreements and the location of the net derivative positions on our consolidated balance sheets:

As of December 31, 2020	Current Assets	Noncurrent Assets	Current Liabilities	Noncurrent Liabilities
(Millions)				
Not designated as hedging instruments				
Derivative assets	$ 3	$ 5	$ 3	$ 3
Derivative liabilities	(3)	(4)	(34)	(78)
	—	1	(31)	(75)
Designated as hedging instruments				
Derivative assets	—	—	—	—
Derivative liabilities	—	—	(1)	—
	—	—	(1)	—
Total derivatives before offset of cash collateral	—	1	(32)	(75)
Cash collateral receivable	—	—	18	1
Total derivatives as presented in the balance sheet	$ —	$ 1	$ (14)	$ (74)

As of December 31, 2019	Current Assets	Noncurrent Assets	Current Liabilities	Noncurrent Liabilities
(Millions)				
Not designated as hedging instruments				
Derivative assets	$ 1	$ 4	$ 1	$ 2
Derivative liabilities	(1)	(2)	(39)	(86)
	—	2	(38)	(84)
Designated as hedging instruments				
Derivative assets	—	—	—	—
Derivative liabilities	—	—	(1)	(1)
	—	—	(1)	(1)
Total derivatives before offset of cash collateral	—	2	(39)	(85)
Cash collateral receivable	—	—	27	1
Total derivatives as presented in the balance sheet	$ —	$ 2	$ (12)	$ (84)

The net notional volumes of the outstanding derivative instruments associated with Networks' activities as of December 31, 2020 and 2019, respectively, consisted of:

As of December 31,	2020	2019
(Millions)		
Wholesale electricity purchase contracts (MWh)	5.6	5.1
Natural gas purchase contracts (Dth)	9.5	8.5
Fleet fuel purchase contracts (Gallons)	2.5	2.2

Derivatives not designated as hedging instruments

NYSEG and RG&E have an electric commodity charge that passes costs for the market price of electricity through rates. We use electricity contracts, both physical and financial, to manage fluctuations in electricity commodity prices in order to provide price stability to customers. We include the cost or benefit of those contracts in the amount expensed for electricity purchased when the related electricity is sold. We record changes in the fair value of electric hedge contracts to derivative assets and/or

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liabilities with an offset to regulatory assets and/or regulatory liabilities, in accordance with the accounting requirements concerning regulated operations.

NYSEG and RG&E have purchased gas adjustment clauses that allow us to recover through rates any changes in the market price of purchased natural gas, substantially eliminating their exposure to natural gas price risk. NYSEG and RG&E use natural gas futures and forwards to manage fluctuations in natural gas commodity prices to provide price stability to customers. We include the cost or benefit of natural gas futures and forwards in the commodity cost that is passed on to customers when the related sales commitments are fulfilled. We record changes in the fair value of natural gas hedge contracts to derivative assets and/or liabilities with an offset to regulatory assets and/or regulatory liabilities in accordance with the accounting requirements for regulated operations.

The amounts for electricity hedge contracts and natural gas hedge contracts recognized in regulatory liabilities and assets as of December 31, 2020 and 2019 and amounts reclassified from regulatory assets and liabilities into income for the years ended 2020, 2019 and 2018 are as follows:

(Millions)	Loss or Gain Recognized in Regulatory Assets/Liabilities		Location of Loss (Gain) Reclassified from Regulatory Assets/Liabilities into Income	Loss (Gain) Reclassified from Regulatory Assets/Liabilities into Income	
As of				For the Year Ended December 31,	
December 31, 2020	**Electricity**	**Natural Gas**	**2020**	**Electricity**	**Natural Gas**
Regulatory assets	$ 17	$ 1	Purchased power, natural gas and fuel used	$ 55	$ 4
Regulatory liabilities	$ —	$ —			
December 31, 2019			**2019**		
Regulatory assets	$ 24	$ 4	Purchased power, natural gas and fuel used	$ 25	$ 1
Regulatory liabilities	$ —	$ —			
			2018		
			Purchased power, natural gas and fuel used	$ (10)	$ (1)

Pursuant to a PURA order, UI and Connecticut's other electric utility, CL&P, each executed two long-term CfDs with certain incremental capacity resources, each of which specifies a capacity quantity and a monthly settlement that reflects the difference between a forward market price and the contract price. The costs or benefits of each contract will be paid by or allocated to customers and will be subject to a cost-sharing agreement between UI and CL&P pursuant to which approximately 20% of the cost or benefit is borne by or allocated to UI customers and approximately 80% is borne by or allocated to CL&P customers.

PURA has determined that costs associated with these CfDs will be fully recoverable by UI and CL&P through electric rates, and UI has deferred recognition of costs (a regulatory asset) or obligations (a regulatory liability), including carrying costs. For those CfDs signed by CL&P, UI records its approximate 20% portion pursuant to the cost-sharing agreement noted above. As of December 31, 2020, UI has recorded a gross derivative asset of $2 million ($0 million of which is related to UI's portion of the CfD signed by CL&P), a regulatory asset of $86 million, a gross derivative liability of $88 million ($85 million of which is related to UI's portion of the CfD signed by CL&P) and a regulatory liability of $0. As of December 31, 2019, UI has recorded a gross derivative asset of $2 million ($0 million of which is related to UI's portion of the CfD signed by CL&P), a regulatory asset of $92 million, a gross derivative liability of $94 million ($92 million of which is related to UI's portion of the CfD signed by CL&P) and a regulatory liability of $0.

The unrealized gains and losses from fair value adjustments to these derivatives, which are recorded in regulatory assets, for the years ended December 31, 2020, 2019 and 2018, respectively, were as follows:

	Years Ended December 31,		
	2020	**2019**	**2018**
(Millions)			
Derivative Assets	$ —	$ (3)	$ (6)
Derivative Liabilities	$ 6	$ 8	$ 1

Certain foreign currency exchange contracts are not designated as hedging instruments. For the year ended December 31, 2020, we recorded a gain of $4 million related to our foreign currency contracts not designated as hedging instruments, included in "Other income" in our condensed consolidated statements of income. No amounts were recorded for both the years ended December 31, 2019 and 2018.

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Derivatives designated as hedging instruments

The effect of derivatives in cash flow hedging relationships on OCI and income for the years ended December 31, 2020, 2019 and 2018, respectively, consisted of:

Year Ended December 31, (Millions)	(Loss) Gain Recognized in OCI on Derivatives (a)	Location of Loss Reclassified from Accumulated OCI into Income	Loss Reclassified from Accumulated OCI into Income	Total amount per Income Statement
2020				
Interest rate contracts	$ —	Interest expense	$ 4	$ 316
Commodity contracts	(1)	Purchased power, natural gas and fuel used	1	1,379
Foreign currency exchange contracts	1		—	
Total	**$ —**		**$ 5**	
2019				
Interest rate contracts	$ —	Interest expense	$ 6	$ 310
Commodity contracts	—	Purchased power, natural gas and fuel used	1	1,509
Foreign currency exchange contracts	(1)		—	
Total	**$ (1)**		**$ 7**	
2018				
Interest rate contracts	$ —	Interest expense	$ 8	$ 303
Commodity contracts	(1)	Purchased power, natural gas and fuel used	—	1,653
Total	**$ (1)**		**$ 8**	

(a) Changes in accumulated OCI are reported on a pre-tax basis.

On June 20, 2019, Networks entered into a forward contract to hedge the foreign currency exchange risk of approximately $100 million in forecasted capital expenditures through June 2023. The forward foreign currency contracts are designated and qualify as cash flow hedges and are expected to be settled upon the payment to vendors for capital expenditures. The gain or loss on the foreign exchange derivative is reported as a component of accumulated OCI and will be reclassified into earnings over the useful life of the underlying capital expenditures.

The net loss in accumulated OCI related to previously settled forward starting swaps and accumulated amortization is $51 million and $55 million as of December 31, 2020 and 2019, respectively. We recorded $4 million, $6 million and $6 million in net derivative losses related to discontinued cash flow hedges during the years ended December 31, 2020, 2019 and 2018, respectively. We will amortize approximately $4 million of discontinued cash flow hedges in 2021.

Unrealized losses of $1 million on hedge derivatives are reported in OCI because the forecasted transaction is considered to be probable as of December 31, 2020. We expect that immaterial amounts of those losses will be reclassified into earnings within the next twelve months. The maximum length of time over which we are hedging our exposure to the variability in future cash flows for forecasted fleet fuel transactions is twelve months.

(b) Renewables activities

The below presented quantitative information includes derivative financial instruments associated with Gas activities, which were sold during 2018.

We sell fixed-price gas and power forwards to hedge our merchant wind assets from declining commodity prices for our Renewables business. We also purchase fixed-price gas and basis swaps and sell fixed-price power in the forward market to hedge the spark spread or heat rate of our merchant thermal assets. We also enter into tolling arrangements to sell the output of our thermal generation facilities.

Renewables has proprietary trading operations that enter into fixed-price power and gas forwards in addition to basis swaps. The intent is to speculate on fixed-price commodity and basis volatility in the U.S. commodity markets.

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Renewables will periodically designate derivative contracts as cash flow hedges for both its thermal and wind portfolios. The fair value changes are recorded in OCI. For thermal operations, Renewables will periodically designate both fixed price NYMEX gas contracts and natural gas basis swaps that hedge the fuel requirements of its Klamath Plant in Klamath, Oregon. Renewables will also designate fixed price power swaps at various locations in the U.S. market to hedge future power sales from its Klamath facility and various wind farms.

The net notional volumes of outstanding derivative instruments associated with Renewables' activities as of December 31, 2020 and 2019, respectively, consisted of:

As of December 31,	2020	2019
(MWh/Dth in Millions)		
Wholesale electricity purchase contracts	3	4
Wholesale electricity sales contracts	7	9
Natural gas and other fuel purchase contracts	24	29
Financial power contracts	12	10
Basis swaps - purchases	35	42
Basis swaps - sales	2	1

The fair values of derivative contracts associated with Renewables' activities as of December 31, 2020 and 2019, respectively, consisted of:

As of December 31,	2020	2019
(Millions)		
Wholesale electricity purchase contracts	$ 4	$ 10
Wholesale electricity sales contracts	11	4
Natural gas and other fuel purchase contracts	—	(2)
Financial power contracts	66	73
Basis swaps - purchases	7	—
Total	**$ 88**	**$ 85**

The tables below present Renewables' derivative positions as of December 31, 2020 and 2019, respectively, including those subject to master netting agreements and the location of the net derivative position on our consolidated balance sheets:

As of December 31, 2020	Current Assets	Noncurrent Assets	Current Liabilities	Noncurrent Liabilities
(Millions)				
Not designated as hedging instruments				
Derivative assets	$ 47	$ 89	$ 2	$ 9
Derivative liabilities	(23)	(2)	(4)	(11)
	24	87	(2)	(2)
Designated as hedging instruments				
Derivative assets	8	15	2	7
Derivative liabilities	(5)	(6)	(3)	(10)
	3	9	(1)	(3)
Total derivatives before offset of cash collateral	27	96	(3)	(5)
Cash collateral payable	(9)	(18)	—	—
Total derivatives as presented in the balance sheet	$ 18	$ 78	$ (3)	$ (5)

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As of December 31, 2019	Current Assets	Noncurrent Assets	Current Liabilities	Noncurrent Liabilities
(Millions)				
Not designated as hedging instruments				
Derivative assets	$ 23	$ 110	$ 42	$ 13
Derivative liabilities	(1)	(7)	(48)	(18)
	22	103	(6)	(5)
Designated as hedging instruments				
Derivative assets	—	18	5	4
Derivative liabilities	—	(9)	(13)	(6)
	—	9	(8)	(2)
Total derivatives before offset of cash collateral	22	112	(14)	(7)
Cash collateral (payable) receivable	(11)	(30)	7	6
Total derivatives as presented in the balance sheet	$ 11	$ 82	$ (7)	$ (1)

Derivatives not designated as hedging instruments

The effects of trading and non-trading derivatives associated with Renewables' activities for the year ended December 31, 2020, consisted of:

	Year Ended December 31, 2020		
	Trading	Non-trading	Total amount per income statement
(Millions)			
Operating Revenues			
Wholesale electricity purchase contracts	$ (1)	$ —	
Wholesale electricity sales contracts	(1)	6	
Financial power contracts	2	—	
Financial and natural gas contracts	—	(13)	
Total loss included in operating revenues	$ —	$ (7)	$ 6,320
Purchased power, natural gas and fuel used			
Wholesale electricity purchase contracts	$ —	$ (4)	
Financial and natural gas contracts	—	6	
Total gain included in purchased power, natural gas and fuel used	$ —	$ 2	$ 1,379
Total Loss	$ —	$ (5)	

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	Year Ended December 31, 2019		
	Trading	Non-trading	Total amount per income statement
(Millions)			
Operating Revenues			
Wholesale electricity purchase contracts	$ (1)	$ —	
Wholesale electricity sales contracts	3	40	
Financial power contracts	(3)	23	
Financial and natural gas contracts	(1)	1	
Total (loss) gain included in operating revenues	$ (2)	$ 64	$ 6,336
Purchased power, natural gas and fuel used			
Financial power contracts	—	(1)	
Financial and natural gas contracts	—	15	
Total gain included in purchased power, natural gas and fuel used	$ —	$ 14	$ 1,509
Total (Loss) Gain	$ (2)	$ 78	

During September 2019, Renewables liquidated a portion of one of its wholesale electricity sales contracts and recorded a gain of $43 million for the year ended December 31, 2019.

The effects of trading and non-trading derivatives associated with Renewables activities for the years ended December 31, 2018 consisted of:

Years Ended December 31,	2018	
(Millions)	Trading	Non-trading
Wholesale electricity purchase contracts	$ 4	$ 11
Wholesale electricity sales contracts	(2)	(15)
Financial power contracts	—	(19)
Financial and natural gas contracts	4	—
Total Gain (Loss)	$ 6	$ (23)

Derivatives designated as hedging instruments

The effect of derivatives in cash flow hedging relationships on accumulated OCI and income for the years ended December 31, 2020, 2019 and 2018 consisted of:

Year Ended December 31,	Gain (Loss) Recognized in OCI on Derivatives (a)	Location of Loss (Gain) Reclassified from Accumulated OCI into Income	Loss (Gain) Reclassified from Accumulated OCI into Income	Total amount per Income Statement
(Millions)				
2020				
Commodity contracts	$ 1	Operating revenues	$ 6	$ 6,320
2019				
Commodity contracts	$ (5)	Operating revenues	$ 3	$ 6,336
2018				
Commodity contracts	$ (11)	Operating revenues	$ (22)	$ 6,477

(a) Changes in OCI are reported on a pre-tax basis.

Amounts are reclassified from accumulated OCI into income in the period during which the transaction being hedged affects earnings or when it becomes probable that a forecasted transaction being hedged would not occur. Notwithstanding future changes in prices, approximately $3 million of gain included in accumulated OCI at December 31, 2020 is expected to be reclassified into earnings within the next twelve months. We recorded immaterial amounts of net derivative losses related to discontinued cash flow hedges for the years ended December 31, 2020, 2019 and 2018.

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(c) Interest rate contracts

AVANGRID uses financial derivative instruments from time to time to alter its fixed and floating rate debt balances or to hedge fixed rates in anticipation of future fixed rate issuances.

On January 31, 2020, AVANGRID entered into two treasury locks, with a total notional amount of $600 million, to hedge the issuance of forecasted fixed rate debt. The treasury locks were designated and qualified as cash flow hedges and were settled upon the second quarter debt issuance described in Note 10. The $27 million loss on the treasury locks is reported as a component of accumulated OCI and is being reclassified into earnings during the periods in which the related interest expense of the forecasted debt is incurred.

The net loss in accumulated OCI related to previously settled interest rate contracts is $57 million and $38 million as of December 31, 2020 and 2019, respectively. We amortized into income $8 million and $2 million of the loss related to the settled interest rate contracts for the years ended December 31, 2020 and December 31, 2019, respectively. We will amortize approximately $9 million of the net loss on the interest rate contracts during 2021.

The effect of derivatives in cash flow hedging relationships on accumulated OCI for the years ended December 31, 2020 and 2019, respectively, consisted of:

Years Ended December 31,	(Loss) Recognized in OCI on Derivatives (a)	Location of Loss Reclassified from Accumulated OCI into Income	Loss Reclassified from Accumulated OCI into Income	Total amount per Income Statement
(Millions)				
2020				
Interest rate contracts	$ (27)	Interest expense	$ 8	$ 316
2019				
Interest rate contracts	$ (24)	Interest expense	$ 2	$ 310
2018				
Interest rate contracts	$ (16)	Interest expense	$ —	$ 303

(a) Changes in OCI are reported on a pre-tax basis. The amounts in accumulated OCI is being reclassified into earnings over the underlying debt maturity periods which ends in 2025 and 2029.

(d) Counterparty credit risk management

NYSEG and RG&E face risks related to counterparty performance on hedging contracts due to counterparty credit default. We have developed a matrix of unsecured credit thresholds that are applicable based on the respective counterparty's or the counterparty guarantor's credit rating, as provided by Moody's or Standard & Poor's. When our exposure to risk for a counterparty exceeds the unsecured credit threshold, the counterparty is required to post additional collateral or we will no longer transact with the counterparty until the exposure drops below the unsecured credit threshold.

The wholesale power supply agreements of UI contain default provisions that include required performance assurance, including certain collateral obligations, in the event that UI's credit rating on senior debt were to fall below investment grade. If such an event had occurred as of December 31, 2020, UI would have had to post an aggregate of approximately $18 million in collateral.

We have various master netting arrangements in the form of multiple contracts with various single counterparties that are subject to contractual agreements that provide for the net settlement of all contracts through a single payment. Those arrangements reduce our exposure to a counterparty in the event of a default on or termination of any single contract. For financial statement presentation purposes, we offset fair value amounts recognized for derivative instruments and fair value amounts recognized for the right to reclaim or the obligation to return cash collateral arising from derivative instruments executed with the same counterparty under a master netting arrangement. The amount of cash collateral under master netting arrangements that has not been offset against net derivative positions was $18 million and $21 million as of December 31, 2020 and 2019, respectively. Derivative instruments settlements and collateral payments are included throughout the "Changes in operating assets and liabilities" section of operating activities in the consolidated statements of cash flows.

Certain of our derivative instruments contain provisions that require us to maintain an investment grade credit rating on our debt from each of the major credit rating agencies. If our debt were to fall below investment grade, we would be in violation of those provisions and the counterparties to the derivative instruments could request immediate payment or demand immediate and ongoing full overnight collateralization on derivative instruments in net liability positions. The aggregate fair value of all derivative instruments with credit risk related contingent features that are in a liability position as of December 31, 2020 is $18 million, for which we have posted collateral.

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Note 13. Leases

We have operating leases for office buildings, facilities, vehicles and certain equipment. Our finance leases are primarily related to electric generation and certain buildings, vehicles and equipment. Certain of our lease agreements include rental payments adjusted periodically for inflation or are based on other periodic input measures. Our leases do not contain any material residual value guarantees or material restrictive covenants. Our leases have remaining lease terms of 1 year to 63 years, some of which may include options to extend the leases for up to 40 years, and some of which may include options to terminate. We consider extension or termination options in the lease term if it is reasonably certain we will exercise the option.

The components of lease cost for the years ended December 31, 2020 and 2019 were as follows:

For the Year Ended December 31,	2020	2019
(Millions)		
Lease cost		
Finance lease cost		
Amortization of right-of-use assets	$ 17	$ 12
Interest on lease liabilities	4	3
Total finance lease cost	21	15
Operating lease cost	16	18
Short-term lease cost	3	5
Variable lease cost	—	2
Total lease cost	$ 40	$ 40

Balance sheet and other information for the years ended December 31, 2020 and 2019 was as follows:

As of December 31,	2020	2019
(Millions, except lease term and discount rate)		
Operating Leases		
Operating lease right-of-use assets	$ 153	$ 70
Operating lease liabilities, current	8	12
Operating lease liabilities, long-term	154	65
Total operating lease liabilities	$ 162	$ 77
Finance Leases		
Other assets	$ 162	$ 133
Other current liabilities	8	9
Other non-current liabilities	91	54
Total finance lease liabilities	$ 99	$ 63
Weighted-average Remaining Lease Term (years)		
Finance leases	8.12	7.59
Operating leases	21.38	12.98
Weighted-average Discount Rate		
Finance leases	3.71 %	5.35 %
Operating leases	3.21 %	3.62 %

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For the years ended December 31, 2020 and 2019, supplemental cash flow information related to leases was as follows:

For the Year Ended December 31,	2020	2019
(Millions)		
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flows from operating leases	$ 13	$ 13
Operating cash flows from finance leases	$ 3	$ 3
Financing cash flows from finance leases	$ 9	$ 27
Right-of-use assets obtained in exchange for lease obligations:		
Finance leases	$ 46	$ 1
Operating leases	$ 94	$ 3

As of December 31, 2020, maturities of lease liabilities were as follows:

	Finance Leases	Operating Leases
(Millions)		
Year ending December 31,		
2021	$ 10	$ 15
2022	5	15
2023	53	13
2024	23	10
2025	2	10
Thereafter	19	182
Total lease payments	112	245
Less: imputed interest	(13)	(83)
Total	$ 99	$ 162

Renewables has a sale-leaseback arrangement (as a seller-lessee) on a solar generation facility. The finance lease liability outstanding (including the current portion thereof) was $47 million and $50 million at December 31, 2020 and December 31, 2019, respectively. In 2013, Renewables sold the generation facility to a consortium of buyers (referred to as "Trusts") and simultaneously entered into an agreement with the Trusts for the right to use the facility for up to 15 years with an early buyout option in year 10. The gain on the sale of the generation facility was deferred and is being amortized to depreciation expense over the 25-year life of the facility.

Most of our leases do not provide an implicit rate in the lease; thus we use our incremental borrowing rate based on the information available at the commencement date in determining the present value of lease payments.

Note 14. Commitments and Contingent Liabilities

We are party to various legal disputes arising as part of our normal business activities. We assess our exposure to these matters and record estimated loss contingencies when a loss is likely and can be reasonably estimated. We do not provide for accrual of legal costs expected to be incurred in connection with a loss contingency.

Transmission - ROE Complaint – CMP and UI

On September 30, 2011, the Massachusetts Attorney General, DPU, PURA, New Hampshire Public Utilities Commission, Rhode Island Division of Public Utilities and Carriers, Vermont Department of Public Service, numerous New England consumer advocate agencies and transmission tariff customers collectively filed a joint complaint with the FERC, pursuant to sections 206 and 306 of the Federal Power Act, against several New England Transmission Owners (NETOs) claiming that the approved base ROE of 11.14% used by NETOs in calculating formula rates for transmission service under the ISO-New England Open Access Transmission Tariff (OATT) was not just and reasonable and seeking a reduction of the base ROE with refunds to customers for the 15-month refund periods beginning October 1, 2011 (Complaint I), December 27, 2012 (Complaint II), July 31, 2014 (Complaint III) and April 29, 2016 (Complaint IV).

On October 16, 2014, the FERC issued its decision in Complaint I setting the base ROE at 10.57% and a maximum total ROE of 11.74% (base plus incentive ROEs) for the October 2011 – December 2012 period as well as prospectively from October 16, 2014. On March 3, 2015, the FERC upheld its decision and further clarified that the 11.74% ROE cap will be applied on a

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project specific basis and not on a transmission owner's total average transmission return. The complaints were consolidated and the administrative law judge issued an initial decision on March 22, 2016. The initial decision determined that, (1) for the fifteen month refund period in Complaint II, the base ROE should be 9.59% and that the ROE Cap (base ROE plus incentive ROEs) should be 10.42% and (2) for the fifteen month refund period in Complaint III and prospectively, the base ROE should be 10.90% and that the ROE Cap should be 12.19%. The initial decision in Complaints II and III is the administrative law judge's recommendation to the FERC Commissioners.

CMP and UI reserved for refunds for Complaints I, II and III consistent with the FERC's March 3, 2015 decision in Complaint I. Refunds were provided to customers for Complaint I. The CMP and UI total reserve associated with Complaints II and III is $26 million and $7 million, respectively, as of December 31, 2020, which has not changed since December 31, 2019, except for the accrual of carrying costs. If adopted as final by the FERC, the impact of the initial decision by the FERC administrative law judge would be an additional aggregate reserve for Complaints II and III of $17 million, which is based upon currently available information for these proceedings.

Following various intermediate hearings, orders and appellate decisions, on October 16, 2018, the FERC issued an order directing briefs and proposing a new methodology to calculate the NETOs ROE that is contained in NETOs' transmission formula rate on file at the FERC (the October 2018 Order).

Pursuant to the October 2018 Order, the NETOs filed initial briefs on the proposed methodology in all four Complaints on January 11, 2019 and replied to the initial briefs on March 8, 2019.

On November 21, 2019, the FERC issued rulings on two complaints challenging the base return on equity for Midcontinent Independent System Operator, or MISO transmission owners. These rulings established a new zone of reasonableness based on equal weighting of the DCF and capital-asset pricing model for establishing the base return on equity. This resulted in a base return on equity of 9.88% as the midpoint of the zone of reasonableness. Various parties have requested rehearing of this decision, which was granted. On May 21, 2020, FERC issued a ruling, which, among other things, adjusted the methodology to determine the MISO transmission owners' ROE, resulting in an increase in ROE from 9.88% to 10.02% by utilizing the risk premium model in addition to the DCF model and capital-asset pricing model under both prongs of Section 206 of the FPA, and calculated the zone of reasonableness into equal thirds rather than employing the quartile approach. We cannot predict the outcome of these proceedings, including the potential impact the MISO transmission owners' ROE proceeding may have in establishing a precedent for our pending four Complaints.

California Energy Crisis Litigation

Two California agencies brought a complaint in 2001 against a long-term PPA entered into by Renewables, as seller, to the California Department of Water Resources, as purchaser, alleging that the terms and conditions of the PPA were unjust and unreasonable. The FERC dismissed Renewables from the proceedings; however, the Ninth Circuit Court of Appeals reversed the FERC's dismissal of Renewables from the proceeding.

Joining with two other parties, Renewables filed a petition for certiorari in the United States Supreme Court on May 3, 2007. In an order entered on June 27, 2008, the Supreme Court granted Renewables' petition for certiorari, vacated the appellate court's judgment, and remanded the case to the appellate court for further consideration in light of the Supreme Court's decision in a similar case. In light of the Supreme Court's order, on December 4, 2008, the Ninth Circuit Court of Appeals vacated its prior opinion and remanded the complaint proceedings to the FERC for further proceedings consistent with the Supreme Court's rulings. In 2014, the FERC assigned an administrative law judge to conduct evidentiary hearings. Following discovery, the FERC trial staff recommended that the complaint against Renewables be dismissed.

A hearing was held before a FERC administrative law judge in November and early December 2015. A preliminary proposed ruling by the administrative law judge was issued on April 12, 2016. The proposed ruling found no evidence that Renewables had engaged in any unlawful market conduct that would justify finding the Renewables PPAs unjust and unreasonable. However, the proposed ruling did conclude that the price of the PPAs imposed an excessive burden on customers in the amount of $259 million. Renewables position, as presented at hearings and agreed by the FERC trial staff, is that Renewables entered into bilateral power purchase contracts appropriately and complied with all applicable legal standards and requirements. The parties have submitted briefs on exceptions to the administrative law judge's proposed ruling to the FERC. There is no specific timetable for the FERC's ruling. In April 2018, Renewables requested, based on the nearly two years of delay from the preliminary proposed ruling and the Supreme Court precedent, that the FERC issue a final decision expeditiously. We cannot predict the outcome of this proceeding.

Gas Storage Indemnification Claims

On May 1, 2018, ARHI closed a transaction to sell our gas storage business to Amphora Gas Storage USA, LLC (Amphora). On October 30, 2019, ARHI received notice of a claim for indemnification from Amphora under the purchase agreement with

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respect to such sale in the amount of approximately $20 million related to, among other things, certain alleged violations of occupational, health and safety requirements, the condition and sufficiency of assets and a third party intellectual property infringement claim. In December 2020, ARHI and Amphora reached a settlement agreement to resolve the claim with ARHI paying Amphora $5 million and Amphora releasing ARHI and AVANGRID of all claims related to the 2018 sale of our gas business.

New York State Public Service Commission Show Cause Order Regarding Greenlight Pole Attachments

On November 20, 2020, the NYPSC issued an Order Instituting Proceeding and to Show Cause (the Show Cause Order) regarding alleged violations of the NYPSC's 2004 Order Adopting Policy Statement on Pole Attachments, dated August 6, 2004 (the 2004 Pole Order) by RG&E, Greenlight Networks, Inc, (Greenlight), and Frontier Communications (Frontier). The alleged violations detailed in the Show Cause Order arise from Greenlight's installation of unauthorized and substandard communications attachments throughout RG&E's and Frontier's service territories. The Show Cause Order directs RG&E to show cause within 30 days why the NYPSC should not pursue civil and/or administrative penalties or initiate a prudency proceeding or civil action for injunctive relief for more than 11,000 alleged violations of the 2004 Pole Order. Under NY Public Service Law Section 25-a, each alleged violation carries a potential penalty of up to $100,000 where it can be shown that the violator failed to "reasonably comply" with a statute or NYPSC order.

RG&E, Greenlight and Frontier filed respective notices to initiate settlement negotiations with respect to the alleged violations and to extend the deadline for filing a response to the Show Cause Order. The NYPSC granted the extension requests initiating settlement discussions. We cannot predict the outcome of this matter.

Power, Gas and Other Arrangements

Power and Gas Supply Arrangements – Networks

NYSEG and RG&E are the providers of last resort for customers. As a result, the companies buy physical energy and capacity from the NYISO. In accordance with the NYPSC's February 26, 2008 Order, NYSEG and RG&E are required to hedge on behalf of non-demand billed customers. The physical electric capacity purchases we make from parties other than the NYISO are to comply with the hedge requirement for electric capacity. The companies enter into financial swaps to comply with the hedge requirement for physical electric energy purchases. Other purchases, from some Independent Power Producers (IPPs) and the New York Power Authority, are from contracts entered into many years ago when the companies made purchases under contract as part of their supply portfolio to meet their load requirement. More recent IPP purchases are required to comply with the companies' Public Utility Regulatory Policies Act (PURPA) purchase obligation.

NYSEG, RG&E, SCG, CNG and BGC (collectively, the Regulated Gas Companies) satisfy their natural gas supply requirements through purchases from various producers and suppliers, withdrawals from natural gas storage, capacity contracts and winter peaking supplies and resources. The Regulated Gas Companies operate diverse portfolios of gas supply, firm transportation capacity, gas storage and peaking resources. Actual gas costs incurred by each of the Regulated Gas Companies are passed through to customers through state regulated purchased gas adjustment mechanisms, subject to regulatory review.

The Regulated Gas Companies purchase the majority of their natural gas supply at market prices under seasonal, monthly or mid-term supply contracts and the remainder is acquired on the spot market. The Regulated Gas Companies diversify their sources of supply by amount purchased and location and primarily acquire gas at various locations in the U.S. Gulf of Mexico region, in the Appalachia region and in Canada.

The Regulated Gas Companies acquire firm transportation capacity on interstate pipelines under long-term contracts and utilize that capacity to transport both natural gas supply purchased and natural gas withdrawn from storage to the local distribution system.

The Regulated Gas Companies acquire firm underground natural gas storage capacity using long-term contracts and fill the storage facilities with gas in the summer months for subsequent withdrawal in the winter months.

Winter peaking resources are primarily attached to the local distribution systems and are either owned or are contracted for by the Regulated Gas Companies, each of which is a Local Distribution Company. Each Regulated Gas Company owns or has rights to the natural gas stored in an LNG facility directly attached to its distribution system.

Other arrangements include contractual obligations for property, plant and equipment, material and services on order but not yet delivered at December 31, 2020.

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Power, Gas and Other Arrangements – Renewables

Gas purchase commitments consist of firm transport capacity to fuel the Cogen and Peaking gas generators. Power purchase commitments include the following: (i) a 55 MW Biomass PPA for 12 years (one year remaining) with a guaranteed output of 34.4 MW flat and a schedule of fixed price rates depending on season and time of day, (ii) long-term firm transmission agreements with fixed monthly capacity payments that allow the delivery of electricity from wind and thermal generation sources to various customers and (iii) a 95.6 MW (average) three-year purchase of hydro capacity and energy to provide balancing services to the NW wind assets that has monthly fixed payments (beginning in 2019 and expiring in 2021) and (iv) a five-year purchase of 52 MW (average) hydro capacity and energy to provide balancing services to the NW wind assets that has monthly fixed payments (beginning in 2019 and expiring in 2023). Power sales commitments include: (i) a 55 MW Biomass off-take agreement for 12 years (one year remaining) with guaranteed annual production of 34.4 MW flat with a schedule of fixed price rates depending on season and time of day, (ii) a retail renewable power sales agreement for 12 MW (average) expiring in 2026, (iii) fixed price, fixed volume power sales off the Klamath Cogen facility, (iv) a seasonal tolling arrangement off the Klamath peaking facility with fixed capacity charges through 2024; (v) fixed price, fixed volume renewable energy credit sales off merchant wind facilities, (vi) sales of merchant wind farm capacity to various ISOs and sales of ancillary services (e.g., regulation and frequency response, generator imbalance, etc.) to third parties from Renewables' Balancing Authority.

In June 2020, Renewables entered into a Payment In Lieu of Taxes (PILOT) agreement related to two of its projects with Torrance County, New Mexico. The agreement requires PILOT payments to Torrance County through 2049. No payments are due until 2021.

Renewables also has easement contracts which are included in the table below.

Forward purchases and sales commitments under power, gas and other arrangements as of December 31, 2020 consisted of:

Year	Purchases	Sales
	(Millions)	
2021	$ 889	$ 178
2022	135	103
2023	74	68
2024	48	41
2025	45	32
Thereafter	934	54
Totals	**$ 2,125**	**$ 476**

Guarantee Commitments to Third Parties

As of December 31, 2020, we had approximately $678 million of standby letters of credit, surety bonds, guarantees and indemnifications outstanding, including approximately $88 million related to Vineyard Wind. These instruments provide financial assurance to the business and trading partners of AVANGRID and its subsidiaries in their normal course of business. The instruments only represent liabilities if AVANGRID or its subsidiaries fail to deliver on contractual obligations. We therefore believe it is unlikely that any material liabilities associated with these instruments will be incurred and, accordingly, as of December 31, 2020, neither we nor our subsidiaries have any liabilities recorded for these instruments.

Note 15. Environmental Liabilities

Environmental laws, regulations and compliance programs may occasionally require changes in our operations and facilities and may increase the cost of electric and natural gas service. We do not provide for accruals of legal costs expected to be incurred in connection with loss contingencies.

Waste sites

The Environmental Protection Agency and various state environmental agencies, as appropriate, have notified us that we are among the potentially responsible parties that may be liable for costs incurred to remediate certain hazardous substances at twenty-six waste sites, which do not include sites where gas was manufactured in the past. Sixteen of the twenty-six sites are included in the New York State Registry of Inactive Hazardous Waste Disposal Sites; five sites are included in Maine's Uncontrolled Sites Program; one site is included in the Brownfield Cleanup Program and one site is included on the Massachusetts Non-Priority Confirmed Disposal Site list. The remaining sites are not included in any registry list. Finally, six of the twenty-six sites are also included on the National Priorities list. Any liability may be joint and several for certain sites.

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We have recorded an estimated liability of $6 million related to twelve of the twenty-six sites. We have paid remediation costs related to the remaining fourteen sites and do not expect to incur additional liabilities. Additionally, we have recorded an estimated liability of $9 million related to another twelve sites where we believe it is probable that we will incur remediation and/or monitoring costs, although we have not been notified that we are among the potentially responsible parties or that we are regulated under State Resource Conservation and Recovery Act programs. It is possible the ultimate cost to remediate these sites may be significantly more than the accrued amount. Our estimate for costs to remediate these sites ranges from $13 million to $21 million as of December 31, 2020. Factors affecting the estimated remediation amount include the remedial action plan selected, the extent of site contamination and the allocation of the clean-up costs.

Manufactured Gas Plants

We have a program to investigate and perform necessary remediation at our fifty-three sites where gas was manufactured in the past (Manufactured Gas Plants, or MGPs). Six sites are included in the New York State Registry; three sites are included in the New York State Department of Environmental Conservation Multi-Site Order on Consent; three sites are part of Maine's Voluntary Response Action Program with two such sites part of Maine's Uncontrolled Sites Program and one site is pending application into the Brownfield Cleanup Program. The remaining sites are not included in any registry list. We have entered into consent orders with various environmental agencies to investigate and, where necessary, remediate forty-one of the fifty-three sites.

Our estimate for all costs related to investigation and remediation of the fifty-three sites ranges from $177 million to $294 million as of December 31, 2020. Our estimate could change materially based on facts and circumstances derived from site investigations, changes in required remedial actions, changes in technology relating to remedial alternatives and changes to current laws and regulations.

Certain of our Connecticut and Massachusetts regulated gas companies own or have previously owned properties where MGPs had historically operated. MGP operations have led to contamination of soil and groundwater with petroleum hydrocarbons, benzene and metals, among other things, at these properties, the regulation and cleanup of which is regulated by the federal Resource Conservation and Recovery Act as well as other federal and state statutes and regulations. Each of the companies has or had an ownership interest in one or more such properties contaminated as a result of MGP-related activities. Under the existing regulations, the cleanup of such sites requires state and at times, federal, regulators' involvement and approval before cleanup can commence. In certain cases, such contamination has been evaluated, characterized and remediated. In other cases, the sites have been evaluated and characterized, but not yet remediated. Finally, at some of these sites, the scope of the contamination has not yet been fully characterized; no liability was recorded related to these sites as of December 31, 2020 and no amount of loss, if any, can be reasonably estimated at this time. In the past, the companies have received approval for the recovery of MGP-related remediation expenses from customers through rates and will seek recovery in rates for ongoing MGP-related remediation expenses for all of their MGP sites.

As of December 31, 2020 and 2019, the liability associated with our MGP sites in Connecticut was $96 million and $97 million, respectively, the remediation costs of which could be significant and will be subject to a review by PURA as to whether these costs are recoverable in rates.

Our total recorded liability to investigate and perform remediation at all known inactive MGP sites discussed above and other sites was $300 million and $349 million as of December 31, 2020 and 2019, respectively. We recorded a corresponding regulatory asset, net of insurance recoveries and the amount collected from FirstEnergy, as described below, because we expect to recover the net costs in rates. Our environmental liability accruals are recorded on an undiscounted basis and are expected to be paid through the year 2056.

FirstEnergy

NYSEG sued FirstEnergy under the Comprehensive Environmental Response, Compensation, and Liability Act to recover environmental cleanup costs at sixteen former MGP sites, which are included in the discussion above. In July 2011, the District Court issued a decision and order in NYSEG's favor, requiring FirstEnergy to pay NYSEG approximately $60 million for past and future clean-up costs at the sixteen sites in dispute. On September 9, 2011, FirstEnergy paid NYSEG $30 million, representing their share of past costs of $27 million and pre-judgment interest of $3 million.

FirstEnergy appealed the decision to the Second Circuit Court of Appeals. On September 11, 2014, the Second Circuit Court of Appeals affirmed the District Court's decision in NYSEG's favor, but modified the decision for nine sites, reducing NYSEG's damages for incurred costs from $27 million to $22 million, excluding interest, and reducing FirstEnergy's allocable share of future costs at these sites. NYSEG refunded FirstEnergy the excess $5 million in November 2014.

FirstEnergy remains liable for a substantial share of clean up expenses at nine MGP sites. Based on current projections, FirstEnergy's share is estimated at approximately $19 million. This amount is being treated as a contingent asset and has not

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been recorded as either a receivable or a decrease to the environmental provision. Any recovery will be flowed through to NYSEG customers.

English Station

In January 2012, Evergreen Power, LLC (Evergreen Power) and Asnat Realty LLC (Asnat), then owners of a former generation site on the Mill River in New Haven (English Station) that UI sold to Quinnipiac Energy in 2000, filed a lawsuit in federal district court in Connecticut related to environmental remediation at the English Station site. This proceeding was stayed in 2014 pending resolutions of other proceedings before the DEEP concerning the English Station site. In December 2016, the court administratively closed the file without prejudice to reopen upon the filing of a motion to reopen by any party.

In December 2013, Evergreen Power and Asnat filed a subsequent lawsuit related to the English Station site. On April 16, 2018, the plaintiffs filed a revised complaint alleging fraud and unjust enrichment against UIL and UI and adding former UIL officers as named defendants alleging fraud. On February 21, 2019, the court granted our Motion to Strike with respect to all counts except for the count against UI for unjust enrichment. The counts stricken include all counts against the individual defendants as well as against UIL. The plaintiffs have appealed the court's decision to strike and oral arguments have taken place. We cannot predict the outcome of this matter.

On April 8, 2013, DEEP issued an administrative order addressed to UI, Evergreen Power, Asnat and others, ordering the parties to take certain actions related to investigating and remediating the English Station site. This proceeding was stayed while DEEP and UI continue to work through the remediation process pursuant to the consent order described below. Status reports are periodically filed with DEEP.

On August 4, 2016, DEEP issued a partial consent order (the consent order), that, subject to its terms and conditions, requires UI to investigate and remediate certain environmental conditions within the perimeter of the English Station site. Under the consent order, to the extent that the cost of this investigation and remediation is less than $30 million, UI will remit to the State of Connecticut the difference between such cost and $30 million to be used for a public purpose as determined in the discretion of the Governor of the State of Connecticut, the Attorney General of the State of Connecticut and the Commissioner of DEEP. UI is obligated to comply with the terms of the consent order even if the cost of such compliance exceeds $30 million. Under the terms of the consent order, the state will discuss options with UI on recovering or funding any cost above $30 million such as through public funding or recovery from third parties; however, it is not bound to agree to or support any means of recovery or funding. UI has initiated its process to investigate and remediate the environmental conditions within the perimeter of the English Station site pursuant to the consent order.

As of December 31, 2020 and 2019, the amount reserved for this matter was $22 million and $16 million, respectively. We cannot predict the outcome of this matter**.**

On April 24, 2020, ACV Environmental Services Company (ACV) filed a lawsuit in Connecticut Superior Court against UI arising out of a contract dispute for services rendered by ACV in the demolition of the Station B at the English Station site. The complaint seeks damages in the amount of $5 million on claims of breach of contract, breach of the covenant of good faith and fair dealing, quantum merit, and unjust enrichment. The claims arise from the alleged non-payment of certain change order requests. The parties have agreed to attempt to mediate this matter during the first half of 2021. We cannot predict the outcome of this matter.

Note 16. Income Taxes

Upon enactment of the Tax Act, the Company remeasured its existing deferred income tax balances as of December 31, 2017 to reflect the decrease in the corporate income tax rate from 35% to 21%, which resulted in a material decrease to its net deferred income tax liability balances based on reasonable estimates that could be determined at that time. The Company's non-regulatory businesses recorded a corresponding net increase or decrease to income tax expense, while the utility operations recorded corresponding regulatory liabilities or assets to the extent that such amounts are probable of settlement or recovery through customer rates. The amount and timing of potential settlements of the established net regulatory liabilities are determined by the regulated utilities' respective rate regulators and IRS Normalization rules. As of December 31, 2018, the Company has completed the measurement and accounting of certain effects of the Tax Act which have been reflected in the consolidated financial statements.

On December 20, 2019, the Setting Every Community up for Retirement Enhancement Act of 2019, was signed into law that extended the PTC and ITC options for wind facilities to 60% of the full credit for facilities commencing construction in 2020, leaving in place phased down credits for projects commencing in years prior to 2020.

The 2020 Consolidated Appropriations Act provides extensions to renewable income tax incentives. Onshore and offshore wind projects may now claim a 60% PTC for projects commencing construction in 2020 and 2021. In addition, offshore wind may

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now elect to claim a 30% ITC for projects commencing construction through 2025. Onshore wind can claim an 18% ITC for projects commencing construction in 2020 or 2021, with no ITC thereafter.

Solar projects commencing construction before 2020 may claim a 30% ITC. Solar projects that commence construction from 2020-2022 may claim a 26% ITC, projects commencing construction in 2023 may claim a 22% ITC and projects commencing thereafter may claim a 10% ITC. The ITC statutes require solar projects be completed by the end of 2025 in order to claim the applicable ITCs.

The Internal Revenue Service (IRS) provided continuity safe harbor guidance that requires renewable projects to be completed within four years of the year construction commences. Any projects that do not meet this requirement will fall outside of the safe harbor and be subject to IRS scrutiny with regard to the date construction commenced. In 2020, the IRS allowed projects beginning construction in 2016 or 2017 an additional year (five years total) to complete construction. In late December 2020, the IRS issued a notice giving onshore wind projects on federal lands, with transmission permit requirements, and offshore wind projects 10 years to complete construction.

During 2020, we received orders to begin returning to customer both protected and unprotected excess ADIT from the 2017 Tax Act. Such amounts are subject to terms of the various state regulators in which we do business while meeting the requirements of normalization for both ARAM and RSG methodologies. We have accounted for those jurisdictions which have issued orders to unit operations. However, not all unit operations have been issued orders as of 2020.

Current and deferred taxes charged to expense for the years ended December 31, 2020, 2019 and 2018 consisted of:

Years Ended December 31,	2020	2019	2018
(Millions)			
Current			
Federal	$ 3	$ 11	$ 17
State	9	(6)	2
Current taxes charged to expense	**12**	**5**	**19**
Deferred			
Federal	67	164	231
State	38	58	(13)
Deferred taxes charged to expense	**105**	**222**	**218**
Production tax credits	(87)	(57)	(68)
Investment tax credits	(1)	(1)	(2)
Total Income Tax Expense	**$ 29**	**$ 169**	**$ 167**

The differences between tax expense per the statements of income and tax expense at the 21% statutory federal tax rate for the years ended December 31, 2020, 2019 and 2018 consisted of:

Years Ended December 31,	2020	2019	2018
(Millions)			
Tax expense at federal statutory rate	$ 119	$ 170	$ 159
Depreciation and amortization not normalized	(13)	(23)	(5)
Investment tax credit amortization	(1)	(1)	(2)
Tax return related adjustments	1	(2)	(6)
Production tax credits	(87)	(57)	(68)
Tax equity financing arrangements	1	8	—
Federal tax rate impact on held for sale classification	—	—	21
State tax expense (benefit), net of federal benefit	37	41	(9)
Excess ADIT amortization	(42)	—	—
Tax Act - remeasurement	—	—	46
Other, net	14	33	31
Total Income Tax Expense	**$ 29**	**$ 169**	**$ 167**

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Deferred tax assets and liabilities as of December 31, 2020 and 2019 consisted of:

As of December 31, (Millions)	2020	2019
Deferred Income Tax Liabilities (Assets)		
Property related	$ 4,147	$ 4,007
Unfunded future income taxes	100	101
Federal and state tax credits	(731)	(632)
Federal and state NOL's	(1,047)	(981)
Joint ventures/partnerships	167	136
Nontaxable grant revenue	(311)	(335)
Pension and other post-retirement benefits	22	43
Tax Act - tax on regulatory remeasurement	(382)	(409)
Valuation allowance	81	48
Other	(127)	(141)
Deferred Income Tax Liabilities	**$ 1,919**	**$ 1,837**
Deferred tax assets	$ 2,598	$ 2,498
Deferred tax liabilities	4,517	4,335
Net Accumulated Deferred Income Tax Liabilities	**$ 1,919**	**$ 1,837**

As of December 31, 2020, we had gross federal tax net operating losses of $3.8 billion, federal PTCs and ITCs, federal R&D tax credits and other federal credits of $695 million, state tax effected net operating losses of $324 million in several jurisdictions and miscellaneous state tax credits of $142 million available to carry forward and reduce future income tax liabilities. For federal purposes, we recognized a valuation allowance of $16 million, and for state purposes, we recognized a valuation allowance of $65 million. The federal net operating losses begin to expire in 2028, while the federal tax credits begin to expire in 2023. The more significant state net operating losses begin to expire in 2021.

Valuation allowances are recorded to reduce deferred tax assets when it is more likely than not that all or a portion of a tax benefit will not be realized. The valuation allowance for deferred tax assets as of December 31, 2020 and 2019 was $81 million and $48 million, respectively. Valuation allowances have been established on various federal tax credits, state net operating losses and state tax credit carryforwards. The Company has recorded a federal valuation allowance on its federal tax credit carryforwards of $16 million and has recorded a state valuation allowance on its state net operating losses and state tax credit carryforwards of $65 million. The $33 million increase in valuation allowance from 2019 to 2020 includes an increase of $12 million for additional valuation allowance on Federal tax credit carryforwards and an increase of $21 million on state net operating losses and state tax credits.

The reconciliation of unrecognized income tax benefits for the years ended December 31, 2020, 2019 and 2018 consisted of:

Years ended December 31, (Millions)	2020	2019	2018
Beginning Balance	$ 148	$ 153	$ 45
Increases for tax positions related to prior years	11	14	111
Increases for tax positions related to current year	—	16	—
Decreases for tax positions related to prior years	(32)	(18)	(3)
Reduction for tax position related to settlements with taxing authorities	—	(17)	—
Ending Balance	**$ 127**	**$ 148**	**$ 153**

Unrecognized income tax benefits represent income tax positions taken on income tax returns but not yet recognized in the consolidated financial statements. The accounting guidance for uncertainty in income taxes provides that the financial effects of a tax position shall initially be recognized when it is more likely than not based on the technical merits the position will be sustained upon examination, assuming the position will be audited and the taxing authority has full knowledge of all relevant information.

Accruals for interest and penalties on tax reserves were immaterial for the years ended December 31, 2020, 2019 and 2018. If recognized, $107 million of the total gross unrecognized tax benefits would affect the effective tax rate.

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It is estimated that no unrecognized tax benefits are anticipated to result in a net increase or decrease within twelve months of December 31, 2020.

AVANGRID and its subsidiaries, without ARHI, have been audited for the federal tax years 1998 through 2009. The results of these audits, net of reserves already provided, were immaterial. Tax years 2010 and forward are open for potential federal adjustments. All New York state returns, which were filed without ARHI, are closed through 2011 and Maine state returns are closed through 2015.

All federal tax returns filed by ARHI from the periods ended March 31, 2004, to December 31, 2009, are closed for adjustment. All New York combined state returns are closed for adjustment through 2011. Generally, the adjustment period for the individual states we filed in is at least as long as the federal period.

As of December 31, 2020, UIL is subject to audit of its federal tax return for years 2014 through its short period 2015. UIL's short period ending in 2015 is open and subject to Connecticut audit.

Note 17. Post-retirement and Similar Obligations

AVANGRID and its subsidiaries sponsor a number of retirement benefit plans. The plans include qualified defined benefit pension plans, supplemental non-qualified pension plans, defined contribution plans and other postretirement benefit plans for eligible employees and retirees. Eligibility and benefits vary depending on each plan's design. For example, certain benefits are based on years of service and final average compensation while others may use a cash balance formula that calculates benefits using a percentage of annual compensation.

Qualified Retirement Benefit Plans

As of December 31, 2020 and 2019, our obligations and funded status consisted of:

	Pension Benefits		Postretirement Benefits	
As of December 31,	**2020**	**2019**	**2020**	**2019**
(Millions)				
Change in benefit obligation				
Benefit Obligation as of January 1,	**$ 3,669**	**$ 3,374**	**$ 439**	**$ 425**
Service cost	47	41	3	3
Interest cost	107	130	13	16
Plan amendments	7	(2)	—	—
Actuarial loss	236	347	29	26
Curtailments	(21)	—	—	—
Benefits paid	(226)	(221)	(32)	(31)
Benefit Obligation as of December 31,	**3,819**	**3,669**	**452**	**439**
Change in plan assets				
Fair Value of Plan Assets as of January 1,	**2,848**	**2,544**	**155**	**148**
Actual return on plan assets	388	460	26	22
Employer contributions	84	65	18	16
Curtailments	(2)	—	—	—
Benefits paid	(226)	(221)	(32)	(31)
Fair Value of Plan Assets as of December 31,	**3,092**	**2,848**	**167**	**155**
Funded Status as of December 31,	**$ (727)**	**$ (821)**	**$ (285)**	**$ (284)**

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During 2020, the pension benefit obligation had an actuarial loss of $236 million, primarily due to a $276 million loss from decreases in discount rates. The only significant plan change in 2020 was an agreement to freeze the UI union pension plan. There were no significant gains or losses relating to the postretirement benefit obligations.

During 2019, the pension benefit obligation had an actuarial loss of $347 million, primarily due to a $384 million loss from decreases in discount rates. There were no significant plan design changes in 2019. There were no significant gains or losses relating to the postretirement benefit obligations.

As of December 31, 2020 and 2019, funded status amounts recognized on our consolidated balance sheets consisted of:

	Pension Benefits		Postretirement Benefits	
As of December 31,	**2020**	**2019**	**2020**	**2019**
(Millions)				
Current liabilities	$ —	$ —	$ (5)	$ (5)
Non-current liabilities	(727)	(821)	(280)	(279)
Total	**$ (727)**	**$ (821)**	**$ (285)**	**$ (284)**

We have determined that Networks' regulated operating companies are allowed to defer as regulatory assets or regulatory liabilities items that would have otherwise been recorded in accumulated OCI pursuant to the accounting requirements concerning defined benefit pension and other postretirement plans.

Amounts recognized as a component of regulatory assets or regulatory liabilities for Networks for the years ended December 31, 2020 and 2019 consisted of:

	Pension Benefits		Postretirement Benefits	
Years Ended December 31,	**2020**	**2019**	**2020**	**2019**
(Millions)				
Net loss	$ 610	$ 706	$ 14	$ 13
Prior service cost (credit)	$ 10	$ 4	$ (8)	$ (21)

Amounts recognized in OCI for ARHI for the years ended December 31, 2020 and 2019, consisted of:

	Pension Benefits		Postretirement Benefits	
Years Ended December 31,	**2020**	**2019**	**2020**	**2019**
(Millions)				
Net loss (gain)	$ 21	$ 23	$ (7)	$ (8)

Our accumulated benefit obligation (ABO) for all qualified defined benefit pension plans was $3,629 million and $3,451 million as of December 31, 2020 and 2019, respectively.

As of December 31, 2020 and 2019, the projected benefit obligation (PBO) and the ABO exceeded the fair value of pension plan assets for all of our qualified plans, and the aggregate PBO and ABO and the fair value of plan assets for our underfunded qualified plans consisted of:

	PBO in excess of plan assets	
As of December 31,	**2020**	**2019**
(Millions)		
Projected benefit obligation	$ 3,819	$ 3,669
Fair value of plan assets	$ 3,092	$ 2,848

	ABO in excess of plan assets	
As of December 31,	**2020**	**2019**
(Millions)		
Accumulated benefit obligation	$ 3,629	$ 3,451
Fair value of plan assets	$ 3,092	$ 2,848

As of December 31, 2020 and 2019, the accumulated postretirement benefits obligation for all qualified plans exceeded the fair value of plan assets.

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Components of Networks' net periodic benefit cost and other changes in plan assets and benefit obligations recognized in income and regulatory assets and liabilities for the years ended December 31, 2020, 2019 and 2018 consisted of:

	Pension Benefits			Postretirement Benefits		
For the years ended December 31,	**2020**	**2019**	**2018**	**2020**	**2019**	**2018**
(Millions)						
Net Periodic Benefit Cost:						
Service cost	$ 46	$ 41	$ 44	$ 3	$ 3	$ 4
Interest cost	106	128	126	13	16	18
Expected return on plan assets	(198)	(190)	(199)	(8)	(7)	(8)
Amortization of prior service cost (benefit)	1	(1)	1	(9)	(10)	(9)
Amortization of net loss	124	113	149	2	1	6
Net Periodic Benefit Cost	**79**	**91**	**121**	**1**	**3**	**11**
Other changes in plan assets and benefit obligations recognized in regulatory assets and regulatory liabilities:						
Curtailments	(18)	—	—	—	—	—
Net loss (gain)	46	80	175	11	13	(37)
Amortization of net loss	(124)	(113)	(149)	(2)	(1)	(6)
Current year prior service cost (credit)	7	(2)	—	—	—	(3)
Amortization of prior service (cost) benefit	(1)	1	(1)	9	10	9
Total Other Changes	**(90)**	**(34)**	**25**	**18**	**22**	**(37)**
Total Recognized	**$ (11)**	**$ 57**	**$ 146**	**$ 19**	**$ 25**	**$ (26)**

Components of ARHI's net periodic benefit cost and other changes in plan assets and benefit obligations recognized in income and OCI for the years ended December 31, 2020, 2019 and 2018 consisted of:

	Pension Benefits			Postretirement Benefits		
For the years ended December 31,	**2020**	**2019**	**2018**	**2020**	**2019**	**2018**
(Millions)						
Net Periodic Benefit Cost:						
Service cost	$ 1	$ 1	$ —	$ —	$ —	$ —
Interest cost	1	2	2	—	—	1
Expected return on plan assets	(2)	(2)	(2)	—	—	—
Amortization of net loss (gain)	2	1	1	(1)	(1)	—
Settlement charge	1	—	1	—	—	—
Net Periodic Benefit Cost	**3**	**2**	**2**	**(1)**	**(1)**	**1**
Other Changes in plan assets and benefit obligations recognized in OCI:						
Net loss (gain)	1	—	1	—	—	(3)
Amortization of net (loss) gain	(2)	(1)	(1)	1	1	—
Amortization of prior service cost	—	—	—	—	(2)	—
Total Other Changes	**(1)**	**(1)**	**—**	**1**	**(1)**	**(3)**
Total Recognized	**$ 2**	**$ 1**	**$ 2**	**$ —**	**$ (2)**	**$ (2)**

The net periodic benefit cost for postretirement benefits represents the amount expensed for providing health care benefits to retirees and their eligible dependents. We include the service cost component in other operating expenses net of capitalized portion and include the components of net periodic benefit cost other than the service cost component in other expense.

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The weighted-average assumptions used to determine our benefit obligations as of December 31, 2020 and 2019 consisted of:

	Pension Benefits		Postretirement Benefits	
As of December 31,	**2020**	**2019**	**2020**	**2019**
Discount rate	2.34 %	3.01 %	2.19 %	2.99 %
Rate of compensation increase	3.52 %	3.66 %	3.50 %	3.48 %
Interest crediting rate	2.87 %	2.87 %	N/A	N/A

The discount rate is the rate at which the benefit obligations could presently be effectively settled. We determined the discount rates by developing yield curves derived from a portfolio of high grade noncallable bonds with yields that closely match the duration of the expected cash flows of our benefit obligations.

The weighted-average assumptions used to determine our net periodic benefit cost for the years ended December 31, 2020, 2019 and 2018 consisted of:

	Pension Benefits			Postretirement Benefits		
Years Ended December 31,	**2020**	**2019**	**2018**	**2020**	**2019**	**2018**
Discount rate	3.01 %	3.98 %	3.68 %	2.99 %	3.97 %	3.67 %
Expected long-term return on plan assets	7.30 %	7.30 %	7.30 %	5.09 %	5.08 %	5.08 %
Rate of compensation increase	3.66 %	3.79 %	3.85 %	3.48 %	3.50 %	3.50 %

We developed our expected long-term rate of return on plan assets assumption based on a review of long-term historical returns for the major asset classes, the target asset allocations, and the effect of rebalancing of plan assets discussed below. Our analysis considered current capital market conditions and projected conditions. NYSEG, RG&E and UIL amortize unrecognized actuarial gains and losses over ten years from the time they are incurred as required by the NYPSC, PURA and DPU. Our other companies use the standard amortization methodology under which amounts in excess of ten-percent of the greater of the projected benefit obligation or market related value are amortized over the plan participants' average remaining service to retirement.

Assumed health care cost trend rates used to determine benefit obligations as of December 31, 2020 and 2019 consisted of:

As of December 31,	**2020**	**2019**
Health care cost trend rate assumed for next year	5.25%/7.25%	6.75%/7.75%
Rate to which cost trend rate is assumed to decline (ultimate trend rate)	4.50 %	4.50 %
Year that the rate reaches the ultimate trend rate	2029 / 2025	2029 / 2027

Contributions

We make annual contributions in accordance with our funding policy of not less than the minimum amounts as required by applicable regulations. We expect to contribute $75 million and $17 million, respectively, to our pension and other postretirement benefit plans during 2021.

Estimated Future Benefit Payments

Expected benefit payments as of December 31, 2020 consisted of:

(Millions)	**Pension Benefits**	**Postretirement Benefits**
2021	$ 211	$ 31
2022	$ 224	$ 30
2023	$ 217	$ 29
2024	$ 219	$ 29
2025	$ 474	$ 49
2026 - 2030	$ 765	$ 100

Non-Qualified Retirement Benefit Plans

We also sponsor various unfunded pension plans for certain current employees, former employees and former directors. The total liability for these plans, which is included in Other current and Other non-current liabilities on our consolidated balance sheets, was $59 million and $56 million at December 31, 2020 and 2019, respectively.

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Plan Assets

Our pension benefits plan assets are consolidated in one master trust. A consolidated trust provides for a uniform investment manager lineup and an efficient, cost effective means of allocating expenses and investment performance to each plan. Our primary investment objective is to ensure that current and future benefit obligations are adequately funded and with volatility commensurate with our risk tolerance. Preservation of capital and achievement of sufficient total return to fund accrued and future benefits obligations are of highest concern. Our primary means for achieving capital preservation is through diversification of the trusts' investments while avoiding significant concentrations of risk in any one area of the securities markets. Further diversification is achieved within each asset group through utilizing multiple asset managers and systematic allocation to various asset classes and providing broad exposure to different segments of the equity, fixed income and alternative investment markets.

The asset allocation policy is the most important consideration in achieving our objective of superior investment returns while minimizing risk. Networks and ARHI have established target asset allocation policies within allowable ranges for their pension benefits plan assets within broad categories of asset classes made up of Return-Seeking investments and Liability-Hedging investments. Networks currently has target allocations ranging from 35%-70% for Return-Seeking assets and 34%-65% for Liability-Hedging assets. ARHI currently has a target allocation of 60% for Return-Seeking assets and 40% for Liability-Hedging assets. Return-Seeking assets also include investments in real estate, global asset allocation strategies and hedge funds. Liability-Hedging investments generally consist of long-term corporate bonds, annuity contracts, long-term treasury STRIPS and opportunistic fixed income investments. Systematic rebalancing within the target ranges increases the probability that the annualized return on the investments will be enhanced, while realizing lower overall risk, should any asset categories drift outside their specified ranges.

The fair values of pension benefits plan assets, by asset category, as of December 31, 2020, consisted of:

As of December 31, 2020		Fair Value Measurements		
(Millions)	Total	Level 1	Level 2	Level 3
Asset Category				
Cash and cash equivalents	$ 120	$ —	$ 120	$ —
U.S. government securities	177	177	—	—
Common stocks	107	107	—	—
Registered investment companies	301	301	—	—
Corporate bonds	710	—	710	—
Preferred stocks	1	1	—	—
Common collective trusts	1,018	—	1,018	—
Other, principally annuity, fixed income	50	6	44	—
	$ 2,484	$ 592	$ 1,892	$ —
Other investments measured at net asset value	608			
Total	**$ 3,092**			

The fair values of pension benefits plan assets, by asset category, as of December 31, 2019, consisted of:

As of December 31, 2019		Fair Value Measurements		
(Millions)	Total	Level 1	Level 2	Level 3
Asset Category				
Cash and cash equivalents	$ 42	$ —	$ 42	$ —
U.S. government securities	87	87	—	—
Registered investment companies	464	464	—	—
Corporate bonds	458	—	458	—
Preferred stocks	1	1	—	—
Common collective trusts	572	—	572	—
Other, principally annuity, fixed income	84	—	84	—
	$ 1,708	$ 552	$ 1,156	$ —
Other investments measured at net asset value	1,140			
Total	**$ 2,848**			

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Valuation Techniques

We value our pension benefits plan assets as follows:

- Cash and cash equivalents – Level 1: at cost, plus accrued interest, which approximates fair value. Level 2: proprietary cash associated with other investments, based on yields currently available on comparable securities of issuers with similar credit ratings.
- U.S. government securities – at the closing price reported in the active market in which the security is traded.
- Common stocks – at the closing price reported in the active market in which the individual investment is traded.
- Corporate bonds – based on yields currently available on comparable securities of issuers with similar credit ratings.
- Preferred stocks – at the closing price reported in the active market in which the individual investment is traded.
- Common collective trusts/Registered investment companies – Level 1: at the closing price reported in the active market in which the individual investment is traded. Level 2 - the fair value is primarily derived from the quoted prices in active markets of the underlying securities. Because the fund shares are offered to a limited group of investors, they are not considered to be traded in an active market.
- Other investments, principally annuity and fixed income – based on yields currently available on comparable securities of issuers with similar credit ratings.
- Other investments measured at net asset value (NAV) – fund shares offered to a limited group of investors and alternative investments, such as private equity and real estate oriented investments, partnership/joint ventures and hedge funds are valued using the NAV as a practical expedient.

Our postretirement benefits plan assets are held with trustees in multiple voluntary employees' beneficiary association (VEBA) and 401(h) arrangements and are invested among and within various asset classes to achieve sufficient diversification in accordance with our risk tolerance. This is achieved for our postretirement benefits plan assets through the utilization of multiple institutional mutual and money market funds, providing exposure to different segments of the fixed income, equity and short-term cash markets. Approximately 37% of the postretirement benefits plan assets are invested in VEBA and 401(h) arrangements that are not subject to income taxes with the remainder being invested in arrangements subject to income taxes.

Networks has established a target asset allocation policy within allowable ranges for postretirement benefits plan assets of 45%-65% for equity securities, 25%-45% for fixed income and 5%-25% for all other investment types. ARHI's asset allocation policy has a target allocation of 45% in equity securities, 50% in fixed income and 5% for cash and cash equivalents investments. Equity investments are diversified across U.S. and non-U.S. stocks, investment styles, and market capitalization ranges. Fixed income investments are primarily invested in U.S. bonds and may also include some non-U.S. bonds. Other asset classes, including alternative investments, are used to enhance long-term returns while improving portfolio diversification. We primarily minimize the risk of large losses through diversification but also through monitoring and managing other aspects of risk through quarterly investment portfolio reviews. Systematic rebalancing within target ranges increases the probability that the annualized return on investments will be enhanced, while realizing lower overall risk, should any asset categories drift outside their specified ranges.

The fair values of other postretirement benefits plan assets, by asset category, as of December 31, 2020 consisted of:

As of December 31, 2020		**Fair Value Measurements**		
(Millions)	**Total**	**Level 1**	**Level 2**	**Level 3**
Asset Category				
Cash and cash equivalents	$ 6	$ —	$ 6	$ —
U.S. government securities	1	1	—	—
Registered investment companies	141	141	—	—
Corporate bonds	3	—	3	—
Common collective trusts	4	—	4	—
Other, principally annuity, fixed income	9	—	9	—
	$ 164	$ 142	$ 22	$ —
Other investments measured at net asset value	3			
Total	**$ 167**			

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The fair values of other postretirement benefits plan assets, by asset category, as of December 31, 2019 consisted of:

As of December 31, 2019		Fair Value Measurements		
(Millions)	Total	Level 1	Level 2	Level 3
Asset Category				
Cash and cash equivalents	$ 31	$ —	$ 31	$ —
Common stocks	16	16	—	—
Registered investment companies	98	98	—	—
Corporate bonds	2	—	2	—
Other, principally annuity, fixed income	8	—	8	—
Total	**$ 155**	**$ 114**	**$ 41**	**$ —**

Valuation Techniques

We value our postretirement benefits plan assets as follows:

- Cash and cash equivalents – Level 1: at cost, plus accrued interest, which approximates fair value. Level 2: proprietary cash associated with other investments, based on yields currently available on comparable securities of issuers with similar credit ratings.
- U.S. government securities – at the closing price reported in the active market in which the security is traded.
- Common stocks and registered investment companies – at the closing price reported in the active market in which the individual investment is traded.
- Corporate bonds – based on yields currently available on comparable securities of issuers with similar credit ratings.
- Common collective trusts – the fair value is primarily derived from the quoted prices in active markets of the underlying securities. Because the fund shares are offered to a limited group of investors, they are not considered to be traded in an active market.
- Other investments, principally annuity and fixed income – based on yields currently available on comparable securities of issuers with similar credit ratings.
- Other investments measured at net asset value (NAV) – fund shares offered to a limited group of investors and alternative investments, such as private equity and real estate oriented investments, partnership/joint ventures and hedge funds are valued using the NAV as a practical expedient.

Pension and postretirement benefit plan equity securities did not include any Iberdrola common stock as of both December 31, 2020 and 2019.

Defined contribution plans

We also have defined contribution plans defined as 401(k)s for all eligible AVANGRID employees. There are various match formulas depending on years of service, age and pension plan closure/freeze date. For the years ended December 31, 2020, 2019 and 2018, the annual contributions we made to these plans was $49 million, $40 million and $37 million, respectively.

Note 18. Equity

As of December 31, 2020 and 2019, we had 413,782 and 485,810 shares of common stock held in trust, respectively, and no convertible preferred shares outstanding. During the years ended December 31, 2020 and 2019, we issued 42,777 and 0 shares of common stock, respectively, and released 72,028 and 0 shares of common stock held in trust, respectively, each having a par value of $0.01. During January 2021, we released 292,594 shares of common stock held in trust.

We maintain a repurchase agreement with J.P. Morgan Securities, LLC. (JPM), pursuant to which JPM will, from time to time, acquire, on behalf of AVANGRID, shares of common stock of AVANGRID. The purpose of the stock repurchase program is to allow AVANGRID to maintain Iberdrola's relative ownership percentage at 81.5%. The stock repurchase program may be suspended or discontinued at any time upon notice. In May 2020, 42,777 shares were repurchased pursuant to the stock repurchase program. As of December 31, 2020, a total of 303,835 shares have been repurchased in the open market, all of which are included as AVANGRID treasury shares. As of December 31, 2020, the total cost of all repurchases, including commissions, was $14 million.

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Accumulated OCI (Loss)

Accumulated OCI (Loss) for the years ended December 31, 2020, 2019 and 2018 consisted of:

Accumulated Other Comprehensive Income (Loss)	As of December 31, 2017	Adoption of new accounting standard	2018 Change	As of December 31, 2018	Adoption of new accounting standard	2019 Change	As of December 31, 2019	2020 Change	As of December 31, 2020
(Millions)									
Change in revaluation of defined benefit plans, net of income tax expense (benefit) of $1 for 2018, $0 for 2019 and $0 for 2020	$ (14)	$ —	$ 3	$ (11)	$ (2)	$ 1	$ (12)	$ —	$ (12)
Loss (gain) for nonqualified pension plans, net of income tax expense (benefit) of $0 for 2018, $(1) for 2019 and $3 for 2020	(6)	(1)	1	(6)	—	(1)	(7)	(13)	(20)
Unrealized (loss) gain on derivatives qualifying as cash flow hedges:									
Unrealized loss during period on derivatives qualifying as cash flow hedges, net of income tax expense (benefit) of $(7) for 2018, $(9) for 2019 and $(7) for 2020	30	—	(21)	9	—	(22)	(13)	(22)	(35)
Reclassification to net income of losses (gains) on cash flow hedges, net of income tax expense (benefit) of $(7) for 2018, $3 for 2019 and $2 for 2020 (a)	(56)	—	(8)	(64)	(10)	11	(63)	19	(44)
Loss on derivatives qualifying as cash flow hedges	(26)	—	(29)	(55)	(10)	(11)	(76)	(3)	(79)
Accumulated Other Comprehensive Loss	**$ (46)**	**$ (1)**	**$ (25)**	**$ (72)**	**$ (12)**	**$ (11)**	**$ (95)**	**$ (16)**	**$ (111)**

(a) Reclassification is reflected in the operating expenses and interest expense, net of capitalization line items in our consolidated statements of income.

Note 19. Earnings Per Share

Basic earnings per share is computed by dividing net income attributable to AVANGRID by the weighted-average number of shares of our common stock outstanding.

The calculations of basic and diluted earnings per share attributable to AVANGRID for the years ended December 31, 2020, 2019 and 2018, respectively, consisted of:

Years Ended December 31,	2020	2019	2018
(Millions, except for number of shares and per share data)			
Numerator:			
Net income attributable to AVANGRID	$ 581	$ 667	$ 587
Denominator:			
Weighted average number of shares outstanding - basic	309,494,939	309,491,082	309,503,319
Weighted average number of shares outstanding - diluted	309,559,387	309,514,910	309,712,628
Earnings per share attributable to AVANGRID			
Earnings Per Common Share, Basic	$ 1.88	$ 2.16	$ 1.90
Earnings Per Common Share, Diluted	$ 1.88	$ 2.16	$ 1.89

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Note 20. Variable Interest Entities

We participate in certain partnership arrangements that qualify as VIEs. Consolidated VIE's consist of tax equity financing arrangements (TEFs) and partnerships in which an investor holds a noncontrolling interest and does not have substantive kick-out or participating rights.

The sale of a membership interest in the TEFs represents the sale of an equity interest in a structure that is considered a sale of non-financial assets. Under the sale of non-financial assets, the membership interests in the TEFs we sell to third-party investors are reflected as noncontrolling interest on our consolidated balance sheets valued based on an HLBV model. Earnings from the TEFs are recognized in net income attributable to noncontrolling interests in our consolidated statements of income. We consolidate the entities that have TEFs based on being the primary beneficiary for these VIEs.

On March 2, 2020, we closed on two TEF agreements, receiving $237 million from two tax equity investors related to two wind farms that reached commercial operation. On May 8, 2020, we closed on a TEF agreement, receiving $70 million from the same tax equity investors related to a wind farm that reached commercial operation. The three wind farms are part of a portfolio of companies called Aeolus Wind Power VII, LLC (Aeolus VII). On February 5, 2021, we closed on the final TEF agreement for Aeolus VII in a non-cash transaction. The four Aeolus VII wind farms total 688 MW of wind power.

As of December 31, 2020, the assets and liabilities of the VIEs totaled approximately $1,713 million and $107 million, respectively. As of December 31, 2019, the assets and liabilities of VIEs totaled approximately $806 million and $29 million, respectively. At both December 31, 2020 and 2019, the assets and liabilities of the VIEs consisted primarily of property, plant and equipment.

Wind power generation is subject to certain favorable tax treatments in the U.S. In order to monetize the tax benefits, we have entered into these structured institutional partnership investment transactions related to certain wind farms. Under these structures, we contribute certain wind assets, relating both to existing wind farms and wind farms that are being placed into operation at the time of the relevant transaction, and other parties invest in the share equity of the limited liability holding company. As consideration for their investment, the third parties make either an upfront cash payment or a combination of upfront cash and payments over time. We retain a class of membership interest and day-to-day operational and management control, subject to investor approval of certain major decisions. The third-party investors do not receive a lien on any assets and have no recourse against us for their upfront cash payments.

The partnerships generally involve disproportionate allocations of profit or loss, cash distributions and tax benefits resulting from the wind farm energy generation between the investor and sponsor until the investor recovers its investment and achieves a cumulative annual after-tax return. Once this target return is met, the relative sharing of profit or loss, cash distributions and taxable income or loss between the Company and the third party investor flips, with the sponsor generally receiving higher percentages thereafter. We also have a call option to acquire the third party investors' membership interest within a defined time period after this target return is met.

At December 31, 2020, El Cabo Wind, LLC (El Cabo), Patriot Wind Farm LLC (Patriot) and Aeolus VII are our consolidated VIEs.

Our El Cabo, Patriot and Aeolus VII interests are not subject to any rights of investors that may restrict our ability to access or use the assets or to settle any existing liabilities associated with the interests.

See Note 22 - Equity Method Investments for information on our VIE we do not consolidate.

Note 21. Grants, Government Incentives and Deferred Income

The changes in deferred income as of December 31, 2020 and 2019 consisted of:

(Millions)	Government grants	Other deferred income	Total
As of December 31, 2018	**$ 1,367**	**$ 18**	**$ 1,385**
Disposals	(3)	—	(3)
Derecognition due to sale (a)	(38)	—	(38)
Recognized in income	(68)	(2)	(70)
As of December 31, 2019	**1,258**	**16**	**1,274**
Disposals	(2)	—	(2)
Recognized in income	(66)	(2)	(68)
As of December 31, 2020	**$ 1,190**	**$ 14**	**$ 1,204**

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(a) Grants no longer controlled by us due to the 2019 sale of a 50% interest in the Poseidon projects. See Note 22 for further information.

Within deferred income, we classify grants we received under Section 1603 of the American Recovery and Reinvestment Act of 2009, where the United States Department of Treasury (DOT) provides eligible parties the option of claiming grants for specified energy property in lieu of tax credits, which we claimed for the majority of our qualifying properties. Deferred income has been recorded for the grant amounts and is amortized as an offset against depreciation expense using the straight-line method over the estimated useful life of the associated property to which the grants apply. We recognize a net deferred tax asset for the book to tax basis differences related to the property for income tax purposes within the nontaxable grant revenue deferred income tax liabilities (see Note 16 – Income Taxes).

We are required to comply with certain terms and conditions applicable to each grant and, if a disqualifying event should occur as specified in the grant's terms and conditions, we are required to repay the grant funds to the DOT. We believe we are in compliance with each grant's terms and conditions as of December 31, 2020 and 2019.

Note 22. Equity Method Investments

On December 16, 2020, Renewables sold an 85% ownership interest in a wind farm located in South Dakota (Tatanka) to WEC Infrastructure involving total consideration of $238 million, excluding closing costs, and recognized a gain of $12 million, net of tax. The pre-tax gain of $16 million is included in "Other income (expense)" in our consolidated statements of income. Our retained investment in Tatanka of $24 million was valued based on an enterprise value of $298 million and applying an effective percentage of economic benefits retained of 7.97%, which was derived from a DCF model similar to the model used for Goodwill as described in Note 7. The net gain includes $4 million related to the remeasurement of our retained investment in Tatanka. The transaction was accounted for as a sale of assets and resulted in a loss of control. The retained 15% ownership interest is accounted for as an equity method investment. As of December 31, 2020, the carrying value of our Tatanka investment was $24 million.

On December 13, 2019, Renewables transferred a 50% ownership interest in a wind farm and a solar project located in Arizona (Poseidon) to Axium involving total consideration of $112 million, excluding closing costs, and recognized a gain of $96 million, net of tax. The pre-tax gain of $134 million is included in "Other income (expense)" in our consolidated statements of income. The net gain includes $50 million related to the remeasurement of our retained investment in Poseidon which was valued based on the consideration received in the transaction. The transaction was accounted for as the sale of a business and resulted in a loss of control. The retained 50% ownership interest is accounted for as an equity method investment. As of December 31, 2020 and 2019, the carrying value of our Poseidon investment was $104 million and $111 million, respectively.

In December 2018, Renewables sold 80% of our wholly owned subsidiary, Coyote Ridge Wind, LLC (Coyote Ridge), including substantially all of the related tax benefits, to WEC Infrastructure in exchange for $144 million of total proceeds with $84 million received in 2019 to complete the transaction. We recorded a gain of $4 million and $10 million from this transaction in "Other expense" in our consolidated statements of income for the years ended December 31, 2019 and 2018, respectively. We account for the remaining 20% membership interest under the equity method of accounting. As of December 31, 2020 and 2019, the carrying amount of our Coyote Ridge investment was $16 million and $14 million, respectively.

Renewables has two 50-50 joint ventures with Horizon Wind Energy, LLC, which own and operate the Flat Rock Windpower LLC (Flat Rock I) and the Flat Rock Wind Power II LLC (Flat Rock II) wind farms located in upstate New York. Flat Rock I has a 231 MW capacity and Flat Rock II has a 91 MW capacity. We account for the Flat Rock joint ventures under the equity method of accounting. As of December 31, 2020 and 2019, the carrying amount of Flat Rock I was $98 million and $105 million, respectively, and Flat Rock II was $47 million and $49 million, respectively.

Renewables holds a 50% voting interest in Vineyard Wind, LLC (Vineyard Wind), a joint venture with Copenhagen Infrastructure Partners (CIP). Vineyard Wind has acquired two easements from the U.S. Bureau of Ocean Energy Management (BOEM) containing the rights to develop offshore wind generation. In total, the two lease areas have the potential to generate up to 5,000 MW of renewable energy. The first easement area is 166,886 acres located southeast of Martha's Vineyard. In 2018, Vineyard Wind was selected by the Massachusetts Electric Distribution Companies (EDCs) to construct and operate Vineyard Wind's proposed 800 MW wind farm and electricity transmission project pursuant to the Massachusetts Green Communities Act Section 83C RFP for offshore wind energy projects. In December 2019, DEEP selected Vineyard Wind to provide 804 MW of offshore wind through the development of its Park City Wind Project. Pursuant to a joint bidding agreement between Renewables and CIP, CIP held a right to sell all or a portion of its 50% ownership interest to Renewables, subject to certain conditions, which expired on September 30, 2020.

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During 2019, Vineyard Wind acquired a second offshore easement contract from BOEM. Renewables initially contributed $100 million to Vineyard Wind to acquire the easement contract, which was proportionally more than CIP's contribution. Pursuant to a joint bidding agreement between Renewables and CIP, CIP had the option to reimburse Renewables an amount, plus interest, to restore its 50% interest in the easement contract. In December 2020, CIP exercised this option and will reimburse Renewables $33 million, plus interest.

As of December 31, 2020, under the provisions of the LLC agreement, Renewables has contributed $252 million to Vineyard Wind, net of reimbursement by CIP. We expect to provide additional capital contributions.

In October 2020, Vineyard Wind submitted an offshore wind solicitation to NYSERDA. Renewables and CIP entered into a joint bidding agreement pursuant to which, subject to the satisfaction of certain conditions, CIP may exercise an option to effectuate a series of transactions that include the sale of its ownership interest in the Liberty Wind and Park City Wind Projects to Renewables and the purchase of Renewables' residual ownership interest in certain lease areas that have not been awarded an offtake agreement as of the date of the exercise of such option by CIP. On January 14, 2021, the options held by CIP related to Liberty Wind expired as the project was not selected by NYSERDA.

Vineyard Wind is considered a VIE because it cannot finance its activities without additional support from its owners or third-parties. Renewables is not the primary beneficiary since it does not have a controlling interest in Vineyard Wind, and therefore we do not consolidate Vineyard Wind. As of December 31, 2020 and 2019, the carrying amount of Renewables' investment in Vineyard Wind was $245 million and $227 million, respectively.

Networks is a party to a 50-50 joint venture with Clearway Energy, Inc. in GenConn, which operates two peaking generation plants in Connecticut. The investment in GenConn is accounted for as an equity investment. As of December 31, 2020 and 2019, the carrying value of our GenConn investment was $104 million and $113 million, respectively.

Networks holds an approximate 20% ownership interest in New York TransCo. Through New York TransCo, Networks has formed a partnership with Central Hudson Gas and Electric Corporation, Consolidated Edison, Inc., National Grid, plc and Orange and Rockland Utilities, Inc. to develop a portfolio of interconnected transmission lines and substations to fulfill the objectives of the New York energy highway initiative, which is a proposal to install up to 3,200 MW of new electric generation and transmission capacity in order to deliver more power generated from upstate New York power plants to downstate New York. On April 8, 2019, New York Transco was selected as the developer for Segment B of the AC Transmission Public Policy Project by the NYISO. The selected project, New York Energy Solution (NYES), replaces nearly 80-year old transmission assets located in the upper to mid-Hudson Valley with streamlined, modernized technology, to enable surplus clean energy resources in upstate New York and help achieve the State's energy goals. The total project cost is $600 million plus interconnection costs. NYSEG's contribution as 20% co-owner is $120 million. New York Transco is subject to regulatory approval of its rates, terms and conditions with the FERC. As of December 31, 2020 and 2019, the amount receivable from New York TransCo was $0 and $1 million, respectively. The investment in New York TransCo is accounted for as an equity investment. As of December 31, 2020 and 2019, the carrying value of our New York TransCo investment was $30 million and $26 million, respectively.

None of our joint ventures have any contingent liabilities or capital commitments. Distributions received from equity method investments amounted to $22 million, $17 million and $18 million for the years ended December 31, 2020, 2019 and 2018 respectively, which are reflected as either distributions of earnings or as returns of capital in the operating and investing sections of the consolidated statements of cash flows, respectively. In addition, during the years ended December 31, 2020 and 2019, we received $14 million and $9 million of distributions in RECs from our equity method investments. As of December 31, 2020, there was an immaterial amount of undistributed earnings from our equity method investments. Capitalized interest costs related to equity method investments were $8 million and $7 million for the years ended December 31, 2020 and 2019, respectively.

Note 23. Other Financial Statements Items

Loss from assets held for sale

In connection with the 2018 sale of our gas trading and storage businesses, we recorded a loss from held for sale measurement of $16 million for the year ended December 31, 2018, which is included in "Loss from assets held for sale" in our consolidated statements of income.

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Other income (expense)

Other income (expense) for the years ended December 31, 2020, 2019 and 2018 consisted of:

Years ended December 31, (Millions)	2020	2019	2018
Gain on sale of assets (a)	$ 20	$ 148	$ 10
Allowance for funds used during construction	56	46	30
Carrying costs on regulatory assets	28	21	21
Non-service component of net periodic benefit cost	(62)	(79)	(128)
Other	(24)	(15)	1
Total Other Income (Expense)	**$ 18**	**$ 121**	**$ (66)**

(a) 2020 includes a $16 million gain from the Tatanka sale, 2019 includes a $134 million gain from the Poseidon sale and 2018 includes a $10 million gain from the Coyote Ridge sale (see Note 22).

Accounts receivable and unbilled revenues, net

Accounts receivable and unbilled revenues, net as of December 31, 2020 and 2019 consisted of:

As of December 31, (Millions)	2020	2019
Trade receivables and unbilled revenues	$ 1,295	$ 1,151
Allowance for credit losses	(108)	(69)
Total Accounts receivable and unbilled revenues, net	**$ 1,187**	**$ 1,082**

The change in the allowance for credit losses as of December 31, 2020 and 2019 consisted of:

(Millions)	
As of December 31, 2017	**$ 64**
Current period provision	74
Write-off as uncollectible	(76)
As of December 31, 2018	**$ 62**
Current period provision	92
Write-off as uncollectible	(85)
As of December 31, 2019	**$ 69**
Current period provision	83
Write-off as uncollectible	(44)
As of December 31, 2020	**$ 108**

DPA receivable balances were $78 million and $65 million as of December 31, 2020 and 2019, respectively.

Prepayments and Other Current Assets

Prepayments and other current assets as of December 31, 2020 and 2019 consisted of:

As of December 31, (Millions)	2020	2019
Prepaid other taxes	$ 135	$ 123
Short-term investment (a)	300	—
Broker margin and collateral accounts	30	33
Other pledged deposits	2	3
Prepaid expenses	41	34
Other	17	6
Total	**$ 525**	**$ 199**

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(a) Short-term investment from proceeds of the Iberdrola Loan.

Other current liabilities

Other current liabilities as of December 31, 2020 and 2019 consisted of:

As of December 31, (Millions)	2020	2019
Advances received	$ 141	$ 143
Accrued salaries	109	89
Short-term environmental provisions	49	40
Collateral deposits received	42	44
Pension and other postretirement	5	5
Finance leases	8	9
Other	14	6
Total	**$ 368**	**$ 336**

Note 24. Segment Information

Our segment reporting structure uses our management reporting structure as its foundation to reflect how AVANGRID manages the business internally and is organized by type of business. We report our financial performance based on the following two reportable segments:

- Networks: includes all of the energy transmission and distribution activities, any other regulated activity originating in New York and Maine and regulated electric distribution, electric transmission and gas distribution activities originating in Connecticut and Massachusetts. The Networks reportable segment includes eight rate regulated operating segments. These operating segments generally offer the same services distributed in similar fashions, have the same types of customers, have similar long-term economic characteristics and are subject to similar regulatory requirements, allowing these operations to be aggregated into one reportable segment.
- Renewables: activities relating to renewable energy, mainly wind energy generation and trading related with such activities.

The chief operating decision maker evaluates segment performance based on segment adjusted net income defined as net income adjusted to exclude restructuring charges, mark-to-market earnings from changes in the fair value of derivative instruments, loss from held for sale measurement, accelerated depreciation derived from repowering of wind farms, impact of the Tax Act, costs incurred related to the PNMR Merger, costs incurred in connection with the COVID-19 pandemic and adjustments for the non-core Gas storage business.

Products and services are sold between reportable segments and affiliate companies at cost. Segment income, expense and assets presented in the accompanying tables include all intercompany transactions that are eliminated in our consolidated financial statements. Refer to Note 4 - Revenue for more detailed information on revenue by segment.

The segment information as of and for the years ended December 31, 2019 and 2018 has been revised consistent with the immaterial corrections to prior periods disclosed in Note 2, including a correction of $24 million of income tax expense at the Renewables segment for the year ended December 31, 2019 from the as reported amount of $4 million.

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Segment information as of and for the year ended December 31, 2020 consisted of:

For the year ended December 31, 2020	Networks	Renewables	Other(a)	AVANGRID Consolidated
(Millions)				
Revenue - external	$ 5,187	$ 1,132	$ 1	$ 6,320
Revenue - intersegment	1	—	(1)	—
Depreciation and amortization	592	394	1	987
Operating income	877	(16)	8	869
Earnings (losses) from equity method investments	10	(13)	—	(3)
Interest expense, net of capitalization	234	7	75	316
Income tax expense (benefit)	120	(80)	(11)	29
Capital expenditures	1,838	943	—	2,781
Adjusted net income	568	115	(58)	625
As of December 31, 2020				
Property, plant and equipment	17,079	9,662	10	26,751
Equity method investments	134	534	—	668
Total assets	$ 24,592	$ 12,867	$ 364	$ 37,823

(a) Includes Corporate and intersegment eliminations.

Segment information as of and for the year ended December 31, 2019 consisted of:

For the year ended December 31, 2019	Networks	Renewables	Other(a)	AVANGRID Consolidated
(Millions)				
Revenue - external	$ 5,150	$ 1,184	$ 2	$ 6,336
Revenue - intersegment	14	—	(14)	—
Depreciation and amortization	549	383	1	933
Operating income	890	93	15	998
Earnings (losses) from equity method investments	11	(8)	—	3
Interest expense, net of capitalization	269	14	27	310
Income tax expense (benefit)	152	28	(11)	169
Capital expenditures	1,610	1,122	3	2,735
Adjusted net income	465	193	(17)	640
As of December 31, 2019				
Property, plant and equipment	15,829	9,357	10	25,196
Equity method investments	139	506	—	645
Total assets	$ 23,239	$ 13,152	$ (1,997)	$ 34,394

(a) Includes Corporate and intersegment eliminations.

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Segment information for the year ended December 31, 2018 consisted of:

For the year ended December 31, 2018	Networks	Renewables	Other (a)	AVANGRID Consolidated
(Millions)				
Revenue - external	$ 5,304	$ 1,136	$ 37	$ 6,477
Revenue - intersegment	6	2	(8)	—
Loss from assets held for sale	—	—	16	16
Depreciation and amortization	503	352	—	855
Operating income	968	132	16	1,116
Earnings (losses) from equity method investments	13	(3)	—	10
Interest expense, net of capitalization	260	33	10	303
Income tax expense (benefit)	167	(32)	32	167
Capital expenditures	1,370	407	—	1,777
Adjusted net income	$ 481	$ 182	$ 13	$ 676

(a) Includes Corporate, Gas and intersegment eliminations.

Reconciliation of Adjusted Net Income to Net Income attributable to AVANGRID for the years ended December 31, 2020, 2019 and 2018 is as follows:

Years Ended December 31,	2020	2019	2018
(Millions)			
Adjusted Net Income Attributable to Avangrid, Inc.	**$ 625**	**$ 640**	**$ 676**
Adjustments:			
Restructuring charges (1)	(6)	(6)	(4)
Mark-to-market adjustments - Renewables (2)	(5)	76	(25)
Loss from held for sale measurement (3)	—	—	(16)
Impact of the Tax Act (4)	—	—	(46)
Accelerated depreciation from repowering (5)	(9)	(33)	(3)
Impact of COVID-19 (6)	(29)	—	—
Merger costs (7)	(6)	—	—
Legal settlement - Gas storage (8)	(5)	—	—
Income tax impact of adjustments	16	(10)	(6)
Gas Storage, net of tax (8)	—	—	11
Net Income Attributable to Avangrid, Inc.	**$ 581**	**$ 667**	**$ 587**

(1) Restructuring and severance related charges relate to costs resulted from restructuring actions involving initial targeted voluntary workforce reductions and related costs in our plan to vacate a lease, predominantly within the Networks segment and costs to implement an initiative to mitigate costs and achieve sustainable growth (See Note 27 - Restructuring and Severance Related Expenses – for further details).
(2) Mark-to-market earnings relates to earnings impacts from changes in the fair value of Renewables' derivative instruments associated with electricity and natural gas.
(3) Represents loss from measurement of assets and liabilities held for sale in connection with the committed plan to sell the gas trading and storage businesses.
(4) Represents the impact from measurement of deferred income tax balances as a result of the Tax Act enacted by the U.S. federal government on December 22, 2017.
(5) Represents the amount of accelerated depreciation derived from repowering wind farms in Renewables.
(6) Represents costs incurred in connection with the COVID-19 pandemic.
(7) Pre-merger costs incurred.
(8) Removal of the impact from Gas activity in the reconciliation to AVANGRID Net Income.

Note 25. Related Party Transactions

We engage in related party transactions that are generally billed at cost and in accordance with applicable state and federal commission regulations.

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Related party transactions for the years ended December 31, 2020, 2019 and 2018, respectively, consisted of:

Years Ended December 31,	2020		2019		2018	
(Millions)	Sales To	Purchases From	Sales To	Purchases From	Sales To	Purchases From
Iberdrola, S.A.	$ 1	$ (43)	$ 1	$ (42)	$ 1	$ (38)
Iberdrola Renovables Energia, S.L.	$ —	$ (9)	$ —	$ (9)	$ —	$ (14)
Iberdrola Financiación, S.A.	$ —	$ (7)	$ —	$ (3)	$ —	$ (3)
Vineyard Wind	$ 9	$ —	$ 13	$ —	$ 3	$ —
Iberdrola Solutions	$ 2	$ —	$ 1	$ —	$ —	$ —
Iberdrola Energia Monterrey, S.A. de C.V.	$ —	$ —	$ —	$ —	$ 3	$ —
Iberdrola Canada Energy Services, Ltd	$ —	$ —	$ —	$ —	$ —	$ (5)
Other	$ —	$ —	$ 1	$ (3)	$ 2	$ (5)

In addition to the statements of income items above, we made purchases of turbines for wind farms from Siemens-Gamesa, in which Iberdrola had an 8.1% ownership interest until Iberdrola sold its interest in February 2020. After the sale, the turbine purchases are no longer considered related party transactions. The amounts capitalized for transactions while Siemens-Gamesa was considered a related party were $11 million and $18 million for the years ended December 31, 2020 and 2019, respectively.

Related party balances as of December 31, 2020 and 2019, respectively, consisted of:

As of December 31,	2020		2019	
(Millions)	Owed By	Owed To	Owed By	Owed To
Iberdrola, S.A.	$ 2	$ (43)	$ 1	$ (42)
Iberdrola Financiacion	$ —	$ (6)	$ —	$ (3)
Siemens-Gamesa (a)	$ —	$ —	$ —	$ (18)
Vineyard Wind	$ 4	$ —	$ 5	$ —
Iberdrola Solutions	$ 5	$ —	$ —	$ —
Other	$ 1	$ (1)	$ 4	$ (1)

(a) After Iberdrola's sale of its interest of Siemens-Gamesa in February 2020, transactions with Siemens-Gamesa are no longer considered related party.

Transactions with Iberdrola, our majority shareholder, relate predominantly to the provision and allocation of corporate services and management fees. All costs that can be specifically allocated, to the extent possible, are charged directly to the company receiving such services. In situations when Iberdrola corporate services are provided to two or more companies of AVANGRID, any costs remaining after direct charges are allocated using agreed upon cost allocation methods designed to allocate such costs. We believe that the allocation method used is reasonable. See Note 10 for a discussion of the Iberdrola Loan.

AVANGRID manages its overall liquidity position as part of the Iberdrola Group and is a party to a liquidity agreement with a financial institution, along with certain members of the Iberdrola Group. Cash surpluses remaining after meeting the liquidity requirements of AVANGRID and its subsidiaries may be deposited at the financial institution. Deposits, or credit balances, serve as collateral against the debit balances of other parties to the liquidity agreement. The balance at December 31, 2020 and 2019 was $0 and $150 million, respectively.

AVANGRID has a credit facility with Iberdrola Financiacion, S.A.U., a company of the Iberdrola Group. The facility has a limit of $500 million and matures on June 18, 2023. AVANGRID pays a facility fee of 10.5 basis points annually on the facility. As of both December 31, 2020 and 2019, there were no amounts outstanding under this credit facility.

We have a bi-lateral demand note agreement with Iberdrola Solutions, LLC, which had a notes receivable balance of $5 million and $0 for the years ended December 31, 2020 and 2019, respectively. Renewables has financial forward power contracts with Iberdrola Solutions to hedge Renewables merchant wind exposure in Texas.

See Note 22 - Equity Method Investments for information on transactions with our equity method investees.

There have been no guarantees provided or received for any related party receivables or payables. These balances are unsecured and are typically settled in cash. Interest is not charged on regular business transactions but is charged on outstanding loan balances. There have been no impairments or provisions made against any affiliated balances.

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Note 26. Stock-Based Compensation

The Avangrid, Inc. Amended and Restated Omnibus Incentive Plan (the Plan) provides for, among other things, the issuance of performance stock units (PSUs), restricted stock units (RSUs) and phantom share units (Phantom Shares). As of December 31, 2020, the total number of shares authorized for stock-based compensation plans was 2,500,000.

Performance Stock Units

During 2016, 1,298,683 performance stock units (PSUs) were granted to certain officers and employees of AVANGRID. In 2017, 2018 and 2019, an additional 85,759, 75,350 and 3,881 PSUs, respectively, were granted to officers and employees of AVANGRID under the Plan with achievement measured based on certain performance and market-based metrics for the 2016 to 2019 time period.

The fair value of the PSUs on the grant date was $31.80 per share, which is expensed on a straight-line basis over the requisite service period of approximately seven years based on expected achievement. The fair value of the PSUs was determined using valuation techniques to forecast possible future stock prices, applying a weighted average historical stock price volatility of AVANGRID and industry companies, a risk-free rate of interest that is equal, as of the grant date, to the yield of the zero-coupon U.S. Treasury bill and a reduction for the respective dividend yield calculated based on the most recent quarterly dividend payment and the stock price as of the grant date.

In February 2020, a total number of 208,268 PSUs, before applicable taxes, were approved as earned by participants based on achievement of certain performance metrics related to the 2016 through 2019 plan and are payable in three equal installments, net of applicable taxes, in 2020, 2021 and 2022. The remaining unvested PSUs were forfeited. In May 2020, 42,777 shares of common stock were issued to settle the first installment payment and 2,605 PSUs were forfeited from the originally approved total number of PSUs.

Restricted Stock Units

In June and October 2018, pursuant to the Avangrid, Inc. Omnibus Incentive Plan two restricted stock units (RSUs) awards of 60,000 and 8,000 RSUs, respectively, were granted to certain officers of AVANGRID. The RSUs vest in full in one installment in June and December 2020, respectively for each award, provided that the grantee remains continuously employed with AVANGRID through the applicable date. The fair value on the grant date was determined based on a price of $50.40 per share for the June 2018 awards and $47.59 per share for the October 2018 awards. In June 2020, 60,000 RSU's, plus dividend equivalents accrued through the vesting period, were settled for $3 million in cash.

In August 2020, 5,000 RSUs were granted to an officer of AVANGRID. The RSUs vest in three equal installments in 2021, 2022 and 2023, provided that the grantee remains continuously employed with AVANGRID through the applicable vesting dates. The fair value on the grant date was determined based on a price of $48.99 per share.

Phantom Share Units

On March 18, 2020, 167,060 Phantom Shares were granted to certain AVANGRID executives and employees. These awards will vest in three equal installments in 2020, 2021 and 2022 and will be settled in a cash amount equal to the number of Phantom Shares multiplied by the closing share price of AVANGRID’s common stock on the respective vesting dates, subject to continued employment. The liability of these awards is measured based on the closing share price of AVANGRID’s common stock at each reporting date until the date of settlement. In June 2020, $2 million was paid to settle the first installment under this plan. As of December 31, 2020, the total liability is $2 million, which is included in other current and non-current liabilities.

The total stock-based compensation expense, which is included in "Operations and maintenance" of our consolidated statements of income for the years ended December 31, 2020, 2019 and 2018 was $14 million, $3 million and $2 million, respectively. The total income tax benefits recognized for stock-based compensation arrangements for each of the years ended December 31, 2020, 2019 and 2018, were $4 million, $1 million and $1 million, respectively.

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A summary of the status of the AVANGRID's nonvested PSUs and RSUs as of December 31, 2020, and changes during the fiscal year ended December 31, 2020, is presented below:

	Number of PSUs and RSUs	Weighted Average Grant Date Fair Value
Nonvested Balance – December 31, 2019	1,274,280	$ 32.83
Granted	6,691	$ 49.20
Forfeited	(997,088)	$ 31.80
Vested	(141,716)	$ 41.44
Nonvested Balance – December 31, 2020	142,167	$ 32.42

As of December 31, 2020, total unrecognized costs for non-vested PSUs, RSUs and Phantom Shares was $3 million. The weighted-average period over which the PSU, RSU and Phantom Shares costs will be recognized is approximately 2 years.

The weighted-average grant date fair value of RSUs granted during the year was $49.20 per share for the year ended December 31, 2020.

Note 27. Restructuring and Severance Related Expenses

In 2017, we announced initial targeted voluntary workforce reductions predominantly within the Networks segment. Those actions primarily included: reducing our workforce through voluntary programs in various areas to better align our people resources with business demands and priorities; reorganizing our human resources function to substantially consolidate in Connecticut, as well as related costs to vacate a lease and relocate employees; and reducing our information technology workforce to make increasing use of external services for operations, support and development of systems. In 2019, we announced changes across the Company aimed to mitigate costs and deliver sustainable growth, including outsourcing and insourcing of certain areas of the Company and technology initiatives that help improve efficiency and reduce costs. For the years ended December 31, 2020, 2019 and 2018, those decisions and transactions resulted in restructuring charges of $2 million, $4 million and $3 million, respectively, for severance expenses, which are included in “Operations and maintenance” in the consolidated statements of income. "Depreciation and amortization" in our consolidated statements of income includes $4 million and $2 million, respectively, for the years ended December 31, 2020 and 2019 for restructuring activities. For the year ended December 31, 2020, the severance and lease restructuring charges reserves, which are recorded in “Other current liabilities” and “Other liabilities”, consisted of:

For the Year Ended December 31,	2020
	(Millions)
Beginning Balance	$ 5
Restructuring and severance related expenses	2
Payments	(4)
Ending Balance	$ 3

Note 28. Subsequent events

Beatrice Corwin Living Irrevocable Trust, by and through Its Authorized Trustee, Robert Corwin v. Iberdrola, S.A., et. al.

On January 8, 2021, the Beatrice Corwin Living Irrevocable Trust, by and through its Authorized Trustee, Robert Corwin filed a complaint in the Supreme Court of the State of New York Westchester County against Iberdrola and the members of the Company’s Board of Directors, as defendants, and the Company, as a nominal defendant with respect to certain counts contained in the complaint. The complaint alleges certain violations of fiduciary duties by Iberdrola and the members of the Company’s Board of Directors related to the existence of certain pre-emptive rights provided to Iberdrola in the Shareholder Agreement between the Company and Iberdrola, dated December 16, 2015, and the binding nature of such rights. We cannot predict the outcome of this matter.

On February 15, 2021, 1,181,031 PSUs were granted to certain officers and employees of AVANGRID pursuant to the Plan with achievement measured based on certain performance and market-based metrics for the 2021 to 2022 performance period. The PSUs will payable in three equal installments, net of applicable taxes, in 2023, 2024 and 2025.

On February 16, 2021, the board of directors of AVANGRID declared a quarterly dividend of $0.44 per share on its common stock. This dividend is payable on April 1, 2021 to shareholders of record at the close of business on March 5, 2021.

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Schedule I –Financial Statements of Parent

AVANGRID, INC. (PARENT)
CONDENSED FINANCIAL INFORMATION OF PARENT
STATEMENTS OF INCOME
FOR THE YEARS ENDED December 31, 2020, 2019 AND 2018

Years Ended December 31,	**2020**	**2019**	**2018**
(Millions)			
Operating Revenues	$ —	$ —	$ —
Operating Expenses			
Operating expense	10	3	3
Taxes other than income taxes	(11)	(12)	(11)
Total Operating Expenses	(1)	(9)	(8)
Operating Income	1	9	8
Other Income			
Other income	35	59	48
Equity earnings of subsidiaries	641	678	596
Interest expense	(109)	(93)	(56)
Income Before Income Tax	568	653	596
Income tax (benefit) expense	(13)	(14)	9
Net Income	**$ 581**	**$ 667**	**$ 587**

See accompanying notes to Schedule I.

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Schedule I –Financial Statements of Parent

AVANGRID, INC. (PARENT)
CONDENSED FINANCIAL INFORMATION OF PARENT
STATEMENTS OF COMPREHENSIVE INCOME
FOR THE YEARS ENDED December 31, 2020, 2019, AND 2018

Years Ended December 31,	**2020**	**2019**	**2018**
(Millions)			
Net Income	$ 581	$ 667	$ 587
Other comprehensive loss of subsidiaries	(16)	(11)	(25)
Comprehensive Income	**$ 565**	**$ 656**	**$ 562**

See accompanying notes to Schedule I.

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Schedule I –Financial Statements of Parent

AVANGRID, INC. (PARENT)
CONDENSED FINANCIAL INFORMATION OF PARENT
BALANCE SHEETS
AS OF December 31, 2020 AND 2019

As of December 31, (Millions)	2020	2019
Assets		
Current Assets		
Cash and cash equivalents	$ 1,438	$ 146
Accounts receivable from subsidiaries	124	22
Notes receivable from subsidiaries	1,489	2,529
Prepayments and other current assets	357	—
Total current assets	3,408	2,697
Investments in subsidiaries	18,356	16,812
Other assets		
Deferred income taxes	388	374
Other	3	3
Total other assets	391	377
Total Assets	**$ 22,155**	**$ 19,886**
Liabilities		
Current Liabilities		
Current portion of debt	$ —	$ 456
Notes payable	308	561
Notes payable to subsidiaries	1,375	1,674
Accounts payable and accrued liabilities	12	2
Accounts payable to subsidiaries	9	7
Interest accrued	9	10
Interest accrued subsidiaries	10	18
Dividends payable	136	136
Taxes accrued	—	24
Total current liabilities	1,859	2,888
Non-current debt	2,087	1,808
Non-current debt with affiliate	3,000	—
Total Liabilities	6,946	4,696
Equity		
Stockholders' Equity:		
Common stock	3	3
Additional paid-in capital	13,665	13,660
Treasury stock	(14)	(12)
Retained earnings	1,666	1,634
Accumulated other comprehensive loss	(111)	(95)
Total Equity	15,209	15,190
Total Liabilities and Equity	**$ 22,155**	**$ 19,886**

See accompanying notes to Schedule I.

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Schedule I –Financial Statements of Parent

AVANGRID, INC. (PARENT)
CONDENSED FINANCIAL INFORMATION OF PARENT
STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED December 31, 2020, 2019, AND 2018

Years Ended December 31, (Millions)	2020	2019	2018
Net Cash used in Operating Activities	**$ (142)**	**$ (1,299)**	**$ (323)**
Cash Flow from Investing Activities			
Notes receivable from subsidiaries	(73)	633	462
Investments in subsidiaries	(591)	(399)	(48)
Return of capital from investments in subsidiaries	419	433	116
Other investments	(300)	—	—
Net Cash (used in) provided by Investing Activities	**(545)**	**667**	**530**
Cash Flow from Financing Activities			
(Repayments) receipts of short-term notes payable from subsidiaries, net	(14)	107	246
(Repayments) receipts of short-term notes payable	(253)	(27)	82
Proceeds from non-current debt	744	1,243	—
Proceeds from non-current debt with affiliate	3,000	—	—
Repayments of non-current debt	(950)	—	—
Repurchase of common stock	(2)	—	(4)
Issuance of common stock	(1)	—	(2)
Dividends paid	(545)	(545)	(537)
Net Cash provided by (used in) Financing Activities	**1,979**	**778**	**(215)**
Net Increase (Decrease) in Cash and Cash Equivalents	1,292	146	(8)
Cash and Cash Equivalents, Beginning of Year	146	—	8
Cash and Cash Equivalents, End of Year	**$ 1,438**	**$ 146**	**$ —**
Supplemental Cash Flow Information			
Cash paid for interest	$ 111	$ 85	$ 55
Cash paid (refunded) payment for income taxes	$ 65	$ 43	$ 55

See accompanying notes to Schedule I.

Note 1. Basis of Presentation

Avangrid, Inc. (AVANGRID) is a holding company and we conduct substantially all of our business through our subsidiaries. Substantially all of our consolidated assets are held by our subsidiaries. Accordingly, our cash flow and ability to meet our obligations are largely dependent upon the earnings of our subsidiaries and the distribution or other payment of their earnings to us in the form of dividends, loans or advances or repayment of loans and advances from us. Our condensed financial statements and related footnotes have been prepared in accordance with regulatory statute 210.12-04 of Regulation S-X. Our condensed financial statements should be read in conjunction with the consolidated financial statements and notes thereto of AVANGRID and subsidiaries (AVANGRID Group).

AVANGRID indirectly or directly owns all of the ownership interests of our significant subsidiaries. AVANGRID relies on dividends or loans from our subsidiaries to fund dividends to our primary shareholder.

AVANGRID's significant accounting policies are consistent with those of the AVANGRID Group. For the purposes of these condensed financial statements, AVANGRID's wholly owned and majority owned subsidiaries are recorded based upon our proportionate share of the subsidiaries net assets.

AVANGRID will file a consolidated federal income tax return that includes the taxable income or loss of all our subsidiaries for the 2020 tax period. Each subsidiary company is treated as a member of the consolidated group and determines its current

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and deferred taxes separately and settles its current tax liability or benefit each year directly with AVANGRID pursuant to a tax sharing agreement between AVANGRID and our members.

Immaterial Corrections to Prior Periods

Our subsidiaries have identified various immaterial corrections primarily related to property, plant and equipment and deferred tax liabilities that originated in prior periods. AVANGRID determined that the cumulative impact of the corrections was not material to the results of operations, financial position or cash flows in previously issued financial statements and therefore, amendments of previously filed condensed financial information of AVANGRID are not required. However, we have revised the prior periods included within these financial statements to reflect these immaterial corrections. The corrections resulted in decreases of $33 million and $8 million in equity earnings and net income in the statements of income for the years ended December 31, 2019 and 2018, respectively, and a $47 million decrease in retained earnings and investments in subsidiaries in the balance sheet as of December 31, 2019. The revision decreased retained earnings by $6 million as of December 31, 2018. The revision had no net impact on the net cash provided by operating activities for the years ended December 31, 2019 and 2018.

Proposed Merger with PNMR

On October 20, 2020, AVANGRID, PNM Resources, Inc., a New Mexico corporation (PNMR) and NM Green Holdings, Inc., a New Mexico corporation and wholly-owned subsidiary of AVANGRID (Merger Sub), entered into an Agreement and Plan of Merger (Merger Agreement), pursuant to which Merger Sub is expected to merge with and into PNMR, with PNMR surviving the Merger as a direct wholly-owned subsidiary of AVANGRID (Merger). Pursuant to the Merger Agreement, each issued and outstanding share of the common stock of PNMR (PNMR common stock) (other than (i) the issued shares of PNMR common stock that are owned by AVANGRID, Merger Sub, PNMR or any wholly-owned subsidiary of AVANGRID or PNMR, which will be automatically cancelled at the time the Merger is consummated and (ii) shares of PNMR common stock held by a holder who has not voted in favor of, or consented in writing to, the Merger who is entitled to, and who has demanded, payment for fair value of such shares) will be converted, at the time the Merger is consummated, into the right to receive $50.30 in cash (Merger Consideration).

Consummation of the Merger (Closing) is subject to the satisfaction or waiver of certain customary closing conditions, including, without limitation, the approval of the Merger Agreement by the holders of at least a majority of the outstanding shares of PNMR common stock entitled to vote thereon, the absence of any material adverse effect on PNMR, the receipt of certain required regulatory approvals (including approvals from the Public Utility Commission of Texas (PUCT), the New Mexico Public Regulation Commission (NMPRC), the FERC, the Federal Communications Commission (FCC), the Committee on Foreign Investment in the United States (CFIUS), the Nuclear Regulatory Commission (NRC) and approval under the Hart-Scott-Rodino Antitrust Improvements Act of 1976), the Four Corners Divestiture Agreements (as defined below) being in full force and effect and all applicable regulatory filings associated therewith being made, as well as holders of no more than 15% of the outstanding shares of PNMR common stock validly exercising their dissenters' rights. On February 12, 2021, the shareholders of PNMR approved the proposed Merger. The Merger is currently expected to close in the second half of 2021.

The Merger Agreement also contains representations, warranties and covenants of PNMR, AVANGRID and Merger Sub, which are customary for transactions of this type. In addition, among other things, the Merger Agreement contains a covenant requiring PNMR to, prior to the Closing, enter into agreements (Four Corners Divestiture Agreements) providing for, and to make filings required to, exit from all ownership interests in the Four Corners Power Plant, all with the objective of having the closing date for such exit be no later than December 31, 2024.

In connection with the Merger, Iberdrola, S.A. has provided AVANGRID a commitment letter (Iberdrola Funding Commitment Letter), pursuant to which Iberdrola has unilaterally agreed to provide to AVANGRID, or arrange the provision to AVANGRID of, funds to the extent necessary for AVANGRID to consummate the Merger, including the payment of the aggregate Merger Consideration. To the extent AVANGRID wishes to effect a funding transaction under the Iberdrola Funding Commitment Letter in order to pay the Merger Consideration, the specific terms of any such transaction will be negotiated between Iberdrola and AVANGRID on an arm's length basis and must be approved by both (i) a majority of the members of the unaffiliated committee of the board of directors of AVANGRID, and (ii) a majority of the board of directors of AVANGRID. Under the terms of such commitment letter, Iberdrola S.A. has agreed to negotiate with AVANGRID the specific terms of any transaction effecting such funding commitment promptly and in good faith, with the objective that such terms shall be commercially reasonable and approved by AVANGRID. AVANGRID's and Merger Sub's obligations under the Merger Agreement are not conditioned upon AVANGRID obtaining financing.

The Merger Agreement provides for certain customary termination rights including the right of either party to terminate the Merger Agreement if the Merger is not completed on or before January 20, 2022 (subject to a three-month extension by either party if all of the conditions to the closing, other than the conditions related to obtaining regulatory approvals, have been

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satisfied or waived). The Merger Agreement further provides that, upon termination of the Merger Agreement under certain specified circumstances (including if AVANGRID terminates the Merger Agreement due to a change in recommendation of the board of directors of PNMR or if PNMR terminates the Merger Agreement to accept a superior proposal (as defined in the Merger Agreement)), PNMR will be required to pay AVANGRID a termination fee of $130 million. In addition, the Merger Agreement provides that (i) if the Merger Agreement is terminated by either party due to a failure of a regulatory closing condition and such failure is the result of AVANGRID's breach of its regulatory covenants, or (ii) AVANGRID fails to effect the Closing when all closing conditions have been satisfied and it is otherwise obligated to do so under the Merger Agreement, then, in either such case, upon termination of the Merger Agreement, AVANGRID will be required to pay PNMR a termination fee of $184 million as the sole and exclusive remedy. Upon the termination of the Merger Agreement under certain specified circumstances involving a breach of the Merger Agreement, either PNMR or AVANGRID will be required to reimburse the other party's reasonable and documented out-of-pocket fees and expenses up to $10 million (which amount will be credited toward, and offset against, the payment of any applicable termination fee).

Note 2. Common Stock

As of December 31, 2020, AVANGRID share capital consisted of 500,000,000 shares of common stock authorized, 309,794,917 shares issued and 309,077,300 shares outstanding, 81.5% of which are owned by Iberdrola, each having a par value of $0.01, for a total value of common stock of $3 million and additional paid in capital of $13,665 million. As of December 31, 2019, AVANGRID share capital consisted of 500,000,000 shares of common stock authorized, 309,752,140 shares issued and 309,005,272 shares outstanding, 81.5% of which were owned by Iberdrola, each having a par value of $ $0.01, for a total value of common stock capital of $3 million and additional paid in of $13,660 million. As of December 31, 2020 and 2019, we had 413,782 and 485,810 shares of common stock held in trust, respectively, and no convertible preferred shares outstanding. During the years ended December 31, 2020 and 2019, we issued 42,777 and 0 shares of common stock, respectively, and released 72,028 and 0 shares of common stock held in trust, respectively, each having a par value of $0.01. During January 2021, we released 292,594 shares of common stock held in trust.

We maintain a repurchase agreement with J.P. Morgan Securities, LLC. (JPM), pursuant to which JPM will, from time to time, acquire, on behalf of AVANGRID, shares of common stock of AVANGRID. The purpose of the stock repurchase program is to allow AVANGRID to maintain Iberdrola's relative ownership percentage at 81.5%. The stock repurchase program may be suspended or discontinued at any time upon notice. In May 2020, 42,777 shares were repurchased pursuant to the stock repurchase program. As of December 31, 2020, a total of 303,835 shares have been repurchased in the open market, all of which are included as AVANGRID treasury shares. As of December 31, 2020, the total cost of all repurchases, including commissions, was $14 million.

On February 16, 2021, the board of directors of AVANGRID declared a quarterly dividend of $0.44 per share on its common stock. This dividend is payable on April 1, 2021 to shareholders of record at the close of business on March 5, 2021.

Note 3. Long-Term Debt

In 2017, AVANGRID issued $600 million aggregate principal amount of its 3.15% notes maturing in 2024.

On May 16, 2019, AVANGRID issued $750 million aggregate principal amount of its 3.80% notes maturing in 2029. Proceeds of the offering were used to finance and/or refinance, in whole or in part, one or more eligible renewable energy generation facilities. Net proceeds of the offering after the price discount and issuance-related expenses were $743 million.

On April 9, 2020, AGR issued $750 million aggregate principal amount of unsecured notes maturing in 2025 at a fixed interest rate of 3.20%. Net proceeds of the offering after the price discount and issuance-related expenses were $744 million.

Iberdrola Loan

On December 14, 2020, AVANGRID entered into an intra-group loan agreement with Iberdrola which provided AVANGRID with an unsecured subordinated loan in an aggregate principal amount of $3,000 million (the Iberdrola Loan).

The Iberdrola Loan bears interest (i) from December 16, 2020 until June 15, 2021, at an interest rate of 0.20%, which increases one basis point each month following the first month of the term of the Iberdrola Loan up to a maximum interest rate of 0.25%, and (ii) from June 16, 2021 until the Iberdrola Loan and any accrued and unpaid interest is repaid in its entirety, at AVANGRID's equity cost of capital as published by Bloomberg. Interest is payable on a monthly basis in arrears.

AVANGRID is required to repay the Iberdrola Loan in full upon certain equity issuances by AVANGRID in which Iberdrola participates or a change of control of AVANGRID. In addition, on or after June 15, 2021, upon five business days' notice to Iberdrola, AVANGRID may voluntarily repay the Iberdrola Loan and any accrued and unpaid interest, in whole or in part, without prepayment premium or penalty if there is a change in AVANGRID's business plan and AVANGRID determines that

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the Iberdrola Loan is no longer required. The intra-group loan agreement contains certain customary affirmative and negative covenants and events of default.

As of December 31, 2020, the Iberdrola Loan had no current maturities and is included in "Non-current debt with affiliate" on our condensed balance sheet as we do not intend on repaying the Iberdrola Loan with current assets. Proceeds from the Iberdrola Loan of $1,438 million and $300 million, respectively, are included in "cash and cash equivalents" and "prepayments and other current assets" on our condensed balance sheet as of December 31, 2020. The remainder of the proceeds reduced our commercial paper balance.

Note 4. Cash Dividends Paid by Subsidiaries

Cash dividends paid by subsidiary are as follows:

Years ended December 31, (millions)	2020	2019	2018
AVANGRID Networks	$ 419	$ 433	$ 116

For the years ended December 31, 2020, 2019 and 2018, AVANGRID made capital contributions to Networks of $590 million, $158 million and $50 million, respectively.

During 2020 and 2019, AVANGRID recorded a net non-cash contribution and dividend of $423 million and $219 million, respectively, to and from its subsidiaries to zero out their account balances of notes receivable and payable.

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Item 9. ***Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.***

None.

Item 9A. ***Controls and Procedures.***

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer, or CEO, and our Chief Financial Officer, or CFO, has evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended, or the Exchange Act), as of the end of the period covered by this Annual Report on Form 10-K. Based on such evaluation, our CEO and CFO have concluded that as of such date, our disclosure controls and procedures were effective to provide reasonable assurance that information required to be disclosed by the Company in reports that it files or submits under the Exchange Act is (i) recorded, processed, summarized and reported within the time periods specified in the SEC rules and forms and (ii) accumulated and communicated to the Company's management, including its CEO and CFO, as appropriate to allow timely decisions regarding required disclosure.

Report of Management on Internal Control Over Financial Reporting

The management of AVANGRID is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. AVANGRID's internal control system over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles. AVANGRID's internal control over financial reporting includes those policies and procedures that:

1. pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company;

2. provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with U.S. generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and

3. provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the company's assets that could have a material effect on the financial statements.

Because of inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation. Also, projections of any evaluation of effectiveness to future periods are subject to risk that controls may become inadequate because of changes in condition, or that the degree of compliance with the policies or procedures may deteriorate.

AVANGRID's management assessed the effectiveness of AVANGRID's internal control over financial reporting as of December 31, 2020. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) ("COSO") in Internal Control-Integrated Framework. Based on this assessment, management determined that our internal control over financial reporting was effective as of December 31, 2020.

Our independent registered public accounting firm, KPMG LLP, has issued an audit report on the Company's internal control over financial reporting, which appears in Part II, Item 8 of this Form 10-K.

Changes in Internal Control

There were no changes in our internal control over financial reporting identified in connection with the evaluation required by Rules 13a-15(d) and 15d-15(d) of the Exchange Act during the quarter ended December 31, 2020 that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. ***Other Information.***

None.

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PART III

Item 10. ***Directors, Executive Officers and Corporate Governance.***

For information regarding our executive officers, see Part I of this Annual Report on Form 10-K. Additional information required by this item is incorporated by reference to our Proxy Statement for the 2021 Annual Meeting of Shareholders to be filed with the SEC within 120 days of the fiscal year ended December 31, 2020.

Item 11. ***Executive Compensation.***

The information required by this item is incorporated by reference to our Proxy Statement for the 2021 Annual Meeting of Shareholders to be filed with the SEC within 120 days of the fiscal year ended December 31, 2020.

Item 12. ***Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.***

The information required by this item is incorporated by reference to our Proxy Statement for the 2021 Annual Meeting of Shareholders to be filed with the SEC within 120 days of the fiscal year ended December 31, 2020.

Item 13. ***Certain Relationships and Related Transactions, and Director Independence.***

The information required by this item is incorporated by reference to our Proxy Statement for the 2021 Annual Meeting of Shareholders to be filed with the SEC within 120 days of the fiscal year ended December 31, 2020.

Item 14. ***Principal Accountant Fees and Services.***

The information required by this item is incorporated by reference to our Proxy Statement for the 2021 Annual Meeting of Shareholders to be filed with the SEC within 120 days of the fiscal year ended December 31, 2020.

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Part IV

Item 15. ***Exhibits and Financial Statement Schedules.***

a) The following documents are made a part of this Annual Report on Form 10-K:

1. Financial Statements—Our consolidated financial statements are set forth under Part II, Item 8 "Financial Statements and Supplementary Data."
2. Financial Statement Schedules— Our financial statement schedules are set forth under Part II, Item 8 "Financial Statements and Supplementary Data."
3. Exhibits—The following instruments and documents are included as exhibits to this report.

Exhibit Number	Exhibit Description
2.1	Agreement and Plan of Merger, dated as of February 25, 2015, by and among Avangrid, Inc. (formerly Iberdrola USA, Inc.), Green Merger Sub, Inc. and UIL Holdings Corporation (incorporated herein by reference to Annex A to the proxy statement/prospectus included as Exhibit 2.1 in our Registration Statement on Form S-4 filed with the Securities and Exchange Commission on July 17, 2015).
2.2	Agreement and Plan of Merger, dated as of October 20, 2020, by and among PNM Resources, I Inc., Avangrid, Inc. and NM Green Holdings, Inc. (incorporated herein by reference to Exhibit 2.1 to Form 8-K file with the Securities and Exchange Commission on October 21, 2020).
3.1	Certificate of Incorporation of Avangrid, Inc. (incorporated herein by reference to Exhibit 3.2 to Form 8-K filed with the Securities and Exchange Commission on December 18, 2015).
3.2	Amended and Restated Bylaws of Avangrid, Inc. (incorporated herein by reference to Exhibit 3.1 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended June 30, 2017 filed with the Securities and Exchange Commission on August 1, 2017).
4.1	Specimen Common Stock Certificate (incorporated herein by reference to Exhibit 4.1 to Form S-4/A filed with the Securities and Exchange Commission on October 21, 2015).
4.2	Senior Indenture, dated as of October 7, 2010, between UIL Holdings Corporation and The Bank of New York Mellon, as trustee (incorporated herein by reference to Exhibit 4.1 of UIL Holdings Corporation's Current Report on Form 8-K filed with the Securities and Exchange Commission on October 7, 2010).
4.3	First Supplemental Indenture, dated as of October 7, 2010, between UIL Holdings Corporation and The Bank of New York Mellon, as trustee (incorporated herein by reference to Exhibit 4.2 of UIL Holdings Corporation's Current Report on Form 8-K filed with the Securities and Exchange Commission on October 7, 2010).
4.4	Second Supplemental Indenture, dated as of December 16, 2015, among UIL Holdings Corporation, Green Merger Sub, Inc. and The Bank of New York Mellon, as trustee (incorporated herein by reference to Exhibit 4.2 to Form 8-K filed with the Securities and Exchange Commission on December 18, 2015).
4.5	Third Supplemental Indenture, dated as of December 19, 2016, among Avangrid, Inc., UIL Holdings Corporation and The Bank of New York Mellon, as trustee (incorporated herein by reference to Exhibit 4.5 of AVANGRID's Annual Report on Form 10-K for the fiscal year ended December 31, 2016 filed with the Securities and Exchange Commission on March 10, 2017).
4.6	Indenture, dated as of November 21, 2017, between the Company and The Bank of New York Mellon, as trustee (incorporated herein by reference to Exhibit 4.1 to Form 8-K filed with the Securities and Exchange Commission on November 21, 2017).
4.7	First Supplemental Indenture, dated November 21, 2017, between the Company and The Bank of New York Mellon, as trustee (incorporated herein by reference to Exhibit 4.2 to Form 8-K filed with the Securities and Exchange Commission on November 21, 2017).

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Exhibit Number	Exhibit Description
4.8	Form of Global Note Representing the Notes (incorporated herein by reference to Exhibit 4.3 to Form 8-K filed with the Securities and Exchange Commission on November 21, 2017).
4.9	Second Supplemental Indenture, dated as of May 16, 2019, among Avangrid, Inc. and The Bank of New York Mellon, as trustee (incorporated herein by reference to Exhibit 4.2 to Form 8-K filed with the Securities and Exchange Commission on May 16, 2019).
4.10	Third Supplemental Indenture, dated April 9, 2020, between the Company and The Bank of New York Mellon, as trustee (incorporated herein by reference to Exhibit 4.2 to Form 8-K filed with the Securities and Exchange Commission on April 9, 2020).
4.11	Form of Global Note Representing the Notes (included in Third Supplemental Indenture, dated April 9, 2020, between the Company and The Bank of New York Mellon, as trustee and incorporated herein by reference to Exhibit 4.2 of AVANGRID's Current Report on Form 8-K filed with the SEC on April 9, 2020).
4.12	Description of Avangrid, Inc.'s Securities Registered Pursuant to Section 12 of the Securities Exchange Act of 1934 (incorporated herein by reference to Exhibit 4.9 of AVANGRID's Annual Report on Form 10-K for the fiscal year ended December 31, 2019 filed with the Securities and Exchange Commission on March 2, 2020).
10.1	Shareholder Agreement, dated as of December 16, 2015, by and between Avangrid, Inc. and Iberdrola, S.A. (incorporated herein by reference to Exhibit 4.1 to Form 8-K filed with the Securities and Exchange Commission on December 18, 2015).
10.2	Service Agreement, dated January 1, 2014, between Iberdrola USA, Inc. Management Corporation and Avangrid, Inc. (formerly Iberdrola USA, Inc.) (incorporated herein by reference to Exhibit 10.2 to Form S-4 filed with the Securities and Exchange Commission on July 17, 2015).
10.3	Accession Agreement, dated September 16, 2011, between Iberdrola Renewables Holdings, Inc. and Bank Mendes Gans N.V. (incorporated herein by reference to Exhibit 10.14 to Form S-4 filed with the Securities and Exchange Commission on July 17, 2015).
10.4	Provisions to be Applied to U.S. Participants in Relation to the Regulations for the "2014-2016 Strategic Bonus" for Senior Officers and Officers of Iberdrola, S.A. and Its Group of Companies (incorporated herein by reference to Exhibit 10.20 to Form S-4/A filed with the Securities and Exchange Commission on September 9, 2015). †
10.5	Employment Agreement dated October 1, 2010 among Robert Daniel Kump, Iberdrola USA Networks, Inc. (formerly Iberdrola USA, Inc.) and Iberdrola USA Management Corporation (incorporated herein by reference to Exhibit 10.23 to Form S-4/A filed with the Securities and Exchange Commission on September 9, 2015). †
10.6	Service Contract dated January 16, 2014 between Robert Daniel Kump and Avangrid, Inc. (incorporated herein by reference to Exhibit 10.24 to Form S-4/A filed with the Securities and Exchange Commission on September 9, 2015). †
10.7	Employment Agreement dated March 1, 2008 between R. Scott Mahoney and Iberdrola USA Management Corporation (formerly Energy East Management Corporation) (incorporated herein by reference to Exhibit 10.27 to Form S-4/A filed with the Securities and Exchange Commission on September 9, 2015).†
10.8	Framework Agreement for the Provision of Corporate Services for Iberdrola and the Companies of its Group, and the Declaration of Acceptance, dated July 16, 2015 (incorporated herein by reference to Exhibit 10.28 to Form S-4 filed with the Securities and Exchange Commission on July 17, 2015).
10.9	Equipment Supply Agreement dated December 28, 2014 between Iberdrola Renewables, LLC and Gamesa Wind US, LLC (incorporated herein by reference to Exhibit 10.29 to Form S-4/A filed with the Securities and Exchange Commission on November 6, 2015).

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Exhibit Number	Exhibit Description
10.10	Agreement and Release dated September 25, 2009 between Robert Daniel Kump and Iberdrola USA Management Corporation (formerly Energy East Management Corporation) (incorporated herein by reference to Exhibit 10.31 to Form S-4/A filed with the Securities and Exchange Commission on September 9, 2015). †
10.11	Form of Indemnification Agreement between Avangrid, Inc. (formerly Iberdrola USA, Inc.) and its directors and officers (incorporated herein by reference to Exhibit 10.32 to Form S-4/A filed with the Securities and Exchange Commission on October 21, 2015).†
10.12	UIL Holdings Corporation 2008 Stock and Incentive Compensation Plan as Amended and Restated May 14, 2013 (incorporated herein by reference to Exhibit 99.1 to Form S-8 filed with the Securities and Exchange Commission on December 16, 2015).†
10.13	UIL Holdings Corporation Deferred Compensation Plan Grandfathered Benefits Provisions, dated August 4, 2008 (incorporated herein by reference to Exhibit 99.2 to Form S-8 filed with the Securities and Exchange Commission on December 16, 2015).†
10.14	UIL Holdings Corporation Deferred Compensation Plan Non-Grandfathered Benefits Provisions, as amended and restated effective dated January 1, 2013 (incorporated herein by reference to Exhibit 99.3 to Form S-8 filed with the Securities and Exchange Commission on December 16, 2015).†
10.15	Amended and Restated UIL Holdings Corporation Change In Control Severance Plan II, dated August 4, 2008 (incorporated herein by reference to Exhibit 10.28a of UIL Holdings Corporation's Quarterly Report on Form 10-Q for the quarter ended June 30, 2008).†
10.16	Employment Agreement, dated as of January 1, 2016, among Avangrid, Inc., Avangrid Service Company and James P. Torgerson (incorporated herein by reference to Exhibit 10.1 to AVANGRID's Current Report on Form 8-K filed with the SEC on April 22, 2016).†
10.17	Commercial Paper/Certificates of Deposit Issuing and Paying Agent Agreement dated May 13, 2016 among Avangrid, Inc., as Issuer, and Bank of America, National Association, as Issuing and paying Agent (incorporated herein by reference to Exhibit 10.1 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended June 30, 2016 filed with the Securities and Exchange Commission on August 4, 2016).
10.18	Form of Commercial Paper Dealer Agreement among Avangrid, Inc., as Issuer, and various Dealers (incorporated herein by reference to Exhibit 10.2 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended June 30, 2016 filed with the Securities and Exchange Commission on August 4, 2016).
10.19	Form of Performance Stock Unit Grant Agreement (incorporated herein by reference to Exhibit 10.1 to AVANGRID's Current Report on Form 8-K filed with the SEC on July 19, 2016).†
10.20	Avangrid, Inc. Omnibus Incentive Plan (incorporated herein by reference to Form S-8 filed with the SEC on July 21, 2016).†
10.21	Uncommitted Line of Credit for Standby Letters of Credit Agreement, dated as of December 2, 2016, between Avangrid, Inc. and Crédit Agricole Corporate (incorporated herein by reference to Exhibit 10.44 of AVANGRID's Annual Report on Form 10-K for the fiscal year ended December 31, 2016 filed with the Securities and Exchange Commission on March 10, 2017).
10.22	Substitution Agreement, dated as of December 19, 2016, between UIL Holdings Corporation and Avangrid, Inc. (incorporated herein by reference to Exhibit 10.45 of AVANGRID's Annual Report on Form 10-K for the fiscal year ended December 31, 2016 filed with the Securities and Exchange Commission on March 10, 2017).
10.23	Amended and Restated Avangrid, Inc. Omnibus Incentive Plan (incorporated herein by reference to Exhibit 10.1 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended March 31, 2017 filed with the Securities and Exchange Commission on May 5, 2017).†

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Exhibit Number	Exhibit Description
10.24	Customer Liquidity Agreement, dated December 1, 2017, between Avangrid, Inc., Bank of America, National Association, Iberdrola, S.A., Iberdrola Mexico, S.A. de C.V., and Scottish Power Ltd. (incorporated herein by reference to Exhibit 10.37 of AVANGRID's Annual Report on Form 10-K for the fiscal year ended December 31, 2017 filed with the Securities and Exchange Commission on March 26, 2018).
10.25	Underwriting Agreement, dated November 16, 2017, by and among the Avangrid, Inc., BBVA Securities Inc., BNP Paribas Securities Corp., Citigroup Global Markets Inc., and Wells Fargo Securities, LLC (incorporated herein by reference to Exhibit 1.1 to Form 8-K filed with the Securities and Exchange Commission on November 21, 2017).
10.26	Purchase Agreement, dated January 31, 2018, between Avangrid Renewables Holdings, Inc. and CCI U.S. Asset Holdings LLC (incorporated herein by reference to Exhibit 10.1 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended March 31, 2018 filed with the Securities and Exchange Commission on May 3, 2018).
10.27	Purchase Agreement, dated February 16, 2018, between Avangrid Renewables Holdings, Inc. and Amphora Gas Storage USA, LLC (incorporated herein by reference to Exhibit 10.2 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended March 31, 2018 filed with the Securities and Exchange Commission on May 3, 2018).
10.28	Restricted Stock Unit Grant Notice and Agreement dated June 7, 2018, between Avangrid, Inc. and James P. Torgerson (incorporated herein by reference to Exhibit 10.1 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended June 30, 2018 filed with the Securities and Exchange Commission on August 2, 2018).†
10.29	Transmission Service Agreement, dated June 13, 2018, between Central Maine Power Company and NSTAR Electric Company (d/b/a Eversource) (incorporated herein by reference to Exhibit 10.2 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended June 30, 2018 filed with the Securities and Exchange Commission on August 2, 2018).
10.30	Transmission Service Agreement, dated June 13, 2018, among Central Maine Power Company, Massachusetts Electric Company (d/b/a National Grid), and Nantucket Electric Company (d/b/a National Grid) (incorporated herein by reference to Exhibit 10.3 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended June 30, 2018 filed with the Securities and Exchange Commission on August 2, 2018).
10.31	Transmission Service Agreement, dated June 13, 2018, between Central Maine Power Company and Fitchburg Gas & Electric Light Company (d/b/a Unitil) (incorporated herein by reference to Exhibit 10.4 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended June 30, 2018 filed with the Securities and Exchange Commission on August 2, 2018).
10.32	Transmission Service Agreement, dated June 13, 2018, between Central Maine Power Company and H.Q. Energy Services (U.S.) Inc. (incorporated herein by reference to Exhibit 10.5 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended June 30, 2018 filed with the Securities and Exchange Commission on August 2, 2018).
10.33	Transmission Service Agreement, dated June 13, 2018, between Central Maine Power Company and H.Q. Energy Services (U.S.) Inc. (incorporated herein by reference to Exhibit 10.6 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended June 30, 2018 filed with the Securities and Exchange Commission on August 2, 2018).
10.34	Transmission Service Agreement, dated June 13, 2018, between Central Maine Power Company and H.Q. Energy Services (U.S.) Inc. (incorporated herein by reference to Exhibit 10.7 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended June 30, 2018 filed with the Securities and Exchange Commission on August 2, 2018).

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Exhibit Number	Exhibit Description
10.35	Transmission Service Agreement, dated June 13, 2018, between Central Maine Power Company and H.Q. Energy Services (U.S.) Inc. (incorporated herein by reference to Exhibit 10.8 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended June 30, 2018 filed with the Securities and Exchange Commission on August 2, 2018).
10.36	Revolving Credit Agreement, dated as of June 29, 2018, among Avangrid, Inc., New York State Electric & Gas Corporation, Rochester Gas and Electric Corporation, Central Maine Power Company, The United Illuminating Company, Connecticut Natural Gas Corporation, The Southern Connecticut Gas Company, The Berkshire Gas Company, the several lenders from time to time parties thereto, JPMorgan Chase Bank, N.A., as Administrative Agent, MUFG Bank, LTD. and Santander Bank, N.A., as Co-Documentation Agents, Bank of America, N.A., as Syndication Agent, Banco Bilbao Vizcaya Argentaria, S.A. New York Branch, as Sustainability Agent, and JPMorgan Chase Bank, N.A., Merrill Lynch, Pierce, Fenner & Smith Incorporated, , MUFG Bank, LTD., Santander Bank, N.A., and BBVA Securities, as Joint Lead Arrangers and Joint Bookrunners (incorporated herein by reference to Exhibit 10.1 to AVANGRID's Current Report on Form 8-K filed with the SEC on June 29, 2018).
10.37	Employment Agreement, effective as of July 8, 2018, between Douglas K. Stuver and Avangrid Management Company, LLC (incorporated herein by reference to Exhibit 10.1 to AVANGRID's Current Report on Form 8-K filed with the SEC on July 20, 2018).†
10.38	Executive Variable Pay Plan (incorporated by reference to Exhibit 10.1 to AVANGRID's Current Report on Form 8-K filed with the SEC on February 21, 2018).†
10.39	First Amendment to Transmission Service Agreement dated October 9, 2018 by and between Central Maine Power Company and NSTAR Electric Company (d/b/a Eversource) (incorporated herein by reference to Exhibit 10.1 to Form 8-K filed with the SEC on October 15, 2018).
10.40	First Amendment to Transmission Service Agreement dated October 9, 2018 by and among Central Maine Power Company, Massachusetts Electric Company (d/b/a National Grid) and Nantucket Electric Company (d/b/a National Grid) (incorporated herein by reference to Exhibit 10.2 to Form 8-K filed with the SEC on October 15, 2018).
10.41	First Amendment to Transmission Service Agreement dated October 9, 2018 by and between Central Maine Power Company and Fitchburg Gas and Electric Light Company (d/b/a Unitil) (incorporated herein by reference to Exhibit 10.3 to Form 8-K filed with the SEC on October 15, 2018).
10.42	Amended and Restated Executive Variable Pay Plan (incorporated by reference to Exhibit 10.1 to AVANGRID's Current Report on Form 8-K filed with the SEC on February 20, 2019).†
10.43	Underwriting Agreement, dated May 14, 2019, by and among the Avangrid, Inc., Credit Agricole Securities (USA) Inc, MUFG Securities Americas Inc., Citigroup Global Markets Inc., and Wells Fargo Securities, LLC (incorporated herein by reference to Exhibit 1.1 to Form 8-K filed with the Securities and Exchange Commission on May 16, 2019).
10.44	Term Loan Credit Agreement, dated December 31, 2019, among Avangrid, Inc., The Several Lenders, Mizuho Bank, LTD and The Bank of Nova Scotia (incorporated herein by reference to Exhibit 10.1 to Form 8-K filed with the Securities and Exchange Commission on January 7, 2020).
10.45	Employment Agreement, dated March 30, 2004 between Anthony Marone III and The United Illuminating Company (incorporated herein by reference to Exhibit 10.51 of AVANGRID's Annual Report on Form 10-K for the fiscal year ended December 31, 2019 filed with the Securities and Exchange Commission on March 2, 2020).†
10.46	First Amendment to Employment Agreement, dated as of November 18, 2004, between Anthony Marone III and The United Illuminating Company (incorporated herein by reference to Exhibit 10.52 of AVANGRID's Annual Report on Form 10-K for the fiscal year ended December 31, 2019 filed with the Securities and Exchange Commission on March 2, 2020).†

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Exhibit Number	Exhibit Description
10.47	Second Amendment to Employment Agreement, dated as of August 4, 2008, between Anthony Marone III and The United Illuminating Company (incorporated herein by reference to Exhibit 10.53 of AVANGRID's Annual Report on Form 10-K for the fiscal year ended December 31, 2019 filed with the Securities and Exchange Commission on March 2, 2020).†
10.48	Letter Agreement, dated September 20, 2016, between Anthony Marone III and Avangrid, Inc (incorporated herein by reference to Exhibit 10.54 of AVANGRID's Annual Report on Form 10-K for the fiscal year ended December 31, 2019 filed with the Securities and Exchange Commission on March 2, 2020).†
10.49	Second Amended and Restated Employment Agreement, dated as of May 4, 2020, between Anthony Marone III and Avangrid, Inc.†*
10.50	Underwriting Agreement, dated April 7, 2020, by and among Avangrid, Inc. and BBVA Securities Inc., BNP Paribas Securities Corp., BofA Securities, Inc. and MUFG Securities Americas Inc., as representatives of the several Underwriters named therein (incorporated herein by reference to Exhibit 1.1 to Form 8-K filed with the Securities and Exchange Commission on April 9, 2020).
10.51	Employment Agreement, dated June 11, 2020, by and between Avangrid Management Company, LLC and Dennis V. Arriola (incorporated herein by reference to Exhibit 10.1 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended June 30, 2020 filed with the Securities and Exchange Commission on July 31, 2020).†
10.52	Revolving Credit Agreement, dated June 29, 2020, among Avangrid, Inc., the several lenders from time to time parties thereto, Mizuho Bank, Ltd., as administrative agent, and The Bank of Nova Scotia and Banco Bilbao Vizcaya Argentaria, S.A. New York Branch, as co-syndication agents (incorporated herein by reference to Exhibit 10.2 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended June 30, 2020 filed with the Securities and Exchange Commission on July 31, 2020).
10.53	Amendment No. 2 to the Revolving Credit Agreement, dated June 29, 2020, among Avangrid, Inc., New York State Electric & Gas Corporation, Rochester Gas and Electric Corporation, Central Maine Power Company, The United Illuminating Company, Connecticut Natural Gas Corporation, The Southern Connecticut Gas Company, The Berkshire Gas Company, the several banks and other financial institutions or entities from time to time parties thereto, JPMorgan Chase Bank, N.A., as administrative agent, and Bank of America, N.A., as syndication agent, MUFG Bank, Ltd. and Santander Bank, N.A., as co-documentation agents, and Banco Bilbao Vizcaya Argentaria, S.A. New York Branch, as sustainability agent (incorporated herein by reference to Exhibit 10.3 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended June 30, 2020 filed with the Securities and Exchange Commission on July 31, 2020),
10.54	Second Amendment to Transmission Service Agreement and Consent to Assignment dated June 25, 2020 by and between Central Maine Power Company and NSTAR Electric Company (d/b/a Eversource) (incorporated herein by reference to Exhibit 10.4 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended June 30, 2020 filed with the Securities and Exchange Commission on July 31, 2020).
10.55	Second Amendment to Transmission Service Agreement and Consent to Assignment dated June 25, 2020 by and among Central Maine Power Company, Massachusetts Electric Company (d/b/a National Grid), and Nantucket Electric Company (d/b/a National Grid) incorporated herein by reference to Exhibit 10.5 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended June 30, 2020 filed with the Securities and Exchange Commission on July 31, 2020).
10.56	Second Amendment to Transmission Service Agreement and Consent to Assignment dated June 25, 2020 by and between Central Maine Power Company and Fitchburg Gas and Electric Light Company (d/b/a Unitil) (incorporated herein by reference to Exhibit 10.6 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended June 30, 2020 filed with the Securities and Exchange Commission on July 31, 2020).
10.57	Second Amendment to Transmission Service Agreement and Consent to Assignment dated June 25, 2020 by and between Central Maine Power Company and H.Q. Energy Services (U.S.) Inc. (incorporated herein by reference to Exhibit 10.7 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended June 30, 2020 filed with the Securities and Exchange Commission on July 31, 2020).

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Exhibit Number	Exhibit Description
10.58	Second Amendment to Transmission Service Agreement and Consent to Assignment dated June 25, 2020 by and between Central Maine Power Company and H.Q. Energy Services (U.S.) Inc. (incorporated herein by reference to Exhibit 10.8 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended June 30, 2020 filed with the Securities and Exchange Commission on July 31, 2020).
10.59	Second Amendment to Transmission Service Agreement and Consent to Assignment dated June 25, 2020 by and between Central Maine Power Company and H.Q. Energy Services (U.S.) Inc. (incorporated herein by reference to Exhibit 10.9 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended June 30, 2020 filed with the Securities and Exchange Commission on July 31, 2020).
10.60	Second Amendment to Transmission Service Agreement and Consent to Assignment dated June 25, 2020 by and between Central Maine Power Company and H.Q. Energy Services (U.S.) Inc. (incorporated herein by reference to Exhibit 10.10 of AVANGRID's Quarterly Report on Form 10-Q for the quarter ended June 30, 2020 filed with the Securities and Exchange Commission on July 31, 2020).
10.61	Intra-Group Loan Agreement, dated December 14, 2020, between Avangrid, Inc. and Iberdrola, S.A. (incorporated herein by reference to Exhibit 10.1 to Form 8-K filed with the Securities and Exchange Commission on December 18, 2020).
21.1	Significant subsidiaries of the Registrant.*
23.1	Consent of KPMG LLP, independent registered public accounting firm of Avangrid, Inc.*
31.1	Chief Executive Officer Certification Pursuant to Rule 13a-14(a) and 15d-14(a), As Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.*
31.2	Chief Financial Officer Certification Pursuant to Rule 13a-14(a) and 15d-14(a), As Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.*
32	Chief Executive Officer and Chief Financial Officer Certification Pursuant to 18 United States Code Section 1350, As Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.*
101.INS	Inline XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
101.SCH	Inline XBRL Taxonomy Extension Schema Document.*
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document.*
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document.*
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document.*
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document.*
104	The cover page from the Company's Annual Report on Form 10-K for the year ended December 31, 2019, formatted as Inline XBRL and contained in Exhibit 101.

* Filed herewith.

† Compensatory plan or agreement.

— Confidential treatment has been requested for portions of this document. The omitted portions of this document have been submitted separately to the Securities and Exchange Commission.

The foregoing list of exhibits does not include instruments defining the rights of the holders of certain long-term debt of Avangrid, Inc. and its subsidiaries where the total amount of securities authorized to be issued under the instrument does not

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exceed ten percent (10%) of the total assets of Avangrid, Inc. and its subsidiaries on a consolidated basis; and Avangrid, Inc. hereby agrees to furnish a copy of each such instrument to the SEC on request.

Item 16. ***Form 10-K Summary.***

None.

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SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Avangrid, Inc.

Date: March 1, 2021

By: /s/ Dennis V. Arriola
Dennis V. Arriola
Director and Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Dennis V. Arriola Dennis V. Arriola	Director and Chief Executive Officer (Principal Executive Officer)	March 1, 2021
/s/ Douglas K. Stuver Douglas K. Stuver	Chief Financial Officer (Principal Financial Officer)	March 1, 2021
/s/ Scott M. Tremble Scott M. Tremble	Controller (Principal Accounting Officer)	March 1, 2021
/s/ Ignacio S. Galán Ignacio S. Galán	Chairman of the Board	February 26, 2021
/s/ John E. Baldacci John E. Baldacci	Director	February 26, 2021
/s/ Daniel Alcain López Daniel Alcain López	Director	February 26, 2021
/s/ Pedro Azagra Blázquez Pedro Azagra Blázquez	Director	February 26, 2021
/s/ Robert Duffy Robert Duffy	Director	February 26, 2021
/s/ Teresa Herbert Teresa Herbert	Director	February 26, 2021
/s/ Patricia Jacobs Patricia Jacobs	Director	February 26, 2021
/s/ John L. Lahey John L. Lahey	Director	February 26, 2021
/s/ José Ángel Marra Rodríquez José Ángel Marra Rodríquez	Director	February 26, 2021
/s/ Santiago Martinez Garrido Santiago Martinez Garrido	Director	February 26, 2021
/s/ José Sáinz Armada José Sáinz Armada	Director	February 26, 2021
/s/ Alan D. Solomont Alan D. Solomont	Director	February 26, 2021
/s/ Elizabeth Timm Elizabeth Timm	Director	February 26, 2021

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EXHIBIT 10.49

SECOND AMENDED AND RESTATED EMPLOYMENT AGREEMENT

THIS SECOND AMENDED AND RESTATED EMPLOYMENT AGREEMENT (the "Agreement") is entered into by and among Avangrid Service Company, a Delaware corporation (the "Company"), a wholly-owned subsidiary of Avangrid, Inc., and Anthony Marone, III (the "Executive") on May 4, 2020, and effective as of June 15, 2019 (the "Effective Date").

WHEREAS, The United Illuminating Company, a Connecticut company ("UI"), a wholly-owned subsidiary of Avangrid, Inc., previously entered into an Employment Agreement with the Executive, dated and effective as of March 30, 2004 ("Employment Agreement"), a First Amendment to the Employment Agreement, dated and effective as of November 18, 2004 ("First Amendment"), and a Second Amendment to the Employment Agreement, dated and effective as of August 4, 2008 ("Second Amendment") (the Employment Agreement, First Amendment and Second Amendment are collectively referred to as the "UI Agreements");

WHEREAS, the Executive was appointed to CEO and President of UIL Holdings Corporation, a Connecticut corporation ("UIL"), a wholly-owned subsidiary of Avangrid, Inc., as of on or about September 12, 2016 and executed a letter on September 26, 2016 indicating his understanding and acceptance of the terms of his employment as the CEO and President of UIL ("Letter Agreement") (the UI Agreements and the Letter Agreement are collectively referred to as the "Previous Agreements");

WHEREAS, the Executive was appointed CEO and President of Avangrid Networks, Inc., a Maine corporation and wholly-owned subsidiary of Avangrid, Inc., as of on or about June 6, 2019;

WHEREAS, the Company desires to continue to employ the Executive as CEO and President of Avangrid Networks, Inc., and the Executive desires to be so employed by the Company, and the parties hereto wish to amend and restate the terms of the Previous Agreements and desire to be bound by the terms of this Agreement, which shall supersede and replace all prior oral or written employment agreements, including, but not limited to the Previous Agreements;

NOW THEREFORE, in consideration of the foregoing and the respective covenants and agreements of the parties contained herein, and the services to be rendered to the Company pursuant hereto, the parties hereby agree as follows:

(1) EMPLOYMENT; TERM

(a) The Company hereby agrees to employ the Executive, and the Executive hereby agrees to serve the Company, at the pleasure of the Board of Directors of Avangrid Networks, Inc. (the "Board") and the CEO and President of Avangrid, Inc., all upon the terms and conditions set forth herein, until Executive's employment is terminated in accordance with the terms of this Agreement (the "Term").

(b) The Term will commence on the Effective Date and continue until the Date of Termination (as defined in Section 5(e) of this Agreement).

(2) POSITION AND DUTIES

(a) The Executive shall be employed by the Company as the CEO and President of Avangrid Networks, Inc., or in such other equivalent or higher position as the Board may determine. The Executive shall:

(i) accept such employment and perform and discharge, faithfully, diligently and to the best of the Executive's abilities, the duties and obligations of the Executive's office and such other duties as may from time to time be assigned to the Executive by, or at the direction of, the Board or the CEO and President of Avangrid, Inc.; and

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(ii) devote substantially all of the Executive's working time and efforts to the business and affairs of the Company, Avangrid Networks, Inc. and their respective subsidiaries and affiliates.

(b) Prior to a Change in Control (as defined in Section 4(c) of this Agreement), in the event that the Executive is named by the Board to a position higher in rank or compensation than that applicable at the commencement of the Term, nothing in this Agreement shall obligate the Company to continue such Executive in such higher position; and the Company shall not be deemed in "Breach" of the Agreement (as defined in Section 5(d) of this Agreement) for failure to continue the Executive in such higher position.

(c) As of a Change in Control as herein defined, for the twenty-four month period after such Change in Control, the Company's employment of the Executive shall be without diminishment in the Executive's management responsibilities, duties or powers. In the event that the Executive's employment is not so continued, the Executive may be eligible for benefits on account of a Constructive Termination in accordance with this Agreement.

(3) PLACE OF PERFORMANCE

In his employment by the Company, the Executive shall be based within a fifty (50)-mile radius of the current executive offices of Avangrid, Inc. in Orange, Connecticut.

(4) COMPENSATION

(a) **Base Salary**. Commencing on January 5, 2020, the Executive shall receive a base salary ("Base Salary") at an annual rate of Five Hundred Fifty Thousand Dollars ($550,000.00), payable in accordance with the then customary payroll practices of the Company. The Executive's performance and Base Salary shall be reviewed by the Board at least annually and may be revised upward as a result of any such review. The Executive's Base Salary may be revised downward by the Board contemporaneously with any general reduction of the salary rates of the Company's other executives.

(b) **Incentive Compensation**. During the Term of the Executive's employment hereunder, the Executive shall be eligible to participate in the Company's Executive Variable Pay Plan or any successor plan thereto (the "EVP"). Commencing with the fiscal year 2020 performance period under the EVP, the Executive's EVP opportunity at Target for each EVP performance period during the Term shall be equal to 65% of his Base Salary then in effect for such EVP performance period, and the maximum opportunity shall be equal to 130% of his Base Salary then in effect for such EVP performance period. Executive shall also be eligible to participate in the Avangrid Long-Term Incentive Plan and any successor plan thereto (the "LTIP"), in accordance with and subject to its terms. Entitlement to participation, and continued participation, in any LTIP shall be conditioned upon the Executive fully complying with any stock ownership and retention guidelines from time to time established and promulgated by the Board.

For purposes of this Agreement, the Executive's "Accrued Incentive Compensation" shall mean the amount of any annual short-term incentive compensation earned with respect to the calendar year ended prior to the Date of Termination (as defined in Section 5(e) of this Agreement) but not yet paid as of the Executive's Date of Termination.

The Executive's "Stub-Period Incentive Compensation" shall mean the annual short-term incentive compensation being earned in the year in which the Executive terminates employment, pro-rated for the year in which he terminates service, and shall be equal to that short-term annual incentive compensation payment to which the Executive would be entitled, if any, under the terms of the Company's executive incentive compensation plan, calculated as if he had been employed by the Company on the last day of the year including his Date of Termination, based on actual performance with respect to the achievement of Company goals multiplied by a fraction, the numerator of which is the number of days which have elapsed in such year through the Date of Termination and the denominator of which is 365. The Company shall determine in its discretion the composition of the Executive's scorecard. In the event that the 'gate', if any, is not achieved with respect to Company goals, then no Stub-Period

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Incentive Compensation will be paid. Any Stub-Period Incentive Compensation payable upon termination of the Executive shall be paid in accordance with Section (6)(e) of this Agreement.

(c) **Change in Control Severance Plan**. A "Change in Control" occurs on the date on which any of the following events occur: a change in the ownership of the Company, Avangrid, Inc. or Iberdrola S.A. (collectively an "Employing Company"); a change in the effective control of the Employing Company; and a change in the ownership of a substantial portion of the assets of the Employing Company.

(i) A change in the ownership of the Employing Company occurs on the date on which any one person, or more than one person acting as a group, acquires ownership of stock of the Employing Company that, together with stock held by such person or group constitutes more than 50% of the total fair market value or total voting power of the stock of the Employing Company.

(ii) A change in the effective control of the Employing Company occurs on the date on which either (1) a person, or more than one person acting as a group, acquires ownership of stock of the Employing Company possessing 30% or more of the total voting power of the stock of the Employing Company, taking into account all such stock acquired during the 12-month period ending on the date of the most recent acquisition, or (2) a majority of the members of the Employing Company's Board of Directors is replaced during any 12-month period by directors whose appointment or election is not endorsed by a majority of the members of such Board of Directors prior to the date of the appointment or election, but only if no other corporation is a majority shareholder of the Employing Company.

(iii) A change in the ownership of a substantial portion of assets occurs on the date on which any one person, or more than one person acting as a group, other than a person or group of persons that is related to the Employing Company, acquires assets from the Employing Company, that have a total gross fair market value equal to or more than 50% of the total gross fair market value of all of the assets of the Employing Company immediately prior to such acquisition or acquisitions, taking into account all such assets acquired during the 12-month period ending on the date of the most recent acquisition.

(iv) An event constitutes a Change in Control with respect to the Executive only if he performs services for the Employing Company that has experienced the Change in Control, or the Executive's relationship to the affected Employing Company otherwise satisfies the requirements of Treasury Regulation § 1.409A-3(i)(5)(ii).

(v) In determining whether a person or group has acquired a percentage of stock, stock of the Employing Company held pursuant to the terms of an employee benefit plan of the Employing Company (or any subsidiary thereof) in a suspense account or otherwise unallocated to a participant's account shall be disregarded to the extent that expressing the applicable percentage as a fraction, such shares shall not be included in the numerator, but such shares will be included in the denominator.

(vi) the determination as to the occurrence of a Change in Control shall be based on objective facts and in accordance with the requirements of Internal Revenue Service Code ("Code") §409A.

(d) **Business Expenses**. During the Term, the Executive shall be entitled to receive prompt reimbursement for all reasonable employment-related business expenses incurred by the Executive, in accordance with the policies and procedures established by the Board from time to time for all of the Company's executives, provided that the Executive properly accounts therefor.

(e) **Benefit Programs**. During the Term of the Executive's employment hereunder and to the extent he meets the applicable eligibility requirements, the Executive shall be entitled to participate in and receive benefits under all of the Company's employee benefit plans, programs and arrangements for its similarly situated executives

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on the same terms and conditions that apply to such executives, including, without limitation, any plan or program of an affiliated company in which the Company is a participating employer, but only for so long as the Company remains a participating employer, this includes, but is not limited to, The United Illuminating Company Pension Plan, as amended, and according to its terms, and the Supplemental Executive Retirement Plan of The United Illuminating Company ("UI SERP"), according to its terms. Except as otherwise expressly provided, nothing paid to the Executive under any such plan, program or arrangement presently in effect or made available by the Company in the future shall be deemed to be in lieu of compensation to the Executive under any other Section of this Agreement. Nothing in this Agreement shall require the Company to maintain a particular, benefit, benefit plan or program, or preclude the Company from modifying, amending or terminating any such benefit, plans, programs, Company policy or arrangements, including its participation therein, or eliminating, reducing or otherwise changing any benefit provided thereunder, so long as such change similarly affects all similarly situated employees of the Company and is in compliance with applicable law.

(f) **Vacations and Holidays**. The Executive shall be entitled to that number of weeks of paid vacation in each calendar year determined by the Board from time to time to be available to similarly situated Company executives, and shall also be entitled to all paid holidays afforded by the Company to its management employees.

(5) TERMINATION

(a) **Death or Disability**. The Executive's employment hereunder shall terminate upon the Executive's death or termination due to disability (as described in Section 6(a) of this Agreement).

(b) **Termination by Company for Cause**. The Company may at any time by written notice to the Executive terminate the Executive's employment for Cause in accordance with the following provisions:

(i) **Termination for Cause Prior to a Change in Control**. Prior to the date of a Change in Control, the Company shall be deemed to have "Cause" to terminate the Executive's employment hereunder only upon the Executive's:

(1) failure to comply with any material term of this Agreement, or to perform and discharge the duties or obligations of the Executive's office, or such other duties as may from time to time be assigned to the Executive by, or at the direction of, the Board, faithfully, diligently, and competently, unless any such failure is cured in all material respects to the reasonable satisfaction of the Board within sixty (60) days after the Executive receives written notice of such failure; or

(2) failure to devote substantially all of his working time and efforts to the business and affairs of the Company unless any such failure is cured in all material respects to the reasonable satisfaction of the Board within sixty (60) days after the Executive receives written notice of such failure; or

(3) misconduct that is demonstrably injurious to the interests of the Company, Avangrid Networks, Inc. or any of their respective Affiliates (as that term is defined in Section 9) unless such misconduct is rectified in all material respects to the reasonable satisfaction of the Board within thirty (30) days after the Executive receives written notice of such misconduct; or

(4) commission of a serious crime, such as an act of fraud, misappropriation of funds, embezzlement, or a crime involving personal dishonesty or moral turpitude.

(ii) **Termination for Cause After a Change in Control**. During the period that commences on a Change in Control and for twenty-four (24) months thereafter (the "Change in Control Protective Period"), and subject to the same notice and cure provisions specified above, the Company (or its successor or other entity employing the Executive following such Change in

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Control) shall be deemed to have Cause to terminate the Executive's employment hereunder only upon the Executive's:

(1) commission of a serious crime, such as an act of fraud, misappropriation of funds, embezzlement, or a crime involving personal dishonesty or moral turpitude; or

(2) misconduct that is demonstrably injurious to the interests of the Company, Avangrid Networks, Inc. or any of their respective Affiliates; or

(3) willful failure of the Executive to substantially perform his duties (other than by reason of incapacity due to physical or mental illness or injury).

(c) **Termination by Company without Cause**. The Company may terminate the Executive's employment at any time, without cause, upon ninety (90) days prior written notice to the Executive.

(d) **Termination by Executive**.

(i) **Breach by the Company, not during Change of Control Protective Period**. If the Executive is not in default of any of the Executive's obligations under Section (2), (9), (10) or (11) hereof, the Executive may terminate employment hereunder on account of a Constructive Termination in accordance with this Section (5)(d)(i). For purposes of this Agreement, a Constructive Termination means:

(1) a Separation from Service (defined as a Separation from Service within the meaning of Code §409A and related regulations) within ninety (90) days of the initial occurrence of one of the following events arising without the consent of the Executive (a "Constructive Termination Event"):

(A) A material diminution in the Executive's annual base salary rate, unless such reduction is part of, and consistent with, a general reduction of the compensation rates of all employees of the Company or of the Executive's business unit;

(B) Except as provided in Section (2)(b), a material diminution in the Executive's authority, duties, or responsibilities, including the assignment of duties materially inconsistent in any adverse respect with such Executive's position, duties, responsibilities and status with the Company immediately prior thereto, or diminishment in such Executive's management responsibilities, duties or powers as in effect immediately prior thereto, or the removal from or failure to re-elect such Executive to any such position or office;

(C) A requirement that the Executive relocate his principal place of employment by more than fifty (50) miles from the Company's current executive offices in Orange, Connecticut; or

(D) Any other action or inaction that constitutes a material breach by the Company of the Agreement, including (1) a failure to include the Executive in the management salary compensation programs then in effect on substantially the same terms and conditions as that applicable to the other officers or similarly situated executives of the Company; (2) a failure to continue the Executive's participation in the material benefit plans of the Company on substantially the same basis, both in terms of the amount of benefits provided (other than due to the Company's stock price performance, provided such performance is a relevant criterion in determining the amount of benefits) and the level of the

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Executive's participation relative to other officers or similarly situated executives of such Company, as that in effect immediately prior thereto; or (3) a failure to renew this Agreement at the time such Agreement expires, provided that the Executive was willing and able to execute a new Agreement providing terms and conditions substantially similar to those in the expiring Agreement and to continue working for the Company; and

(2) The Executive has given notice to the Board stating that in the Executive's opinion at least one of the Constructive Termination Events has occurred and setting forth in reasonable detail the relevant facts, and such notice was given within thirty-one (31) days of the occurrence of the Constructive Termination Event; and

(3) The Company shall have failed to remedy or otherwise cure the situation within thirty-one (31) days after receipt of the notice.

(ii) Breach by the Company, during Change of Control Protective Period. If the Executive is not in default of any of the Executive's obligations under Section (2), (9), (10) or (11) hereof, the Executive may terminate employment hereunder on account of a Constructive Termination as defined herein so long as the Executive's Separation from Service occurs within 90 days of the initial occurrence of the Constructive Termination Event and until the Separation from Service, the Executive was willing and able to continue working for the Company and the Company did not have grounds to terminate the Executive's employment for Cause.

(iii) In the absence of Breach by the Company. If the Executive is not in default of any of the Executive's obligations under Section (2), (9), (10) or (11) hereof, the Executive may terminate employment in the absence of a Breach by the Company, effective upon at least ninety (90) days prior written notice.

(e) **Date of Termination**. For purposes of this Agreement, the "Date of Termination" is defined as (i) the Executive's date of death, in the event of his death; or the date of his termination due to disability, in the case of disability, or (ii) the date specified in the notice of termination, in the case of the Executive's termination pursuant to Sections (5)(b), (5)(c), 5(d) hereof.

(6) CONSEQUENCES OF TERMINATION OR NON-RENEWAL.

(a) **Termination on Death or Disability; or by the Executive in the Absence of a Breach by the Company**. If the Executive's employment terminates by reason of the Executive's death, or in the event that the Executive's employment is terminated due to total or partial physical or mental disability such that the Executive becomes entitled to long-term disability benefits under the Company's long-term disability plan, or if the Executive terminates employment hereunder in the absence of a Breach by the Company upon ninety (90) days prior written notice, the Company shall pay to the Executive or, in the event of death or disability, the Executive's personal representative and/or spouse:

(i) the Executive's Base Salary, earned but unpaid as of the Date of Termination, and Accrued Incentive Compensation (as defined in Section 4(b));

(ii) Stub-Period Incentive Compensation (as defined in Section 4(b)) earned, but unpaid, as of the Date of Termination, but only in the case of the Executive's death or termination due to disability, and not in the case of his voluntary termination; plus

(iii) any amounts payable pursuant to (4)(d) (unreimbursed business expenses), (4)(e) (employee benefits due and owing), and 4(f) (accrued, but unpaid vacation or holidays); plus

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(iv) any benefits or amounts payable, on account of the Executive's (A) exercise of his then exercisable rights under any long-term incentive compensation plan or arrangement, and (B) participation in any deferred compensation plan in which he was a participant as of his termination of service.

Pending a determination that the Executive is entitled to long-term disability benefits, the Executive's short-term disability benefits shall be extended, as necessary at 50% of Base Salary, if his length of employment with the Company is of such short duration that his short term disability benefits would otherwise expire before his entitlement to long-term disability benefits is determined.

Upon payment of these amounts, the Company shall have no further obligation to the Executive, the Executive's personal representative and/or spouse under this Agreement or on account of, or arising out of, the termination of the Executive's employment.

(b) **Upon Termination for Cause; or by the Executive on fewer than 90 day's notice**. If the Company terminates the Executive's employment for Cause, or the Executive terminates employment hereunder in the absence of a Breach by the Company and upon fewer than ninety (90) days prior written notice, the Company shall pay to the Executive:

(i) the Executive's Base Salary earned, but unpaid, as of the Date of Termination; plus

(ii) any amounts payable pursuant to Sections (4)(d), (4)(e), and 4(f) hereof, and

(iii) any benefits payable under any elective non-qualified deferred compensation plan in which the Executive had been a participant, other than any benefit under the UI SERP or any other supplemental executive retirement plan of the Company or an Affiliate, whereupon the Company shall have no further obligation to the Executive under this Agreement or on account of, or arising out of, the termination of the Executive's employment.

(c) **Upon Termination Without Cause or a Constructive Termination prior to a Change in Control**. If the Company terminates the Executive's employment hereunder without Cause or if the Executive terminates the Executive's employment hereunder on account of a Constructive Termination, and in either case the termination constitutes an Involuntary Separation from Service within the meaning of Treasury Regulations Section 1.409A-1(n) and is not upon a Change in Control or within the Change in Control Protective Period, the Company shall pay or provide (as applicable) to the Executive, all of the following:

(i) the Executive's Base Salary, Accrued Incentive Compensation and Stub-Period Incentive Compensation earned, but unpaid, as of the Date of Termination; plus

(ii) any amounts payable pursuant to Sections 4(d), 4(e), and 4(f); plus

(iii) any benefits or amounts payable, on account of the Executive's (A) exercise of his then exercisable rights under any long-term incentive compensation plan or arrangement, and (B) participation in any deferred compensation plan in which he was a participant as of his termination of service; plus

(iv) a lump sum severance payment in an amount equal to the product of 1/12 of the Executive's Base Salary rate approved by the Board at the time of its most recent review of the salary rates of all of the Company's executives, plus 1/12 of the short-term annual incentive compensation payment to which the Executive would be entitled, calculated as if he had been employed by the Company on the last day of the year of his termination, as if both personal goals and Company goals had been achieved 'at Target', multiplied by the number of whole and partial years of the Executive's service as an Employee of the Company at termination (not to be less than

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12 nor more than 24 years), which the parties agree would be 24 years given the Executive's length of service.

(v) benefits under the Company's health care plans during the COBRA continuation period on the same terms as are then available to active employees of the Company.

(d) **Separation from Service**. Notwithstanding anything herein to the contrary, no compensation constituting severance or deferred compensation shall be paid under the Agreement upon a termination of employment or termination of service unless such termination of employment or termination of service constitutes a Separation from Service as defined herein.

(e) **Timing of Payment**. Any cash amount that is due and owing to the Executive upon a termination of service pursuant to Section (6) or Section (7) will be paid on the thirtieth (30th) day following the Executive's Separation from Service and in no event may the Executive designate the timing or year of payment. Notwithstanding the foregoing, however, (i) any Stub-Period Incentive Compensation shall be calculated in accordance with the terms of the applicable plan or program and such incentive compensation and that portion of any severance payment that is based on such incentive compensation shall be paid at the same time that such incentive compensation generally would be payable to all other employees, but in no event later than March 15th of the calendar year following the end of the performance period to which such incentive compensation relates; (ii) any long-term incentive compensation shall be calculated in accordance with the terms of the applicable plan or program and such incentive compensation shall be paid at the same time that such incentive compensation generally would be payable to all other employees, but in no event later than March 15th of the calendar year following the end of the performance period to which such compensation relates; and (iii) any qualified or non-qualified deferred compensation payable pursuant to the terms of a plan of the Company shall be paid in accordance with the terms of the applicable plan.

(f) **Release**. All payments and obligations of the Company under Section (6) and (7) shall be conditioned upon the execution and delivery by Executive to the Company of a full and effective release by Executive of any liability by the Company to Executive in form and substance reasonably satisfactory to the Company.

(7) CHANGE IN CONTROL

(a) If on, or within twenty-four (24) months following, a Change in Control, the Company (or its successor or other entity employing the Executive following such Change in Control) either terminates the Executive's employment hereunder without Cause or fails to renew this Agreement on substantially identical terms, or if the Executive terminates the Executive's employment on account of a Constructive Termination (as defined herein), and in any such case the termination constitutes an Involuntary Separation from Service within the meaning of Treasury Regulations Section 1.409A-1(n), then the Executive shall be entitled to the following:

(i) the Executive's Base Salary, Accrued Incentive Compensation and Stub-Period Incentive Compensation earned, but unpaid, prior to the Date of Termination; plus

(ii) any amounts payable pursuant to Sections 4(d), 4(e), and 4(f) hereof; plus

(iii) any benefits or amounts payable, on account of the Executive's (A) exercise of his then exercisable rights under any long-term incentive compensation plan or arrangement, and (B) participation in any deferred compensation plan in which he was a participant as of his termination of service.

(b) For purposes of this Agreement, Change in Control shall mean "Change in Control" as defined in Section 4(c) of this Agreement.

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(c) During the Change in Control Protective Period, the Executive's Base Salary may not be reduced to an annual rate less than the Base Salary rate fixed by the Board as a result of its most recent review of salary rates, unless such reduction is part of, and consistent with, a general reduction of the compensation rates of all employees of the Company, its successor, or purchaser of assets, as the case may be.

(d) Payment of benefits under this Section 7 shall be subject to, and conditioned upon, the provisions of Section 6(e) and (f) hereof.

(8) RESERVED FOR FUTURE USE

(9) CONFIDENTIAL INFORMATION

The Executive recognizes that the Executive's employment by the Company is one of highest trust and confidence by reason of his access to certain trade secrets, confidential business practices, and proprietary information concerning the Company or any person or entity that directly, or indirectly through one or more intermediaries, controls or is controlled by, or is under common control with, the Company (an "Affiliate"), including, without limitation, the Company's methods of doing business, marketing and strategic business plans, employees' compensation and contract terms, customer lists and customer characteristics (collectively referred to as "Proprietary Information"). The Executive agrees and covenants to exercise utmost diligence to protect and safeguard the trade secrets, confidential business practices and Proprietary Information concerning the Company and any Affiliate. The Executive further agrees and covenants that, except with the prior written consent of the Company, he will not, either during the Term hereof or thereafter, directly or indirectly, use for his own benefit or for the benefit of any other person or organization, or disclose, disseminate or distribute to any other person or organization, any of the Proprietary Information (whether or not acquired, learned, obtained or developed by the Executive alone or in conjunction with another), unless and until such Proprietary Information has become a matter of public knowledge through no action or fault of the Executive or unless otherwise required by court order to comply with legal process. All memoranda, notes, records, drawings, documents or other writings whatsoever made, compiled, acquired or received by the Executive during the Term hereof arising out of, in connection with, or related to any activity or business of the Company are and shall continue to be the sole and exclusive property of the Company, and shall, together with all copies thereof, be returned and delivered to the Company by the Executive immediately, when he ceases to be employed by the Company, or at any other time upon the Company's demand.

(10) NON-COMPETITION

The Executive agrees and covenants that, during the Term of this Agreement and for a period of twelve (12) months following the month during which the Executive ceases to be employed by the Company, the Executive will not, in any capacity, directly or indirectly, whether as a consultant, employee, officer, director, partner, member, principal, shareholder, or otherwise:

(a) compete with the Company in the marketing of energy services related to the delivery or use, at retail, of electricity in the Company's franchise territory; or

(b) engage in any business activity that would, directly or indirectly, diminish the retail sales of electricity in the Company's franchise territory; expressly provided, however that nothing herein shall be construed to prevent the Executive from being employed by, or becoming a consultant to, an entity that engages in energy conservation and load management programs and services as a contractor or subcontractor of the Company; or

(c) directly or indirectly divert or attempt to divert from the Company or any Affiliate any business in which such entity has been actively engaged during the Term hereof, or in any way interfere with the relationships that the Company or any Affiliate has with its customers or sources of supply; or

(d) directly or indirectly interfere or attempt to interfere with the relationship between the Company or any Affiliate and any of such entity's employees, unless the Company has granted prior written approval

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which may be withheld for any reason. Nothing in this Section shall be construed to prohibit the ownership by the Executive of less than five percent (5%) of any class of securities of any entity that is engaged in any of the foregoing businesses having a class of securities registered pursuant to the Securities Exchange Act of 1934 (the "Exchange Act"), provided that such ownership represents a passive investment and that neither the Executive, nor any group of persons including the Executive, in any way, directly or indirectly, manages or exercises control of such entity, guarantees any of its financial obligations, or otherwise takes any part in its business, other than through exercising the Executive's rights as a shareholder.

For purposes of this Section "Affiliate" means any entity that directly or indirectly controls, is controlled by, or is under common control with the Company.

As used in Sections 9-11, the term the "Company" shall include Avangrid Service Company, its affiliates, its parent and any of their respective affiliates, subsidiaries, assigns, or successors to, or acquirers of, the business or assets of the Company.

(11) DISCLOSURE AND ASSIGNMENT OF INVENTIONS AND DISCOVERIES

(a) **Disclosure of Inventions**. The Executive agrees to make prompt and complete disclosure to the Company of all inventions and discoveries made or conceived by him, alone or with others, while this Agreement is in effect, or within a reasonable time thereafter, which arise out of or relate to the services rendered pursuant to this Agreement. The Executive also agrees to keep necessary records, including notes, sketches, drawings, models and data supporting all such inventions and discoveries made by him, alone or with others, during the course of performing the services pursuant to this Agreement, and the Executive agrees to furnish the Company, upon request, all such records.

(b) **Assignment of Inventions and Discoveries**. The Executive also agrees that he will assign to the Company all inventions and discoveries made by him which arise out of and pertain to the services rendered pursuant to this Agreement, together with all domestic and foreign patents as may be obtained on these inventions and discoveries. The Executive further agrees that, upon request of the Company, he will execute all necessary papers and cooperate in the fullest degree with the Company in securing, maintaining and enforcing any such patents which arise out of his services under this Agreement. It is understood, however, that these obligations undertaken by Executive will be at no expense to him.

(12) MISCELLANEOUS.

(a) **Equitable Remedies**. The Executive acknowledges that the restrictions provided for in Sections (9) through (11) are reasonable and necessary in order to protect the legitimate interests of the Company and its Affiliates; and that any violation thereof would result in serious damage and irreparable injury to the Company and its Affiliates. Further, the Executive acknowledges that the services to be rendered by him are of such unique and extraordinary nature, and the resulting injury to the Company from a breach of Sections (9) through (11), inclusive, by the Executive would be of such a nature, that an action at law for the collection of damages would not provide adequate relief to the Company for the enforcement of its rights in the event of an actual or threatened violation by the Executive of his commitments and obligations under Sections (9) through (11). The Executive agrees that upon the actual or threatened breach or violation of any of the commitments under Section (9) through (11), the Company shall be entitled to both preliminary and permanent injunctive relief, in any action or proceeding brought in an appropriate court having jurisdiction over the Executive, to restrain him from committing any violation of any such commitments and obligations.

(b) **Effect Of Breach**. All payments and other benefits payable but not yet distributed to Executive under Sections (6) or (7) shall be forfeited and discontinued in the event that the Executive violates Sections (9) through (11) of this Agreement, or willfully engages in conduct which is materially injurious to the Company, monetarily or otherwise, all as determined in the sole discretion of the Company.

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(c) **Successors; Binding Agreement; Assignment**.

(i) The Company will require the acquirer of all or substantially all of the business or assets of the Company (whether directly or indirectly, by purchase of stock or assets, merger, consolidation or otherwise), by agreement in form and substance reasonably satisfactory to the Executive, to expressly assume and agree to perform this Agreement in the same manner and to the same extent that the Company would be required to perform it if no such succession had taken place. As used in this Section, the term the "Company" shall include Avangrid Service Company, and any successor to, or acquirer of, the business or assets of the Company that executes and delivers the agreement provided for in this Section (12)(c) or which otherwise becomes bound by all the terms and provisions of this Agreement by operation of law.

(ii) This Agreement, and the Executive's rights and obligations hereunder, may not be assigned by the Executive. Any attempted assignment of this Agreement by the Executive shall be void and of no force and effect. This Agreement and all rights of the Executive hereunder shall inure to the benefit of and be enforceable by the Executive's personal or legal representatives, executors, administrators, successors, heirs, distributees, devisees and legatees.

As used in this Section, the term the "Company" shall include Avangrid Service Company, and any successor to, or acquirer of, the business or assets of the Company that executes and delivers the agreement provided for in this Section (12)(c) or which otherwise becomes bound by all the terms and provisions of this Agreement by operation of law.

(d) **Notices.** For the purpose of this Agreement, notices and all other communications to either party hereunder provided for in the Agreement shall be in writing and shall be deemed to have been duly given when delivered or mailed by United States certified or registered mail, return receipt requested, postage prepaid, addressed, in the case of the Company, to the Secretary of the Company at 180 Marsh Hill Road, Orange, CT 06477, or, in the case of the Executive, to the Executive at his residence, or to such other address as either party shall designate by giving written notice of such change to the other party.

(e) **Waiver; Amendment**. No provision of this Agreement may be modified, waived or discharged unless such waiver, modification or discharge is approved by the Board and agreed to in a writing signed by the Executive and the Company. No waiver by either party hereto at any time of any breach by the other party hereto of, or compliance with, any condition or provision of this Agreement to be performed by such other party shall be deemed a waiver of any similar or dissimilar provisions or conditions at the same or at any prior or subsequent time. No agreements or representations, oral or otherwise, express or implied, with respect to the subject matter hereof have been made by either party that are not set forth expressly in this Agreement.

(f) **Governing Law; Severability**. The validity, interpretation, construction and performance of this Agreement shall be governed by the laws of the State of Connecticut. The validity or unenforceability of any provision or provisions of this Agreement shall not affect the validity or enforceability of any other provision of this Agreement, which shall remain in full force and effect. In the event one or more of the provisions of this Agreement should, for any reason, be held to be invalid, illegal or unenforceable in any respect, the parties agree that such provisions shall be legally enforceable to the extent permitted by applicable law, and that any court of competent jurisdiction shall so enforce such provision, or shall have the authority hereunder to modify it to make it enforceable to the greatest extent permitted by law.

(g) **Code Section 409A Compliance**. The parties hereto recognize that certain provisions of this Agreement may be affected by Section 409A of the Code and guidance issued thereunder, and agree to amend this Agreement, or take such other action as may be necessary or advisable, to comply with Section 409A. It is intended that all payments hereunder shall comply with Section 409A and the regulations promulgated thereunder so as to not subject the Executive to payment of interest or any additional tax under Section 409A. In furtherance thereof, if payment or provision of any amount or benefit hereunder that is subject to Section 409A at the time specified herein would subject such amount or benefit to any additional tax under Section 409A, the payment or provision of such

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amount or benefit shall be postponed to the earliest date on which the payment or provision of such amount or benefit could be made without incurring such additional tax. In addition, to the extent that any regulations or other guidance issued under Section 409A (after application of the previous provisions of this Section (12)G)) would result in the Executive's being subject to the payment of interest or any additional tax under Section 409A, the parties agree, to the extent reasonably possible, to amend this Agreement in order to avoid the imposition of any such interest or additional tax under Section 409A, which amendment shall have the minimum economic effect necessary and be reasonably determined in good faith by the Company and the Executive.

Notwithstanding anything herein to the contrary, it is expressly understood that at any time the Company (or any related employer treated with the Company as the service recipient for purposes of Code Section 409A) is publicly traded on an established securities market (as defined for purposes of Code Section 409A), if a payment or provision of an amount or benefit constituting a deferral of compensation is to be made pursuant to the terms of this Agreement to the Executive on account of a Separation from Service (as defined herein) at a time when the Executive is a Specified Employee (as defined for purposes of Code Section 409A(a)(2)(B)(i)), such deferred compensation shall not be paid to the Executive prior to the date that is six (6) months after the Separation from Service. In the event this restriction applies, the deferred compensation that the Executive would have otherwise been entitled to during the restriction period will be accumulated and paid (without adjustment for the delay in payment) on the first business day of the seventh month following the date of the Executive's Separation from Service.

The parties hereto intend that the Agreement, as amended, be consistent with IRS Notice 2007-78, IRS Notice2007-86 and other Code Section 409A transition relief, and it shall be interpreted accordingly.

(h) **No Conflict**. The Executive hereby represents and warrants to the Company that neither the execution nor the delivery of this Agreement, nor the employment of the Executive by the Company will result in the breach of any agreement to which the Executive is a party.

(i) **Survival**. The provisions of this Agreement shall not survive the termination of this Agreement or of the Executive's employment hereunder, except that the provisions of Sections (6) through (12) hereof shall survive such termination and shall be binding upon the Executive, the Executive's personal representative and/or spouse, the Company, and the Company's successors and assigns.

(j) **Counterparts; Facsimile Execution**. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original but all of which together shall constitute one and the same instrument. Facsimile execution and delivery of this Agreement is legal, valid and binding execution and delivery for all purposes.

(k) **Entire Agreement.** This Agreement contains the entire agreement and understanding between the parties hereto in respect of Executive's employment and supersedes, cancels and annuls any prior or contemporaneous written or oral agreements, understandings, commitments and practices between them respecting Executive's employment except as specifically referenced herein.

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IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the day and year first above written.

AVANGRID SERVICE COMPANY

Date: May 4, 2020

/s/ Peter Church
Peter Church
Chief Human Resources Officer

EXECUTIVE

Date: May 4, 2020

/s/ Anthony Marone, III
Anthony Marone, III

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EXHIBIT 21.1

LIST OF SUBSIDIARIES OF Avangrid, Inc.

Name of Subsidiary	State or Jurisdiction of Incorporation Or Organization
Avangrid Networks, Inc.(1)*	Maine
New York State Electric & Gas Corporation(2)	New York
Rochester Gas and Electric Corporation(2)	New York
Central Maine Power Company(2)	Maine
Maine Natural Gas Corporation(2)	Maine
UIL Holdings Corporation(2)	Connecticut
The United Illuminating Company(4)	Connecticut
The Southern Connecticut Gas Company(4)	Connecticut
Connecticut Natural Gas Corporation(4)	Connecticut
The Berkshire Gas Company(4)	Massachusetts
Avangrid Renewables Holdings, Inc.(1)*	Delaware
Avangrid Renewables, LLC(3)	Oregon

(1) Subsidiary of Avangrid, Inc.
(2) Subsidiary of Avangrid Networks, Inc.
(3) Subsidiary of Avangrid Renewables Holdings, Inc.
(4) Subsidiary of UIL Holdings Corporation

* Holding Company

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EXHIBIT 23.1

Consent of Independent Registered Public Accounting Firm

The Board of Directors
Avangrid, Inc.:

We consent to the incorporation by reference in the registration statement (No. 333-231251) on Form S-3 and registration statements (No. 333-212616 and No. 333-208571) on Form S-8 of Avangrid, Inc. of our reports dated March 1, 2021, with respect to the consolidated balance sheets of Avangrid, Inc. as of December 31, 2020 and 2019, the related consolidated statements of income, comprehensive income, changes in equity, and cash flows for each of the years in the three-year period ended December 31, 2020, and the related notes (and financial statement schedule I), and the effectiveness of internal control over financial reporting as of December 31, 2020, which reports appear in the December 31, 2020 annual report on Form 10-K of Avangrid, Inc.

/s/ KPMG LLP

New York, New York
March 1, 2021

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EXHIBIT 31.1

CERTIFICATION

I, Dennis V. Arriola, certify that:

1. I have reviewed this annual report on Form 10-K of Avangrid, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 1, 2021

/s/ Dennis V. Arriola
Dennis V. Arriola
Director and Chief Executive Officer

PUBLIC

EXHIBIT 31.2

CERTIFICATION

I, Douglas K. Stuver, certify that:

1. I have reviewed this annual report on Form 10-K of Avangrid, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 1, 2021

/s/ Douglas K. Stuver

Douglas K. Stuver
Chief Financial Officer

PUBLIC

EXHIBIT 32

CERTIFICATION OF CHIEF EXECUTIVE OFFICER AND CHIEF FINANCIAL OFFICER
Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

Pursuant to 18 U.S.C. 1350, the undersigned, Dennis V. Arriola and Douglas K. Stuver, the Chief Executive Officer and Chief Financial Officer, respectively, of Avangrid, Inc. (the "issuer"), do each hereby certify that the report on Form 10-K to which this certification is attached as an exhibit (the "report") fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)) and that information contained in the report fairly presents, in all material respects, the financial condition and results of operations of the issuer.

/s/ Dennis V. Arriola

Dennis V. Arriola
Director and Chief Executive Officer
Avangrid, Inc.
March 1, 2021

/s/ Douglas K. Stuver

Douglas K. Stuver
Chief Financial Officer
Avangrid, Inc.
March 1, 2021

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VINEYARD WIND

ATTACHMENT TO SECTION 5

Attachment 5.6-21: Iberdrola Annual Report 2018

PUBLIC

Annual Financial Report

Iberdrola, S.A. and subsidiaries

Financial year 2018

IBERDROLA

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AUDITOR’S REPORT

PUBLIC

KPMG Auditores, S.L.
Torre Iberdrola
Plaza Euskadi, 5
Planta 17
48009 Bilbao

Independent Auditor's Report on the Consolidated Annual Accounts

(Translation from the original in Spanish. In the event of discrepancy, the Spanish-language version prevails.)

To the Shareholders of Iberdrola, S.A.

REPORT ON THE CONSOLIDATED ANNUAL ACCOUNTS

Opinion

We have audited the consolidated annual accounts of Iberdrola, S.A. (the "Parent") and subsidiaries (together the "Group"), which comprise the consolidated statement of financial position at 31 December 2018, and the consolidated income statement, consolidated statement of comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flows for the year then ended, and consolidated notes.

In our opinion, the accompanying consolidated annual accounts give a true and fair view, in all material respects, of the consolidated equity and consolidated financial position of the Group at 31 December 2018 and of its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards as adopted by the European Union (IFRS-EU) and other provisions of the financial reporting framework applicable in Spain.

Basis for Opinion

We conducted our audit in accordance with prevailing legislation regulating the audit of accounts in Spain. Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Consolidated Annual Accounts* section of our report.

We are independent of the Group in accordance with the ethical requirements, including those regarding independence, that are relevant to our audit of the consolidated annual accounts in Spain pursuant to the legislation regulating the audit of accounts. We have not provided any non-audit services, nor have any situations or circumstances arisen which, under the aforementioned regulations, have affected the required independence such that this has been compromised.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

KPMG Auditores S.L., sociedad española de responsabilidad limitada y firma miembro de la red KPMG de firmas independientes afiliadas a KPMG International Cooperative ("KPMG International"), sociedad suiza.
Paseo de la Castellana, 259C – Torre de Cristal – 28046 Madrid

Inscrita en el Registro Oficial de Auditores de Cuentas con el nº.S0702, y en el Registro de Sociedades del Instituto de Censores Jurados de Cuentas con el nº.10.
Reg. Mer Madrid, T. 11.961, F. 90, Sec. 8, H. M -188.007, Inscrip. 9
N.I.F. B-78510153

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Key Audit Matters

Key audit matters are those matters that, in our professional judgement, were of most significance in the audit of the consolidated annual accounts of the current period. These matters were addressed in the context of our audit of the consolidated annual accounts as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Recoverability of non financial assets See note 12 to the consolidated annual accounts	
Key Audit Matter	*How the Matter was Addressed in Our Audit*
The principal activities of the different businesses included in the consolidated annual accounts of the Group are related to the generation, transmission, distribution and supply of electricity, and therefore the balances recognised under intangible assets and property, plant and equipment are highly significant. Furthermore, as a result of the acquisitions made in recent years, the consolidated annual accounts include goodwill for an amount of Euros 7,838 million. IFRS-EU determine the need to carry out an analysis of the recoverable amounts of assets in those cases in which indications of impairment were identified. Goodwill, intangible assets with indefinite useful lives and in-process intangible assets are not amortised, but are instead tested for impairment at least on an annual basis. The calculation of the recoverable amount of non-current assets indicated in the preceding paragraphs is determined through the use of methodologies based on discounted cash flows, the estimation of which requires the use of a high degree of judgement.	Our audit procedures included the following: ▪ Assessing the design and implementation of the key controls related to the process of determining recoverable amount. ▪ Assessing the reasonableness of the methodology used to calculate value in use and the main assumptions considered, with the involvement of our specialists. ▪ Analysing the consistency of the estimated growth in future cash flows with the business plans approved by the governing bodies. We also contrasted the cash flow forecasts estimated in prior years with the actual cash flows obtained. ▪ Assessing the sensitivity of certain assumptions to changes that are considered reasonable. ▪ Assessing whether the disclosures in the consolidated annual accounts comply with the requirements of the applicable financial reporting framework.

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Provisions for pensions and similar obligations See note 25 to the consolidated annual accounts	
Key Audit Matter	*How the Matter was Addressed in Our Audit*
The Group has important commitments with personnel in relation to retirement and other long-term liabilities. These commitments are mainly in Spain, the United States, the United Kingdom and Brazil. The present value of commitments undertaken is Euros 10,087 million, while the fair value of plan assets amounts to Euros 7,923 million, of which Euros 1,769 million is classified as level 3 of the fair value hierarchy. Non-material variations in the relevant assumptions that determine the valuation of the commitments undertaken or the fair value of the associated assets could have a significant impact on the amounts recognised in the consolidated annual accounts.	Our audit procedures included the following: ▪ Assessing the design and implementation of controls related to the valuation process. ▪ Reading and understanding of collective agreements and other commitments assumed with personnel. ▪ Evaluation of the integrity and accuracy of the databases used for the beneficiaries of the different commitments. ▪ Analysis of the reasonableness of the main actuarial assumptions and calculation methods applied by the Group in the different jurisdictions in which it operates through the involvement of our specialists. ▪ Performance of substantive procedures on a sample of the assets subject to the different plans in order to verify the reasonableness of their valuation. Our procedures included obtaining external confirmations. ▪ Evaluation of the reasonableness of the sensitivity analyses performed. ▪ Analysis of compliance with the disclosure requirements established in IFRS-EU.

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Provisions for litigation and claims See note 26 to the consolidated annual accounts	
Key Audit Matter	*How the Matter was Addressed in Our Audit*
As a result of the operations carried out by the entities that comprise the Group, the consolidated statement of financial position includes significant provisions amounting to Euros 1,357 million that are shown in the "provisions for litigation, indemnities and other items" and "other provisions" columns of note 26 to the consolidated annual accounts. The criteria for the recognition and disclosure of contingencies and provisions require the application of a high degree of judgement.	Our audit procedures included the following: ▪ Assessing the design and implementation of the controls related to the process of recognising and evaluating litigations and claims. ▪ Obtaining details of litigation prepared by the Group's legal services department and analysing the reasonableness of the amounts recognised in the consolidated annual accounts. ▪ Sending confirmations to the lawyers with whom the Group operates. ▪ Readings of the minutes of board of directors' meetings. ▪ Selection of a sample of the main litigation procedures and analysis with supporting documentation with the involvement of our specialists. ▪ Analysis of compliance with the disclosure requirements established in IFRS-EU.

Revenue recognition See note 5 a) to the consolidated annual accounts	
Key Audit Matter	*How the Matter was Addressed in Our Audit*
The Group's businesses that carry out electricity supply activities must make estimates of unbilled supplies to end customers in the period between the last meter reading and the end of the fiscal year. Unbilled electricity supplied is estimated based on internal and external information that is compared with the measurements contained in the management systems used by the businesses. Revenue is calculated by multiplying the volume of estimated unbilled use by the tariff agreed for each customer, a process that is subject to a high degree of uncertainty. Estimated electricity supplied and not invoiced amounts to Euros 2,067 million.	Our audit procedures included the following: ▪ Analysis of the design, implementation and operating effectiveness of the key controls related to the estimation of unbilled revenue. ▪ Evaluation of the reasonableness of the calculation model used by comparing the estimates made at the close of the previous period and actual invoicing data (retrospective analysis). ▪ Verification of the reasonableness of the volume of unbilled electricity through an analysis of historical information and other available internal and external data. ▪ Verification of the tariffs applied by comparing them with the data contained in the customer contract databases.

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Other information: Consolidated Directors' Report

Other information solely comprises the 2018 consolidated directors' report, the preparation of which is the responsibility of the Parent's Directors and which does not form an integral part of the consolidated annual accounts.

Our audit opinion on the consolidated annual accounts does not encompass the consolidated directors' report. Our responsibility regarding the content of the consolidated directors' report is defined in the legislation regulating the audit of accounts, which establishes two different levels:

a) A specific level applicable to the consolidated non-financial information statement and to certain information included in the Annual Corporate Governance Report, as defined in article 35.2. b) of Audit Law 22/2015, which consists solely of verifying that this information has been provided in the directors' report, or where applicable, that the directors' report makes reference to the separate report on non-financial information, as provided for in legislation, and if not, to report on this matter.

b) A general level applicable to the rest of the information included in the consolidated directors' report, which consists of assessing and reporting on the consistency of this information with the consolidated annual accounts, based on knowledge of the Group obtained during the audit of the aforementioned accounts and without including any information other than that obtained as evidence during the audit. Also, assessing and reporting on whether the content and presentation of this part of the consolidated directors' report are in accordance with applicable legislation. If, based on the work we have performed, we conclude that there are material misstatements, we are required to report them.

Based on the work carried out, as described above, we have verified that the information mentioned in a) above has been provided in the consolidated directors' report and that the rest of the information contained in the consolidated directors' report is consistent with that disclosed in the consolidated annual accounts for 2018 and the content and presentation of the report are in accordance with applicable legislation.

Directors' and Audit Committee's Responsibility for the Consolidated Annual Accounts

The Parent's Directors are responsible for the preparation of the accompanying consolidated annual accounts in such a way that they give a true and fair view of the consolidated equity, consolidated financial position and consolidated financial performance of the Group in accordance with IFRS-EU and other provisions of the financial reporting framework applicable to the Group in Spain, and for such internal control as they determine is necessary to enable the preparation of consolidated annual accounts that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated annual accounts, the Parent's Directors are responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Directors either intend to liquidate the Group or to cease operations, or have no realistic alternative but to do so.

The Parent's audit committee is responsible for overseeing the preparation and presentation of the consolidated annual accounts.

PUBLIC

Auditor's Responsibilities for the Audit of the Consolidated Annual Accounts

Our objectives are to obtain reasonable assurance about whether the consolidated annual accounts as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with prevailing legislation regulating the audit of accounts in Spain will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence economic decisions of users taken on the basis of these consolidated annual accounts.

As part of an audit in accordance with prevailing legislation regulating the audit of accounts in Spain, we exercise professional judgement and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated annual accounts, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Parent's Directors.
- Conclude on the appropriateness of the Parent's Directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated annual accounts or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated annual accounts, including the disclosures, and whether the consolidated annual accounts represent the underlying transactions and events in a manner that achieves a true and fair view.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated annual accounts. We are responsible for the direction, supervision and performance of the Group audit. We remain solely responsible for our audit opinion.

We communicate with the Audit and Risk Monitoring Committee of Iberdrola, S.A. regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

PUBLIC

We also provide the Parent's Audit and Risk Monitoring Committee with a statement that we have complied with the applicable ethical requirements, including those regarding independence, and to communicate with them all matters that may reasonably be thought to bear on our independence and, where applicable, related safeguards.

From the matters communicated to the audit committee of the Parent, we determine those that were of most significance in the audit of the consolidated annual accounts of the current period and which are therefore the key audit matters.

We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter.

REPORT ON OTHER LEGAL AND REGULATORY REQUIREMENTS

Additional Report to the Audit Committee of the Parent

The opinion expressed in this report is consistent with our additional report to the Parent's audit committee dated 22 February 2019.

Contract Period

We were appointed as auditor of the Group by the shareholders at the ordinary general meeting on 31 March 2017 for a period of three years, from the year ended 31 December 2017.

KPMG Auditores, S.L.
On the Spanish Official Register of Auditors ("ROAC") with No. S0702

(Signed on original in Spanish)

Enrique Asla García
On the Spanish Official Register of Auditors ("ROAC") with No. 1,797

22 February 2019

PUBLIC

CONSOLIDATED ANNUAL ACCOUNTS AND CONSOLIDATED DIRECTORS' REPORT FOR THE YEAR ENDED 31 DECEMBER 2018

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Translation of Annual accounts originally issued in Spanish and prepared in accordance with IFRS as adopted by the European Union (see Note 55). In the event of a discrepancy, the Spanish-language version prevails.

IBERDROLA, S.A. AND SUBSIDIARIES

CONSOLIDATED STATEMENT OF FINANCIAL POSITION AT 31 DECEMBER 2018

Thousands of Euros			
ASSETS	**Note**	**31.12.2018**	**31.12.2017 (*)**
Intangible assets	**8**	**21,000,248**	**21,148,027**
Goodwill		7,837,843	7,932,404
Other intangible assets		13,162,405	13,215,623
Investment property	**9**	**428,592**	**424,029**
Property, plant and equipment	**10**	**66,109,320**	**64,082,379**
Property, plant and equipment in use		58,517,671	57,301,296
Property, plant and equipment under construction		7,591,649	6,781,083
Current financial investments		**5,191,132**	**5,013,504**
Equity-accounted investees	13.a	1,709,518	1,790,896
Non-current securities portfolio		68,831	65,342
Other non-current financial investments	13.b	2,685,387	2,612,565
Derivative Financial instruments	28	727,396	544,701
Trade and other receivables-non-current	**14**	**1,480,252**	**838,690**
Deferred tax assets	**31**	**5,485,999**	**5,382,373**
Non-current assets		**99,695.543**	**96,889,002**
Assets held for sale	**6**	**62,164**	**355,731**
Nuclear fuel	**16**	**272,674**	**331,883**
Inventories	**17**	**2,173,831**	**1,870,121**
Trade and other receivables current		**6,854,733**	**6,721,258**
Current tax assets	32	252,907	546,304
Public entities, other	32	503,444	318,582
Trade and other receivables current	18	6,098,382	5,856,372
Current Financial investments		**1,177,821**	**1,323,224**
Non-current securities portfolio		–	1,744
Other current financial investments	13.b	571,568	598,883
Derivative financial instruments	28	606,253	722,597
Cash and cash equivalents	**19**	**2,801,157**	**3,197,340**
CURRENT ASSETS		**13,342,380**	**13,799,557**
TOTAL ASSETS		**113,037,923**	**110,688,559**

(*) The consolidated statement of financial position at 31 December 2017 is presented for comparative purposes only.
The accompanying Notes 1 to 54 and the Appendix are an integral part of the consolidated statements of financial position at 31 December 2018.

PUBLIC

Translation of Annual accounts originally issued in Spanish and prepared in accordance with IFRS as adopted by the European Union (see Note 55). In the event of a discrepancy, the Spanish-language version prevails.

IBERDROLA, S.A. AND SUBSIDIARIES
Consolidated statement of financial position at 31 December 2018

Thousands of Euros			
EQUITY AND LIABILITIES	**Note**	**31.12.2018**	**31.12.2017 (*)**
Parent company	**20**	**36,582,199**	**35,509,260**
Subscribed capital		4,798,222	4,738,136
Valuation adjustments		(32,196)	(42,254)
Other reserves		32,731,625	31,435,651
Treasury shares		(1,010,348)	(597,797)
Translation differences		(2,919,156)	(2,828,470)
Net profit for the year		3,014,052	2,803,994
Non-controlling interests		**5,668,803**	**5,671,380**
Perpetual subordinated bonds		**1,725,552**	**1,552,546**
EQUITY		**43,976,554**	**42,733,186**
NON-CURRENT SECURITIES PORTFOLIO HAVING THE SUBSTANCE OF A FINANCIAL LIABILITY	**22**	**140,582**	**14,762**
Capital grants	**23**	1,477,928	1,481,111
Facilities transferred or financed by third parties	**24**	4,823,396	4,763,148
Provisions		**5,447,587**	**5,486,820**
Provision for pensions and similar obligations	25	2,420,032	2,533,465
Other provisions	26	3,027,555	2,953,355
Financial debt		**31,138,863**	**29,784,705**
Financial debt - loans and borrowings	27	30,751,710	29,465,739
Derivative financial instruments	28	387,153	318,966
Other non-current liabilities	**30**	**874,006**	**1,140,638**
Deferred tax liabilities	**31**	**9,042,567**	**8,558,419**
TOTAL NON-CURRENT LIABILITIES		**52,804,347**	**51,214,841**
CURRENT SECURITIES PORTFOLIO HAVING THE SUBSTANCE OF A FINANCIAL LIABILITY	**22**	**36,647**	**32,519**
Liabilities linked to assets held for sale	**6**	**561**	**134,544**
Provisions		**579,984**	**626,841**
Provision for pensions and similar obligations	25	22,874	40,604
Other provisions	26	557,110	586,237
Financial debt		**7,023,143**	**7,509,809**
Financial debt - loans and borrowings	27	6,574,762	7,224,759
Derivative financial instruments	28	448,381	285,050
Trade and other payables		**8,476,105**	**8,422,057**
Trade payables	33	5,428,933	5,307,551
Income tax	32	349,314	259,633
Public entities, other	32	1,039,449	988,926
Other current liabilities	30	1,658,409	1,865,947
Current Liabilities		**16,079,793**	**16,693,251**
TOTAL EQUITY AND LIABILITIES		**113,037,923**	**110,688,559**

(*) The consolidated statement of financial position at 31 December 2017 is presented for comparative purposes only.
The accompanying Notes 1 to 54 and the Appendix are an integral part of the consolidated statements of financial position at 31 December 2018.

PUBLIC

Translation of Annual accounts originally issued in Spanish and prepared in accordance with IFRS as adopted by the European Union (see Note 55). In the event of a discrepancy, the Spanish-language version prevails.

IBERDROLA, S.A. AND SUBSIDIARIES

CONSOLIDATED INCOME STATEMENT FOR THE YEAR ENDED AT 31 DECEMBER 2018

Thousands of Euros	Note	31.12.2018	31.12.2017
PROFIT FOR THE YEAR FROM CONTINUING OPERATIONS			
Revenue	35	35,075,873	31,263,262
Supplies	36	(19,640,736)	(17,899,454)
GROSS MARGIN		**15,435,137**	**13,363,808**
Personnel expenses	37	(2,678,725)	(2,775,994)
Capitalised personnel expenses	37	658,719	604,398
Net personnel expenses		(2,020,006)	(2,171,596)
External services		(2,797,175)	(2,578,653)
Other operating income		661,950	579,644
Net external services		(2,135,225)	(1,999,009)
Net operating expenses		(4,155,231)	(4,170,605)
Taxes	39	(1,931,003)	(1,874,503)
GROSS OPERATING PROFIT (EBITDA)		**9,348,903**	**7,318,700**
Change in Trade and other contract assets	2.a	(253,656)	(197,399)
Amortisations, depreciation and provisions	40	(3,655,874)	(4,408,670)
OPERATING PROFIT (EBITDA)		**5,439,373**	**2,712,631**
Result of equity-accounted investees - net of taxes	13.a	55,904	(28,733)
Finance income	42	839,911	921,790
Financial costs	43	(1,996,005)	(1,858,892)
Financial result		(1,156,094)	(937,102)
Gains on sales of non-current assets	41	48,468	299,093
Losses on sales of non-current assets	41	(39,617)	(20,039)
Non-current asset profit/(loss)		8,851	279,054
PROFIT OF THE YEAR BEFORE TAX		**4,348,034**	**2,025,850**
Income tax	31	(959,499)	1,397,127
PROFIT FOR THE YEAR FROM CONTINUING OPERATIONS		**3,388,535**	**3,422,977**
PROFIT FOR THE PERIOD FROM CONTINUING OPERATIONS (NET)		**(51,167)**	**(253,011)**
Non-controlling interests	20	(323,316)	(365,972)
NET PROFIT FOR THE YEAR ATTRIBUTABLE TO THE PARENT		**3,014,052**	**2,803,994**
BASIC AND DILUTED EARNINGS PER SHARE IN EUROS FOR CONTINUING OPERATIONS	**53**	**0.475**	**0.458**
BASIC AND DILUTED EARNINGS PER SHARE IN Euros FOR DESCONTINUED OPERATIONS	**53**	**(0.008)**	**(0.038)**

(*)The consolidated income statement at 31 December 2017 is presented for comparative purposes only.
The accompanying Notes 1 to 54 and the Appendix are an integral part of the consolidated income statement.

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Translation of Annual accounts originally issued in Spanish and prepared in accordance with IFRS as adopted by the European Union (see Note 55). In the event of a discrepancy, the Spanish-language version prevails.

IBERDROLA, S.A. AND SUBSIDIARIES
CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME FOR THE YEAR ENDED AT 31 DECEMBER 2018

Miles de euros		31.12.2018				31.12.2017 (*)			
	Note	Of the parent company	From Non-controlling shares	Of perpetual subordinated bonds	Total	Of the parent company	From Non-controlling shares	Of perpetual subordinated bonds	Total
NET PROFIT FOR THE YEAR		**3,014,052**	**285,747**	**37,569**	**3,337,368**	**2,803,994**	**333,730**	**32,242**	**3,169,966**
OTHER COMPREHENSIVE INCOME/(LOSS) TO BE RECLASIFIED TO PROFIT OR LOSS IN SUBSEQUENT PERIODS									
Valuation adjustments		**14,368**	**(7,298)**	**–**	**7,070**	**114,278**	**4,836**	**–**	**119,114**
Change in value of available-for-sale investments	2.a	–	–	–	–	577	–	–	577
Change in value of cash flow hedges		25,554	(9,884)	–	15,670	158,462	7,993	–	166,455
Change in hedging cost		1,041	–	–	1,041	–	–	–	–
Tax effect		(12,227)	2,586	–	(9,641)	(44,761)	(3,157)	–	(47,918)
Differences in exchange rates		**(90,686)**	**(193,420)**	**–**	**(284,106)**	**(1,769,353)**	**(555,977)**	**–**	**(2,325,330)**
Valuation gains or losses		(90,686)	(193,420)	–	(284,106)	(2,065,566)	(555,977)	–	(2,621,543)
Amounts transferred to the consolidated income statement	6	–	–	–	–	296,213	–	–	296,213
TOTAL		**(76,318)**	**(200,718)**	**–**	**(277,036)**	**(1,655,075)**	**(551,141)**	**–**	**(2,206,216)**
OTHER COMPREHENSIVE INCOME NOT TO BE RECLASSIFIED TO PROFIT OR LOSS IN SUBSEQUENT PERIODS EQUITY-ACCOUNTED INVESTEES									
Other reserves		**(39,595)**	**(634)**	**–**	**(40,229)**	**(151,887)**	**1,110**	**–**	**(150,777)**
Actuarial gains and losses on pension schemes	25	(48,501)	(333)	–	(48,834)	(57,818)	28,490	–	(29,328)
Tax effect		8,906	(301)	–	8,605	(20,090)	(10,587)	–	(30,677)
Impact of US Tax reform	31	–	–	–	–	(73,979)	(16,793)	–	(90,772)
Valuation adjustment		**5,613**	**–**	**–**	**5,613**	**(17,596)**	**–**	**–**	**(17,596)**
Change in value of cash flow hedges		7,233	–	–	7,233	(21,992)	–	–	(21,992)
Tax effect		(1,620)	–	–	(1,620)	4,396	–	–	4,396
TOTAL		**(33,982)**	**(634)**	**–**	**(34,616)**	**(169,483)**	**1,110**	**–**	**(168,373)**
OTHER COMPREHENSIVE INCOME OF EQUITY-ACCOUNTED INVESTEES EQUITY-ACCOUNTED INVESTEES (NET OF TAXES)									
Other reserves		**(862)**	**–**	**–**	**(862)**	**(11,952)**	**–**	**–**	**(11,952)**
Valuation adjustments		**(11,031)**	**–**	**–**	**(11,031)**	**10,458**	**–**	**–**	**10,458**
TOTAL	**13.a**	**(11,893)**	**–**	**–**	**(11,893)**	**(1,494)**	**–**	**–**	**(1,494)**
TOTAL NET PROFIT RECOGNISED DIRECTLY IN EQUITY		**(122,193)**	**(201,352)**	**–**	**(323,545)**	**(1,826,052)**	**(550,031)**	**–**	**(2,376,083)**
TOTAL COMPREHENSIVE INCOME FOR THE YEAR		**2,891,859**	**84,395**	**37,569**	**3,013,823**	**977,942**	**(216,301)**	**32,242**	**793,883**

(*) The consolidated statement of comprehensive income at 31 December 2017 is presented for comparison purposes only.
The accompanying Notes 1 to 54 and the Appendix are an integral part of the comprehensive income for the year ended at 31 December 2018.

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Translation of Annual accounts originally issued in Spanish and prepared in accordance with IFRS as adopted by the European Union (see Note 55). In the event of a discrepancy, the Spanish-language version prevails.

IBERDROLA, S.A. AND SUBSIDIARIES

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY FOR THE YEAR ENDED AT 31 DECEMBER 2018

			Other reserves										
Thousands of Euros	Subscribed capital	Treasury shares	Legal reserve	Revaluation reserves	Share premium	Other restricted reserves	Retained earnings	Valuation adjustments	Translation differences	Net profit for the year	Non-controlling interests	Perpetual subordinated bonds	Total
Balance at 01.01.2018	**4,738,136**	**(597,797)**	**968,998**	**236,866**	**14,667,676**	**693,684**	**14,868,427**	**(42,254)**	**(2,828,470)**	**2,803,994**	**5,671,380**	**1,552,546**	**42,733,186**
Adjustments due to IFRS 9 (Note 2.a.)	–	–	–	–	–	–	100,731	1,108	–	–	(8,017)	–	**93,822**
Adjustments due to IFRS 15 (Note 2.a.)	–	–	–	–	–	–	(40,325)	–	–	–	–	–	**(40,325)**
Adjusted Balance at 01.01.2018	**4,738,136**	**(597,797)**	**968,998**	**236,866**	**14,667,676**	**693,684**	**14,928,833**	**(41,146)**	**(2,828,470)**	**2,803,994**	**5,663,363**	**1,552,546**	**42,786,683**
Net profit for the year	–	–	–	–	–	–	(40,457)	**8,950**	**(90,686)**	**3,014,052**	**84,395**	**37,569**	**3,013,823**
Transactions with shareholders or owners													–
Share capital increase (Note 20)	208,866	–	–	(208,866)	–	–	(859)	–	–	–	–	–	(859)
Share capital reduction (Note 20)	(148,780)	1,245,420	–	–	148,780	–	(1,245,469)	–	–	–	–	–	(49)
Restructuring Distribution of year 2017	–	–	–	–	–	–	2,661,298	–	–	(2,803,994)	(197,955)	–	(340,651)
Acquisition of free allocation rights (Note 20)	–	–	–	–	–	–	(97,899)	–	–	–	–	–	(97,899)
Transactions with treasury shares (Note 20)	–	(1,657,971)	–	–	–	–	(225)	–	–	–	–	–	(1,658,196)
Other changes in equity													–
Securities portfolio-based payments (Note 21)	–	–	–	–	–	–	2,671	–	–	–	(448)	–	2,223
Issue of perpetual subordinated bonds (Note 20)	–	–	–	–	–	–	(2,538)	–	–	–	–	700,000	697,462
Write-off of perpetual subordinated bonds (Note 20)	–	–	–	–	–	–	–	–	–	–	–	(525,000)	(525,000)
Other movements	–	–	–	–	–	–	19,132	–	–	–	119,448	(39,563)	39,017
Balance at 31.12.2018	**4,798,222**	**(1,010,348)**	**968,998**	**28,000**	**14,816,456**	**693,684**	**16,224,487**	**(32,196)**	**(2,919,156)**	**3,014,052**	**5,668,803**	**1,725,552**	**43,976,554**

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Thousands of Euros	Subscribed capital	Treasury shares	Other reserves: Legal reserve	Other reserves: Revaluation reserves	Other reserves: Share premium	Other reserves: Other restricted reserves	Other reserves: Retained earnings	Valuation adjustments	Translation differences	Net profit for the year	Non-controlling interests	Perpetual subordinated bonds	Total
Balance at 01.01.2017 (*)	**4,771,559**	**(1,083,367)**	**958,271**	**368,436**	**14,667,676**	**528,691**	**14,983,227**	**(149,394)**	**(1,059,117)**	**2,704,983**	**3,445,898**	**550,526**	**40,687,389**
Comprehensive income for the year (excluding impact of Changes to the consolidation perimeter) (Note 6)	–	–	–	–	–	–	(163,839)	107,806	(2,407,780)	2,759,982	(216,301)	32,242	112,110
Transactions with shareholders or owners													
Scrip issue (Note 20)	131,570	–	–	(131,570)	–	–	(834)	–	–	–	–	–	(834)
Share capital decrease (Note 20)	(164,993)	1,280,176	–	–	–	164,993	(1,280,214)	–	–	–	–	–	(38)
Distribution of 2016 profit	–	–	10,727	–	–	–	2,507,184	–	–	(2,704,983)	(101,332)	–	(288,404)
Acquisition of free allocation rights (Note 20)	–	–	–	–	–	–	(645,800)	–	–	–	–	–	(645,800)
Transactions with treasury shares (Note 20)	–	(794,606)	–	–	–	–	2,950	–	–	–	–	–	(791,656)
Other movements in equity													–
Share-based payments (Note 21)	–	–	–	–	–	–	6,830	–	–	–	845	–	7,675
Modification of the consolidation perimeter (Note 6)	–	–	–	–	–	–	(500,926)	(666)	638,427	44,012	2,320,651	–	2,501,498
Issue of Perpetual subordinated bonds (Note 20)	–	–	–	–	–	–	(5,150)	–	–	–	–	1,000,000	994,850
Other changes	–	–	–	–	–	–	(35,001)	–	–	–	221,619	(30,222)	156,396
Balance at 31.12.2017 (*)	**4,738,136**	**(597,797)**	**968,998**	**236,866**	**14,667,676**	**693,684**	**14,868,427**	**(42,254)**	**(2,828,470)**	**2,803,994**	**5,671,380**	**1,552,546**	**42,733,186**

(*) The consolidated statement of changes in equity at 31 December 2017 is presented for comparison purposes only.
The accompanying Notes 1 to 54 and the Appendix are an integral part of the consolidated statement of of changes in equity for the year ended at 31 December 2018.

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Translation of Annual accounts originally issued in Spanish and prepared in accordance with IFRS as adopted by the European Union (see Note 55). In the event of a discrepancy, the Spanish-language version prevails.

IBERDROLA, S.A. AND SUBSIDIARIES
CONSOLIDATED STATEMENT OF CASH FLOWS FOR THE YEARS ENDED AT 31 DECEMBER 2018

Thousand of Euros	Note	31.12.2018	31.12.2017 (*)
Profit of the year from continuing activities before tax		4,348,034	2,025,850
Profit of the year before tax discontinued operations before tax		(64,660)	(321,490)
Adjustments for			
Amortisation, depreciation, provisions valuation adjustments finance assets and personnel expenses for pensions	37, 40	4,080,238	4,969,021
Results of companies accounted for using the equity method net of taxes	13	(55,904)	28,405
Grants credited to income and other deferred income	23	(282,898)	(276,795)
Income and expenses financial	42, 43	1,156,094	946,812
Profit from the disposal on non-current assets	41	(8,851)	(278,962)
Changes in working capital			
Change in trade and other receivables		(434,905)	36,145
Change in inventories		(313,389)	(169,087)
Change in trade and other payables		(24,057)	(310,640)
Change in non-current receivables and other payables		(24,520)	(1,397)
Provisions paid		(511,382)	(470,723)
Income tax paid		(332,891)	(542,169)
Dividends received		55,339	50,483
Cash flows from (used in) operating activities		**7,586,248**	**5,685,453**
Change in cash due to variations in the method and / or perimeter of consolidation	6	–	76,366
Investments in intangible assets	8	(1,113,978)	(530,992)
Capitalised interests paid for intangible assets	42	(35,735)	(21,506)
Investments in associates	13.a	(91,305)	(77,331)
Sale of subsidiaries		(1,746)	(1,641)
Other investments		(675,737)	1,016
Acquisition of investment property	9	(11,878)	(4,169)
Acquisition property, plant and equipment	10	(5,237,151)	(5,594,372)
Capital grants and other deferred income	23	14,040	42,761
Capitalised interests paid for property, plant and equipment	42	(156,896)	(112,536)
Net Inflow/outflow due to current financial assets		(67,300)	584,087
Interest received		192,291	130,830
Income tax		22,076	–
Proceeds from sales of non-financial assets		6,604	2,800
Proceeds from sales of financial assets		47,152	312,017
Sale of subsidiaries		1,059,150	–
Net cash flows from (used in) investing activities		**(6,050,413)**	**(5,192,670)**
Free-of-charge allocation rights acquisition	20	(97,899)	(645,800)
Dividends paid		(142,696)	(187,072)
Dividends paid to non-controlling interests		(161,241)	(104,029)
Issuance of perpetual subordinated bonds	20	697,462	1,000,000
Reimbursement of perpetual subordinated obligations	20	(525,000)	–
Payments of perpetual subordinated bonds interests	20	(39,563)	(35,337)
Issues and disposal from borrowings	20	13,325,103	13,637,173
Repayment of borrowings	29, 22	(12,493,320)	(10,419,647)
Interest paid excluded capitalised interest		(879,389)	(840,985)
Cash outflows due to capital decrease		(49)	(38)
Cash outflows due to capital increase		(859)	(834)
Treasury shares acquisition	20	(1,674,480)	(1,004,890)
Proceeds from sale of treasury shares	20	63,286	90,589
Transactions with non-controlling interests		132,483	(67,503)
Net cash flows from (used in) financing activities		**(1,796,162)**	**1,421,627**
Effect of exchange rate changes on cash and cash equivalents		**(135,856)**	**(149,756)**
Net increase / (decrease) in cash and cash equivalents		**(396,183)**	**1,764,654**
Cash and cash equivalents at the beginning of the year		**3,197,340**	**1,432,686**
Cash and cash equivalents at the ending of the year		**2,801,157**	**3,197,340**

(*) The consolidated statement of cash flows for 2017 is presented for comparison purposes only.
The accompanying Notes 1 to 54 and the Appendix are an integral part of the consolidated statements of cash flows for the year ended at 31 December 2018.

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IBERDROLA, S.A. AND SUBSIDIARIES
Consolidated financial statement for the year ended at 31 December 2018

1. ACTIVITY OF THE GROUP

IBERDROLA S.A. (hereinafter, IBERDROLA), a company incorporated in Spain and with registered office at Plaza Euskadi 5, in Bilbao, is the parent of a group of companies whose main activities are the following:

- Production of electricity from renewable and conventional sources.
- Sale and purchase of electricity and gas in whole sale markets.
- Transmission and distribution of electricity.
- Supply of electric power, gas and energy-related services.
- Other activities mainly linked to the energy sector.

The aforementioned activities may be carried out in Spain as well as abroad, and may be carried out, in whole or in part, either directly by IBERDROLA or through the ownership of shares or equity interests in other companies, subject in all cases and at all times to applicable legal provisions for each industry, especially the electricity industry. The IBERDROLA Group carries out its activities mainly in five countries in the Atlantic region: Spain, United Kingdom (UK), United States of America (USA), Mexico and Brazil.

2. BASIS OF PRESENTATION OF THE CONSOLIDATED ANNUAL ACCOUNTS

2.a) Applicable accounting legislation

The IBERDROLA Group's 2018 consolidated annual accounts authorised for issue by the directors on 19 February 2019, in accordance with International Financial Reporting Standards (hereinafter, IFRS), as adopted by the European Union, in conformity with Regulation (EC) No 1606/2002 of the European Parliament and of the European Council. The directors of IBERDROLA expect these consolidated annual accounts to be approved at the General Shareholders' Meeting without modification.

The IBERDROLA Group's 2017 consolidated annual accounts were approved by the shareholders at their General Meeting held on 13 April 2018.

At 31 December 2018, the annual accounts present negative working capital of Euros 2,774 million. The directors declare the deficit will be offset by the generation of funds from the IBERDROLA Group's businesses. Moreover, as shown in Note 4, the IBERDROLA Group has an undrawn granted borrowings of Euros 10,211 million.

These consolidated annual accounts have been prepared on the basis of a historical cost, except for available-for-sale financial assets and derivatives, which have been measured at fair value. The carrying amounts of assets and liabilities hedged by fair value hedges are adjusted to reflect variations in their fair value as a result of the risk hedged.

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The accounting policies used in the preparation of these consolidated annual accounts are those used for the year ended on 31 December 2017, except for the application on January 1 2018, of IFRS 9 "Financial instruments" and IFRS 15 "Revenues from contracts with customers" published by the International Accounting Standards Board (IASB), adopted by the European Union for its use in Europe:

The main impacts of applying the new standards above are:

IFRS 15: *"Revenues from contracts with customers"*

According to the core principle of IFRS 15, an entity recognises revenue from ordinary activities to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services.

The IBERDROLA Group will adopt IFRS 15 retroactively recording the effect of applying this standard at 1 January 2018. Thus, annual accounts for 2017 do not include any effects resulting from the application of IFRS 15.

The adoption of IFRS 15 has affected the accounting treatment of the following concepts::

- The capitalisation of incremental costs incurred in obtaining contracts with customers, which, prior to application of IFRS 15 used to be posted under "External services" in the consolidated income statement.

  Incremental costs capitalised by IBERDROLA Group mainly refer to sales commissions incurred to obtain a contract with a customer which would not otherwise have been incurred if the contract had not been obtained.

  Assets recognised for this item are amortised on a systematic basis according to the average expected life of contracts with customers that are associated with such costs.

- Claims against customers in construction contracts. IFRS 15 establishes that to recognise modifications to contracts with customers as revenue, either because new rights and obligations are generated or because pre-existing ones are changed, these have to be approved in writing, by verbal agreement or implicitly on account of customary business practices. However, under the previous IAS 11 "Contracts under construction" claims where included under income to the extent that they are probable and can be reliably measured.

- Penalties with customers in construction contracts for delays or other reasons. IFRS 15 establishes that the estimated amount of variable consideration is to be included in the transaction price only to the extent that it is highly likely that there will be no significant reversal of the amount of revenue when the uncertainty associated with the variable consideration is subsequently resolved. However, under the previous IAS 11 "Contracts under construction" penalties were included under income to the extent that they are probable or the uncertainties related to them were settled.

- The timing of recognition of the revenue that corresponds to assignment agreements applicable to the capacity of technical facilities.

The impact from the above items that was recognised by the IBERDROLA Group in implementing IFRS 15 as of 1 January 2018 was:

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Thousands of Euros	Cost capitalisation	Claims/penalties	Time income recognition	Total
Intangible assets.	175,001	-	-	175,001
Trades and other accounts receivable	-	(133,049)	(50,579)	(183,628)
Deferred tax assets	-	64,562	15,174	79,736
Non-current assets	**175,001**	**(68,487)**	**(35,405)**	**71,109**
Trades and other accounts receivable	-	(57,792)	-	(57,792)
CURRENT ASSETS	**-**	**(57,792)**	**-**	**(57,792)**
TOTAL ASSETS	**175,001**	**(126,279)**	**(35,405)**	**13,317**
Parent company	134,496	(192,116)	17,295	(40,325)
EQUITY	**134,496**	**(192,116)**	**17,295**	**(40,325)**
Other non-current payables	-	-	(75,286)	(75,286)
Deferred tax liabilities	40,505	-	22,586	63,091
NON-CURRENT LIABILITIES	**40,505**	**-**	**(52,700)**	**(12,195)**
Provisions	-	(1,202)	-	(1,202)
Trade and other payables	-	67,039	-	67,039
Current Liabilities	**-**	**65,837**	**-**	**65,837**
TOTAL EQUITY AND LIABILITIES	**175,001**	**(126,279)**	**(35,405)**	**13,317**

While undertaking the performance through transfer of goods or services to the client before the client pays the consideration or before payment may be enforced, IBERDROLA Group submits the contract as an asset of the contract, excluding the amounts submitted as accounts receivable. An account receivable is the unconditional right to receive compensation subject to the passing of time for payment to be enforced. IBERDROLA Group submits the agreement's assets in the sub-headings “Trade debtors and other non-current assets” and “Trade debtors and other current assets-Other trade debtors and other current assets” of the consolidated annual accounts (Notes 14 and 18).

A liability of the agreement is the obligation that IBERDROLA Group has to transfer goods or services to a client from whom it has already received a consideration (or this client consideration has come due). IBERDROLA Group presents the contract's assets in the sub-headings “Other non-current liabilities” and “Trade creditors and other liabilities-Other trade creditors” of the consolidated annual accounts (Notes 30 and 33).

Given below is the amount by which each item in the annual accounts had been affected by implementation of IFRS 15 as of 31 December 2018 compared with the previously applied rules:

Thousands of Euros	In accordance with IFRS 15	Effects due to changes in rules	In accordance with previous rules
Intangible assets	21,000,248	(254,714)	20,745,534
Real estate investments	428,592	-	428,592
Property, plant and equipment	66,109,320	-	66,109,320
Non-Current financial investments	5,191,132	-	5,191,132
Trade and other receivables-non-current	1,480,252	183,628	1,663,880
Deferred tax assets	5,485,999	(79,955)	5,406,044
NON-CURRENT ASSETS	**99,695,543**	**(151,041)**	**99,544,502**
Assets held for sale	62,164	-	62,164
Nuclear fuel	272,674	-	272,674
Inventories	2,173,831	-	2,173,831
Trade and other receivables current	6,854,733	57,792	6,912,525
Current financial investments	1,177,821	-	1,177,821
Cash and cash equivalents	2,801,157	-	2,801,157
CURRENT ASSETS	**13,342,380**	**57,792**	**13,400,172**
TOTAL ASSETS	**113,037,923**	**(93,249)**	**112,944,674**

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Thousands of Euros	In accordance with IFRS 15	Effects due to changes in rules	In accordance with previous rules
Parent company	**36,582,199**	**(21,075)**	**36,561,124**
Share capital	4,798,222	-	4,798,222
Valuation adjustments	(32,196)	-	(32,196)
Other reserves	32,731,625	40,325	32,771,950
Treasury shares	(1,010,348)	-	(1,010,348)
Translation differences	(2,919,156)	1,417	(2,917,739)
Net profit for the year	3,014,052	(62,817)	2,951,235
Non-controlling interests	**5,668,803**	**–**	**5,668,803**
Perpetual subordinated bonds	**1,725,552**	**-**	**1,725,552**
EQUITY	**43,976,554**	**(21,075)**	**43,955,479**
NON-CURRENT SECURITIES PORTFOLIO HAVING THE	**140,582**	**-**	140,582
Capital grants	1,477,928	–	1,477,928
Facilities transferred or financed by third parties	4,823,396	-	4,823,396
Provisions	5,447,587	-	5,447,587
Financial debt	31,138,863	-	31,138,863
Other non-current liabilities	874,006	75,381	949,387
Deferred tax liabilities	9,042,567	(80,841)	8,961,726
NON-CURRENT LIABILITIES	**52,804,347**	**(5,460)**	**52,798,887**
NON-CURRENT SECURITIES PORTFOLIO HAVING THE	**36,647**	**-**	**36,647**
Liabilities linked to assets held for sale	561	-	561
Provisions	579,984	1,203	581,187
Financial debt	7,023,143	-	7,023,143
Trade and other payables	8,476,105	(67,917)	8,408,188
CURRENT LIABILITIES	**16,079,793**	**(66,714)**	**16,013,079**
TOTAL EQUITY AND LIABILITIES	**113,037,923**	**(93,249)**	**112,944,674**

Thousands of Euros	In accordance with IFRS 15	Effects due to changes in rules	In accordance with previous rules
Revenue	35,075,873	(6,458)	35,069,415
Provisions	(19,640,736)	-	(19,640,736)
GROSS MARGIN	**15,435,137**	**(6,458)**	**15,428,679**
Net personnel expenses	(2,020,006)	-	(2,020,006)
Net External services	(2,135,225)	(155,462)	(2,290,687)
Net Operating Expenses	(4,155,231)	(155,462)	(4,310,693)
Taxes	(1,931,003)	-	(1,931,003)
Gross operating profit (EBITDA)	**9,348,903**	**(161,920)**	**9,186,983**
Change in Trade and other contract assets	(253,656)	-	(253,656)
Amortisations, depreciation and provisions	(3,655,874)	80,580	(3,575,294)
Operating profit (EBITDA)	**5,439,373**	**(81,340)**	**5,358,033**
Result of equity-accounted investees - net of taxes	55,904	-	55,904
Finance income	839,911	–	839,911
Financial costs	(1,996,005)	–	(1,996,005)
Financial result	(1,156,094)	–	(1,156,094)
Non-current asset profit/(loss)	8,851	-	8,851
profit of the year before tax	**4,348,034**	**(81,340)**	**4,266,694**
Income tax	(959,499)	17,865	(941,634)
PROFIT FOR THE YEAR FROM CONTINUING ACTIVITIES	**3,388,535**	**(63,475)**	**3,325,060**
PROFIT FOR THE YEAR FROM DISCONTINUED OPERATIONS (NET)	**(51,167)**	**658**	**(50,509)**
Non-controlling interests	(323,316)	-	(323,316)
NET PROFIT FOR THE YEAR ATTRIBUTABLE TO THE PARENT	**3,014,052**	**(62,817)**	**2,951,235**

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IFRS 9: *"Financial instruments"*:

IFRS 9 establishes the requirements for recognising and measuring financial assets, financial liabilities and certain contracts to buy and sell non-financial items and replaces the previously applied IAS 39.

Classification and measurement of financial assets and liabilities

IFRS 9 replaces the previous classification of financial assets and these are now classified in accordance with the business model within which they are held and the cash flow characteristics under their contractual terms. On the other hand, the new standard to a great extent retains the requirements in IAS 39 for classifying and measuring financial liabilities.

The IBERDROLA Group has adopted the classification and measurement requirements retroactively, with initial application on 1 January 2018, thus taking the option of not restating the figures for comparative periods.

The IBERDROLA Group has classified its financial assets into the following categories:

Categories	
Financial Assets at amortised cost	Financial assets that: - are held within a business model where the objective is to hold the assets to obtain the contract cash flows, and - whose contract terms produce, on specific dates, cash flows which are only payments of the principal and interest on the amount of the outstanding principal.
Financial assets at fair value through profit and loss:	This category embraces those financial assets which fail to meet the conditions for being classified as "measured at amortised cost".

The IBERDROLA Group has irrevocably decided that securities portfolio existing at the time of the initial application of IFRS 9 should be classified at fair value through profit and loss where the changes in fair value are recognised under "Financial costs" and "Financial income" in the consolidated income statement. Under IAS 39 these investments were classified in the category of available-for-sale assets and changes in their fair value were debited or taken to "Value adjustments" in the consolidated statement of financial position up until the time of sale of such investments or their impairment, at which point the cumulative amount for this item was allocated to the consolidated income statement.

Under IAS 39 the amounts classified under IAS 39 have the following equivalent in the new IFRS 9 categories:

In accordance with IAS 39	In accordance with IFRS 9
Loans and receivables	Financial Assets at amortised cost
Available-for-sale assets	Financial assets at fair value through profit and loss:
Assets held for trading	Financial assets at fair value through profit and loss:

On the other hand, classification of the IBERDROLA Group's financial liabilities has not undergone any changes with respect to what featured in the consolidated annual accounts for 2017.

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Impairment of financial assets at amortised cost and contract assets

Under IFRS 9 it is no longer necessary for there to be some event that evidences impairment to recognise credit losses. Instead, expected credit losses are carried, which means bringing forward recognition of credit losses compared to IAS 39.

The IBERDROLA Group has adopted the value impairment requirements retroactively, with initial application on 1 January 2018, thus taking the option of not restating the figures for comparative periods.

The impact recognised by the IBERDROLA Group from applying the new expected loss model (Note 3.I) to calculate value impairment of financial assets at amortised cost and contract assets as of 1 January 2018 was:

Thousands of Euros	01.01.2018
Current Financial investments	(475)
Trades and other accounts receivable	(9,090)
Deferred tax assets	2,652
NON-CURRENT ASSETS	**(6,913)**
Trades and other accounts receivable	(7,372)
Current Financial investments	(6,918)
Cash and cash equivalents	(710)
CURRENT ASSETS	**(15,000)**
TOTAL ASSETS	**(21,913)**
Parent company	(14,640)
Non-controlling interests	(7,273)
TOTAL EQUITY AND LIABILITIES	**(21,913)**

Valuation adjustment due to impairment in “Non-current trade and other non-current assets” and “Current trade and other current assets” is detailed separately in the consolidated income statement under “Valuation adjustments trade and other contract assets”. Subsequently, the amount of Euros 197,399 million has been reclassified which, in accordance with the previous IAS 39, was detailed in “Amortisations and provisions” in the income statement for 2017.

Hedge accounting

The requirements of IFRS 9 make hedge accounting more closely aligned with risk management, establish a focus that is more in accordance with principles and tackle the incongruences and shortcomings of the hedge accounting model in IAS 39 that was previously applied.

In accordance with IFRS 9, the IBERDROLA Group will record as hedge cost the temporary value of option contracts and term of term contracts should they be excluded from hedges (Note 20). Under IAS 39 these elements were carried in the consolidated income statement.

The transition to IFRS 9 in relation to the recording of hedges will be made prospectively, with the exception of the accounting treatment of the temporary value of those option contracts for which changes in its intrinsic value was designated as hedging instrument. In such case, it will be applied retrospectively. The effect of initial application of IFRS 9 as of 1 January 2018 as regards the above-mentioned time value has meant a charge of Euros 1,552 thousand to “Other reserves” in the consolidated statement of financial position along with a credit to “Value adjustments” in the consolidated statement of financial position (Note 20).

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Changes to financial liabilities

The changes of financial liabilities to amortised cost not resulting from the derecognition of a financial liability (for considering this to be a non-material change) imply recording in the consolidated annual accounts the result on the date of the change, the difference between amortised cost of financial liabilities and the amount of cash flows still in financial liabilities deducted from the original effective tax rate.

Previous to this change, in changes of financial liabilities whose conditions were not substantially different, the amortised cost of the financial liability is determined using the effective interest rate method. The effective interest rate is the rate that matches the carrying amount of the financial liability at the date of modification with the cash flows payable under the new terms.

The result of retroactively applying these criteria on 1 January 2018 is as follows:

Thousands of Euros	01.01.2018
Parent company	117,627
EQUITY	**117,627**
Finance debt (Note 27).	(156,434)
Deferred tax liabilities	38,807
NON-CURRENT LIABILITIES	**(117,627)**
TOTAL EQUITY AND LIABILITIES	**-**

The consolidated income statement for 2018 includes a greater cost of Euros 34,600 thousand recognised under “Financial cost” in the consolidated income statement as a result of the rise in the effective interest rate under the new accounting rule for financial liabilities that have been modified to an insignificant degree with respect to the rate which was applied for 2017.

Rules issued pending of application

At the reporting date of these consolidated annual accounts, the following standards, interpretations, and amendments had been adopted, becoming effective after December 31, 2018:

		Mandatory application	
Regulation		**IASB**	**European Union**
IFRS 16	Leases	01.01.2019	01.01.2019
IFRS 17	Insurance contracts	01.01.2021	(*)
IFRIC 23	Uncertainties over income tax treatments	01.01.2019	01.01.2019
Modifications to IFRS 9	Prepayment Features with Negative Compensation	01.01.2019	01.01.2019
Modifications to IAS 28	Long-term interests in subsidiaries and joint business	01.01.2019	(*)
Modifications to IAS 19	Changes, reductions or settlement of defined benefit retirement plans	01.01.2019	(*)
Cycle 2015-2017	Annual improvements several standards	01.01.2019	(*)
Modifications to IFRS 3	Business definition	01.01.2020	(*)
Modifications to AIS 1 & AIS 8	Material definition	01.01.2020	(*)

(*) Pending approval from the European Union

The IBERDROLA Group has not applied in advance of the formulation of these consolidated annual accounts any published standard, interpretation or amendment that has not yet come into force.

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The IBERDROLA Group believes that their application would not have had a material impact on these consolidated annual accounts, and, furthermore, would not have a material impact when they are applied, except for the application of IFRS 16 *"Leases".*

IFRS 16: *"Leases"*

The IBERDROLA Group will apply on the annual accounts starting from 01 January 2019 the IFRS 16: *"Leases"*. All the quantitative effects are shown below in gross figures.

From the perspective of the lesser, IFRS 16 eliminates the current classification among operating and financial leases and sets, as regards lease agreements, that the lessee shall recognise in the income statement an asset for right of use and a liability for the present value of the lease during said period.

The lease expense, which in these consolidated annual accounts is recognised under "External services" on the consolidated income statement, will now be recognised in the consolidated income statement under "Amortisations and provisions" due to the amortisation of said right of use asset and "Financial cost" due to the current value of the liability.

From the perspective of the lessor, IFRS 16 does not introduce relevant changes.

IBERDROLA Group has carried out an analysis in order to assess whether an agreement is or includes a lease on the date of its first application in accordance with the conditions set in IFRS 16. In said analysis, IBERDROLA Group has interpreted that assignment of land use does not imply a lease when its owner has the right to carry out any kind of financial activity implying the financial profit inherent to the use of the asset subject to the agreement has not been assigned.

IBERDROLA Group will transition to IFRS 16 through the modified retroactive alternative which does not imply re-stating the comparative period and recognising the effect of the application of IFRS 16 for the first time on 1 January 2019 (date it was first applied). Therefore, in lease agreements in which IBERDROLA Group acts as lessee, lease liabilities will be measured at the present value of the remaining lease payments to which the discount rate at the time of the first application will be discounted. With some exceptions, right-of-use assets will be measured in the same amount as liabilities.

In accordance with the options offered by IFRS 16, the IBERDROLA Group has opted for not applying it to lease agreements for intangible assets, as well as applying the exemption when recognising current leases (lease term equal or under 12 months), which will continue being accounted for as presently.

The same contract may include different lease elements, some of them not qualifying as leases. The IBERDROLA Group has opted for not separating both elements for accounting purposes and recognising them as a sole element, except for the type of underlying assets for which the separation may have a significant impact on the annual accounts.

The implementation of IFRS 16 is well advanced. In this regard, it is estimated that IFRS 16 at 1 January 2019 will imply an increase in current and non-current liabilities of Euros 399,139 million in accordance with the following agreements in accordance with this type of assets:

Thousands of Euros	01 January 2019
Buildings and real property	231,437
Vehicle fleet	34,543
Optical fibre and others (Networks)	38,334
Land related to renewable facilities (solar and other)	46,048
Other	48,803
Total	**399,165**

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Details of discount rates (minimum and maximum ranges) used at the time of the first application are as follows:

	Less than 5 years		Between 20 and 30 years	
Currency	**Minimum**	**Maximum**	**Minimum**	**Maximum**
Euro	-	2.15	1.87	2.94
Sterling Pound	1.12	3.21	3.19	4.94
US dollar	2.68	3.3	4.16	4.48
Mexican Pesos	9.09	9.46	11.36	12.62
Brazilian Reals	8.68	11.96	14.55	15.15

Details of the reconciliation between the future minimum payment for non-cancellable operating leases under the scope of the current IAS 17 at 31 December 2018 (Note 38) and lease liabilities estimated to be recognised at 1 January 2019 in the transition to IFRS 16 are as follows:

Thousands of Euros	
Future minimum payments for non-cancellable operating leases in accordance with IAS 17 (Note 38)	1,462,154
Re-stated contracts not qualifying as lease in accordance with IFRS 16	(846,374)
Lease agreements starting after 1 January 2019 and other	(127,144)
Difference in financial discount	(89,471)
Lease liabilities at 1 January 2019 under IFRS 16	**399,165**

Under current standards, the majority of lease agreements for land in which the wind generation facilities are located qualify under operating leases. In application of IFRS 16, IBERDROLA Group interprets that the majority of these agreements do not include lease in accordance with the criteria previously described. Said interpretation in the application of IFRS 16 is in accordance with international practice in the scope of the application of the IFRS.

However, the accounting treatment of agreements observing shared used of underlying assets is subject to changes in accordance with future interpretations. The Group intends on following possible discussions on the matter that may take place in the future in order to confirm the reasonability of the accounting treatment adopted. In the event lease agreements for the use of land in which the wind generation facilities qualified as lease agreements under the scope of IFRS 16 on the date the standard is applied for the first time, estimated current and non-current liabilities for the IBERDROLA Group would increase, in the maximum amount of Euros 846,374 million.

2.b) Basis of consolidation

Appendix I to these consolidated annual accounts lists all IBERDROLA subsidiaries, joint ventures and associates, together with the consolidation method or measurement basis used and other related disclosures.

Subsidiaries

The subsidiaries over which the IBERDROLA Group exercises control have been fully consolidated from the date they were acquired, except when they have a negligible effect on the true and fair view of the IBERDROLA Group.

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The IBERDROLA Group considers that it maintains control of a company when it is exposed, or has the right to variable returns from its involvement in the company, and has the capability to influence these returns through its power thereover. For the purpose of preparing these consolidated annual accounts, control is deemed to be exercised in companies in which the Group holds over 50% of the share capital and can prove the existence of this control. The Appendix to these consolidated annual accounts contains information on fully consolidated companies in which the Group holds less than a 50% interest, and on companies in which the Group holds more than 50% interest that have not been consolidated.

The results of subsidiaries acquired or sold during the year are included in the consolidated income statement as from the effective date of acquisition or up to the effective date of sale. All accounts and transactions between fully consolidated companies have been eliminated in the consolidation process.

On the takeover date, assets, liabilities and contingent liabilities of a subsidiary are recognised at fair value. Any excess of the subsidiary´s acquisition cost over the market value of its assets and a liability is recognised as goodwill, as it corresponds to assets that cannot be identified and measured separately. If the difference is negative, it is taken to the consolidated income statement.

Non-controlling interests are recognised upon initial recognition at an amount equivalent to their proportional interest in the fair value of the acquiree on the takeover date. The value of non-controlling interests' share of equity and results of fully consolidated subsidiaries is presented under the "Equity –Non-controlling interests" in the consolidated statement of financial position and under the "Non-controlling interests" in the consolidated income statement, respectively.

When there is a loss of control of a company of the Group, its assets, liabilities and any non-controlling interest are derecognised. The resulting gains or losses are recognised in profit or loss. Investments remaining in subsidiaries over which control has been lost are measured at their fair value on the date this loss of control occurred. Gains/losses on shares purchased from non-controlling interests in controlled companies and sales of shares without loss of control, are debited or taken to reserves.

Equity-accounted investees

Equity-accounted investees include investments in associates and joint ventures. Associates are companies in which the IBERDROLA Group has significant influence, i.e., the power to intervene in decisions regarding financial and operating policies but without having control or joint control. A joint venture is a joint agreement in which the Group has the right to net assets of the agreement.

For the purpose of preparing these consolidated annual accounts, significant influence is deemed to be exercised in companies in which the Group holds over 20% of the share capital and can prove the existence of this significant influence.

Appendix I to these consolidated annual accounts contains information on equity-accounted companies in which the Group holds less than a 20% interest, and companies in which the Group holds between a 20% and 50% interest that have not been accounted for using the equity method.

In transactions carried out with associates and joint ventures, the gains or losses on the operation are eliminated at the percentage of interest held in each company. The result of measuring investments in equity-accounted associates is recognised under “Other reserves” and “Share of profit/(loss) of equity-accounted investees - net of taxes” in the consolidated statement of financial position and the consolidated income statement, respectively.

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Closing date of the annual accounts

The closing date of the annual accounts of subsidiaries, joint ventures and associates is 31 December, with the exception of Siemens Gamesa Renewable Energy, S.A. (hereinafter SIEMENS GAMESA), whose closing date is 30 September. However, for the purposes of preparing these consolidated annual accounts harmonisation has been applied so that the equity method includes the equity of the associate at 31 December.

The accounting policies applied by the companies of the consolidated Group are the same or have been harmonised with those used by the IBERDROLA Group.

Conversion of the annual accounts of foreign companies

The annual accounts of each foreign company were prepared in their respective functional currencies, understood as the currency of the economic environment in which each company operates and in which it generates and uses cash.

The conversion of the annual accounts of foreign companies has been carried out by applying the year-end exchange rate method. This method consists of converting all the assets, rights and obligations to Euros at the exchange rates prevailing at the reporting date of the consolidated annual accounts, and the average exchange rate for the year (provided that there have not been significant transactions that warrant the use the average exchange rate) for the consolidated income statement items, keeping equity at the historical exchange rate at the date of acquisition (or at the average exchange rate of the year in which they were generated in the case of accumulated results). The resulting translation differences are taken directly to equity accounts.

2.c) Comparative information

When comparing the figures for 2018 included in these consolidated annual accounts with those corresponding to 2017, it is necessary to take into account the following:

The acquisition of Neoenergia, S.A.

As indicated in Note 6, on 24 August 2017, the incorporation of the activity and businesses of Elektro Holding, S.A. (ELEKTRO) in Neoenergia S.A. (NEOENERGIA) was completed, according to the agreement of the NEOENERGIA shareholders (BB Banco de Investimento S.A.- Banco do Brasil, Caixa de Previdência dos Funcionários do Banco do Brasil –Previ and IBERDROLA Energía, S.A.U. - IBERDROLA ENERGÍA), notified on 8 June 2017 and once the suspensive conditions have been met that were subject to the operation. As a result of this transaction, IBERDROLA Group acquired NEOENERGIA compared to the previous control granted by its prior stake. This thus resulted in a business combination in stages.

After the transaction took effect, Banco do Brasil and Previ own 9.35% and 38.21% approximately and respectively of the capital of NEOENERGIA, and IBERDROLA ENERGÍA now holds 52.45%, including the businesses of ELEKTRO as consideration. Currently, Banco do Brasil and Previ are holders of 12% and 49% respectively of the capital of NEOENERGIA, with 39% remaining owned by IBERDROLA ENERGÍA.

The acquisition of NEOENERGÍA should be considered when comparing the figures for 2018 included in these consolidated annual accounts with the 2017 figures.

New applicable rules from 1 January 2018

As mentioned in Note 2.a., on 1 January 2018 IFRS 15 and IFRS 9 were applied for the first time.

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Tax reform in the US

On 22 December 2017 the T*ax Cuts and Jobs Act of 2017* (Tax Act), referred to as "US Tax reform", was signed and passed. The standard includes relevant changes in the US Federal Tax Structure, the most significant aspect of which is the reduction in federal tax for legal persons from 35% to 21%. This circumstance affected the comparison under "Corporate income tax" in the consolidated annual accounts (Note 31).

Merge GAMESA-SIEMENS

In the first half of 2017, as a result of the conclusion of the decision to merge the wind power businesses of Gamesa Corporación Tecnológica, S.A. (GAMESA) and Siemens AG (SIEMENS) whereby Siemens Wind HoldCo (as disappearing company) was taken over by GAMESA (as surviving company), there was dilution to IBERDROLA Group's percentage holding in GAMESA, which was reduced by 19.69% to 8.07%.

The profit as a result of the aforementioned dilution of the operation reached Euros 250,695 million, which were recognised under 'Gains on disposal of non-current assets' in the 2017 consolidated income statement (Notes 13.a and 41).

2.d) Amendment to comparative information

Geographical and business segment reporting (Note 7)

As provided in IFRS 8: "Operation segments" revises comparative information from the previous year for the following reasons:

- From 1 January 2018, hydropower assets in the countries where the IBERDROLA Group operates have been transferred from the Liberalised business to the Renewables business. The purpose of this restructure is to group clean generation assets in only one operation segment. Said change in the management of hydropower assets entails corporate restructuring completed on 1 August 2018, when all administrative authorisations had been obtained.

- In 2017, the gas business in the United States and Canada was included under the Liberalised-Rest of the World segment. In 2018, after having sold the whole gas business in the United States (Note 41), the remaining assets and liabilities of this business in Canada are included under "Other businesses".

Earnings per share (Note 53)

As described in Note 20 and 51 of these consolidated annual accounts, in July 2018 and January 2019 two free capital increases took place in the context of the "IBERDROLA scrip dividend" programme. According to IAS 33: "Earning per share" these scrip issues meant that earnings per share for 2017 included in the consolidated annual accounts for that year had to be corrected, and have been taken into account when calculating basic and diluted earnings per share for 2018.

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3. ACCOUNTING POLICIES

3.a) Goodwill

Goodwill represents future economic benefits arising from other financial assets acquired in a business combination that are not individually identified or separately recognised.

Goodwill arising from acquisitions of companies with a functional currency other than the Euro is converted to Euros at the exchange rate prevailing at the reporting date of the consolidated statement of financial position.

Goodwill acquired on or after 1 January 2004 are measured at acquisition cost and those that are acquired earlier are measured at the carrying amount at 31 December 2003 in accordance with Spanish accounting standards in effect on that date, as provided for in IFRS 1: “First-time adoption of IFRS”.

Goodwill is not amortised. However, at the end of each reporting period its recoverability is analysed and any impairment is recognised (Note 3.i).

3.b) Other intangible assets

Concessions, patents, licenses, trademarks and similar rights

The amounts recognised as concessions, patents, licenses, trademarks and similar rights reflect the cost incurred in their acquisition.

The electricity distribution and transmission concessions held in UK by SCOTTISH POWER and those linked to the activities of AVANGRID, are not subject to any limits of a legal or other nature. Accordingly, as they are intangible assets with an indefinite useful life, they are not amortised by the IBERDROLA Group, although they are tested yearly for impairment, as described in Note 3.i.

IFRIC 12: “Service concession arrangements” affects public-private service concession arrangements that meet two prerequisites:

- the grantor controls or regulates which services the operator must provide for the infrastructure, to whom it must provide them to and at what price; and

- the grantor controls any significant residual interest in the infrastructure at the end of the term of the arrangement.

Infrastructures within the scope of a service concession arrangement are not recognised as property, plant and equipment of the operator, because the operator does not have the contractual right to control them.

If the operator performs more than one service (e.g. operation services and construction or upgrade services), the consideration received under the agreement for provision of services is recognised separately in accordance with IFRS 15 “Ordinary income from contracts with customers”.

In the case of IBERDROLA Group, IFRIC 12 only affects the electricity distribution and transmission activities carried out by in Brazil (Note 11). Remuneration for network construction and upgrade work carried out by the IBERDROLA Group in this country consisted, on the one hand, of an unconditional right to receive cash and, on the other hand, of the right to charge certain amounts to consumers. As a result, by applying IFRIC 12, two different assets were recognised for the two types of consideration received:

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- A financial asset, which is recognised under "Other non-current financial investments" in the consolidated statement of financial position (Note 13.b).

- An intangible asset, amortisable in the concession period, which is recognised under "Other intangible assets" in the consolidated statement of financial position (Note 8).

The costs incurred in relation to the other items included under this heading in the consolidated statement of financial position are amortised on a straight-line basis over their useful lives, of between five and ten years.

Computer software

The acquisition and development costs incurred in relation to computer software are recognised with a charge to “Other intangible assets” in the consolidated statement of financial position. Maintenance costs of computer software are recorded with a charge to the consolidated income statement for the year in which they are incurred.

Computer software is amortised on a straight-line basis over a period of between three and five years from the entry into service of each software application.

Customer acquisition costs

IBERDROLA Group recognises the incremental costs of signing contracts mainly from commissions for signing sales contracts as an intangible asset and they are redeemed during the estimated duration of those contracts.

Research and development expenditure

The IBERDROLA Group’s policy is to record research expenses in the consolidated income statement for the period when they are incurred.

Development costs are recognised as an intangible asset in the consolidated statement of financial position if the Group can identify them separately and show the technical viability of the asset, its intention and capacity to use or sell it, and how it will generate probable future economic benefits.

3.c) Investment property

Real estate investments will be recognised at its acquisition cost net of accumulated depreciation. Investment properties are depreciated on a straight-line basis, minus material residual value, over each asset’s estimated useful life which ranges between 37.5 y 75 years in accordance with the features of each asset concerned.

3.d) Property, plant and equipment

Items of property, plant and equipment are measured at acquisition or production cost less depreciation and accumulated impairment. Acquisition cost includes, where applicable, the following:

1. Prior to the date of transition to IFRS (1 January 2004), the IBERDROLA Group revalued certain Spanish assets under “Property, plant and equipment” in the consolidated statement of financial position as permitted by applicable legislation, including Royal Decree-Law 7/1996, and considered the amount of these revaluations as part of the cost of the assets, in accordance with IFRS 1.

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2. Finance costs relating to external funding accrued exclusively during the construction period, are determined as follows:

    - Interests accrued on specific sources of financing used to build certain assets are fully capitalised.

    - Interests accrued on external general-purpose borrowings is capitalised by applying the average effective interest rate of this financing to the average cumulative investment qualifying for capitalisation, after deducting the investment financed with specific-purpose borrowings, provided that it does not exceed the total finance costs incurred in the year.

3. Personnel expenses relating directly or indirectly to constructions in progress (Note 37).

4. If the IBERDROLA Group is required to dismantle its facilities or restore the place where they are located, the present value of said costs are included in the carrying amount of the asset at their present value, with a credit to "Provisions - Other provisions" of the consolidated statement of financial position (Note 3.s).

   The IBERDROLA Group periodically checks its estimate of this current value increasing or decreasing the assets value depending on the results of said estimate.

The IBERDROLA Group transfers property, plant and equipment under construction to property, plant and equipment in use at the end of the related trial period.

Expansion or improvement costs leading to increased productivity, capacity or to a lengthening of the useful lives of the assets are capitalised. Replacements or renewals of complete items are recorded as additions to property, plant and equipment, and the items replaced are derecognised.

Gains or losses arising on the disposal of items of property, plant and equipment are calculated as the difference between the amount received on the sale and the carrying amount of the asset disposed of.

3.e) Depreciation of property, plant and equipment in use

Every year, the IBERDROLA group reviews the useful life of its assets in accordance with internal and external information sources.

Since 2017, following this review, the IBERDROLA Group considers that the best useful life estimation is 40 years for combined cycle plants (compared to the 35 years considered previously) and 50 years for the electromechanical equipment at hydroelectric power plants (compared to the 35 years considered previously). As a result, "Amortisation and provisions" in the 2017 consolidated income statement includes the impact of this change in estimate, which as per accounting regulations has been applied prospectively since 01 January 2017, and resulted in a lower depreciation charge of approximately Euros 65 million. This amount is gradually decreasing as the useful life of hydroelectric and combined cycle power plants in use draws an end 1 January 2017.

The cost of property, plant and equipment in use is depreciated by depreciating the cost of the different items on a straight-line basis, less any residual value, over their estimated useful lives, the majority of which are as follows:

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	Average years of estimated useful life
Conventional thermal power plants	25-50
Combined cycle power plants	40
Nuclear plants	40
Wind farms	
Structural components	40
Non-structural components	25
Gas storage facilities	25-40
Transmission facilities	40-56
Distribution facilities	30-54
Conventional meters and measuring devices	10-40
Electronic or smart meters	10
Buildings	50-75
Dispatching centres and other facilities	4-50

As hydroelectric plants are operated under concessions (Note 11), civil engineering assets are depreciated over the life of the concession, while their electromechanical equipment is depreciated in 50 years or in the concession period if this was lower.

Significant components of the property, plant and equipment with different useful lives are considered separately.

3.f) Lease agreements

The IBERDROLA Group classifies all lease arrangements under which the lessor transfers to the lessee substantially all the risks and rewards incidental to ownership of the asset as finance leases. All other leases are classified as operating leases.

Assets acquired under finance leases are recognised as non-current assets in accordance with their nature and function. Assets are measured at the lower of the fair value of the leased asset and the present value of the future lease payments, and are amortised over the useful life of each asset.

Expenses arising from operating leases are taken to the consolidated income statement on an accrual basis over the term of the lease agreement.

3.g) Nuclear fuel

The IBERDROLA Group measures its nuclear fuel stocks on the basis of the costs actually incurred in acquiring and subsequently processing the fuel.

Nuclear fuel costs include the finance costs accrued during construction, calculated as indicated in Note 3.d (Note 42).

Nuclear fuel consumed is recognised under “Supplies” in the consolidated income statement from when the fuel loaded into the reactor starts to be used, in accordance with the cost of the fuel and the degree of burning in each reporting period.

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3.h) Inventories

Energy resources

Energy resources are measured at acquisition cost, calculated weighted average cost or at net realisable value, if it were lower. No adjustments are made to the value of energy sources that are part of the production process if the finished products into which they will be incorporated are expected to be sold at above cost.

Real estate inventories

Real estate inventories are measured at acquisition cost, which includes both the acquisition cost of the land and plots and the costs of urbanisation and construction of real estate developments incurred until year end. These costs include those incurred by the architecture and construction departments.

Acquisition cost also includes finance costs to the extent that such expenses relate to the period of town planning permits, urbanisation or construction up until the time at which the land or plot is ready for operation, calculated using the method set out in Note 3.d (Note 42).

Trade costs are charged to the consolidated income statement in the year in which they are incurred except for those incremental costs needed to close contracts with clients.

The IBERDROLA Group periodically compares the cost of acquisition of real estate inventories with their net realisable value, recognising the necessary impairment losses with a charge to the consolidated income statement when the latter is lower. If the circumstances leading to impairment no longer exist, it is reversed recognising the corresponding income.

For land, construction in progress and unsold units, net realisable value is used taking into account the appraisals by independent experts. Net realisable value is the estimated selling price in the ordinary course of business, less the estimated costs to finish production and the costs necessary to sell the element.

This value is determined using the residual method, where the estimated total cost of the work is deducted from the total gross value of the project, and the profit margin for developer's risk is added. The key variables of the residual method are:

- Forecast revenues: consists of the estimated price at which each of the units of the promotion can be sold, according to a pace of sales as estimated by independent experts.

- The cost of the development, including all disbursements to be made by the developer of the work depending on the type (e.g. government-sponsored or private single-family dwellings) and the quality of the construction. In addition to the cost of the work, it includes the cost of projects and licenses (10%-12% of the physical construction project), legal fees (1%-1.5% of the material implementation project), marketing and promotional expenses (2%-4% of income) and unforeseen contingencies (3% of income).

- Development time: the time necessary for different planning, management, and town planning phases, as well as the forecast building and sale period.

- The developer profit considered for each asset, depending on the zone state of the land, size and complexity of the development, ranging from 15% to 35% of total costs.

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For land with licences, construction in progress and unsold units, the main difference with regard to unlicensed land is the developer profit, which in this case is lower given the stage of completion of the work and the decrease in risk as the completion of construction nears.

Emission allowances and renewables obligation certificates

Inventories of emission allowances and renewables obligation certificates (ROCs) are measured at acquisition cost, calculated at weighted average cost and at net realisable value, if it were lower. No adjustments are made to the value of emission allowances and ROCs that are part of the production process if the finished products into which they will be incorporated are expected to be sold at above cost.

Emission allowances and ROCs acquired to obtain benefits from fluctuations in their market price are measured at fair value with a credit or debit to the consolidated income statement.

Emission allowances and ROCs are derecognised from the consolidated statement of financial position when they are sold to third parties, have been delivered or expire. When the allowances are delivered, they are derecognised with a charge to the provision made when the CO2 emissions were produced.

3.i) Non-Financial assets impairment

At least at each reporting date, the IBERDROLA Group reviews the carrying amounts of its non-current assets, testing them for any indications of impairment. If such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss, if necessary. For this purpose, in the case of assets that do not generate cash flows that are largely independent of other assets, the IBERDROLA Group estimates the recoverable amount of the cash-generating unit to which they belong.

In the case of goodwill and other intangible assets which have not come into use or which have an indefinite useful life, the IBERDROLA Group performs the recoverability analysis systematically every year, except when there are indications of impairment in another moment, in which case recoverability analysis is performed at the same time.

For purposes of this recoverability analysis, goodwill is allocated to the cash generating units in which it is controlled for internal management purposes (Note 8).

Recoverable amount is the higher of fair value less costs sell and value in use, which is taken to be the present value of the estimated future cash flows. The assumptions used in calculating value in use include discount rates, growth rates and expected changes in selling prices and direct costs. The discount rates reflect the time value of money and the risks specific to each cash-generating unit. The growth rates and the changes in prices and direct costs are in accordance with contractual commitments that have already been signed, information in the public domain, sector forecasts and the experience of the IBERDROLA Group (Note 12).

If the recoverable amount of an asset is less than its carrying amount, the difference is recognised as a charge to “Amortisation and provisions” in the consolidated income statement.

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The IBERDROLA Group distinguishes between impairment allowances and write-downs depending on whether the impairment is reversible or not reversible. A write-down involves derecognising the carrying amount of an asset, either because impairment is considered definitive and non-reversible, because of an accounting standard, such as the case of goodwill, or when the value of the asset is not deemed to be recoverable from its use or disposal. Impairment arises when future expected earnings to be obtained are less than the carrying amount.

Impairment losses recognised for an asset are reversed with a credit to "Amortisation, depreciation and provisions" when there is a change in the estimates used to calculate the recoverable amount of the asset, and the asset's carrying amount is increased to the amount that would have been determined had no impairment loss been recognised.

3.j) Associates and joint ventures

Investments in associates and joint ventures are accounted for using the equity method. Under this method, investments are measured initially at acquisition cost, subsequently adjusted for changes to each company's equity, taking into consideration the percentage of ownership and, if applicable, any impairment.

Some investments in associates and joint ventures which in the context of these consolidated annual accounts are immaterial are recorded at acquisition cost within "Non-current financial assets – Non-current securities portfolio" of the consolidated statement of financial position.

The IBERDROLA Group regularly analyses the existence of impairment in its associates and joint ventures by comparing the total carrying amount of the associate or joint venture, including goodwill, to its recoverable amount. If the carrying amount exceeds the recoverable amount, the IBERDROLA Group recognises the related impairment with a debit to the consolidated income statement under "Share of profit/(loss) of equity-accounted investees - net of taxes".

3.k) Joint operations

A joint operation is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the assets liability, obligations, relating to the arrangement. These consolidated annual accounts include the proportional part of the assets, liabilities, income and expenses of the joint operations in which the IBERDROLA Group takes part in (Note 45).

3.l) Finance instruments

Classification and assessment of financial assets

The IBERDROLA Group measures its current and non-current investments in accordance with the criteria described below:

1. Assets at amortised cost

   Under this category financial assets that met the following conditions are included:

   - Assets held within a business model where the objective is to hold the assets to obtain the contract cash flows, and
   - whose contract terms produce, on specific dates, cash flows which are only payments of the principal and interest on the amount of the outstanding principal.

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These assets are initially recognised at fair value adding transaction costs and are subsequently measured at amortised cost. Interests accrued on these liabilities are recognised in the income statement using the effective interest rate method. However, loans and receivables maturing in less than a year that do not have a contractual interest rate, are measured both initially and subsequently at nominal value when the impact of not discounting cash flows is not significant.

2. Assets at fair value through profit and loss:

   The IBERDROLA Group includes in this category the derivative financial instruments which do not satisfy the conditions necessary for hedge accounting in accordance with the requirements established for this purpose in IFRS 9: “Financial instruments (Note 28).

   Assets held for trade are recognised at fair value. The transaction costs directly attributable to purchase or issuing is recognised as an expense in the consolidated income statement as it is incurred. The changes that occur in their fair value are allocated to the consolidated income statement for the period in the headings “Expenses” e “Income” of the consolidated annual accounts, as may be applicable.

The IBERDROLA Group determines the most appropriate classification for each asset on acquisition and reviews the classification at each year end date.

Before 1 January 2018, prior to the application of IFRS 9: “Financial instruments” for the first time (Note 2.a.), IBERDROLA Group classified financial assets into the following categories:

- Loans and accounts receivable: valued at amortised cost through the application of the effective interest method.

- Held-for-sale assets: valued at fair value with changes to the consolidated financial statement of the overall result.

- Assets held for trading: valued at fair value with changes to the results. The IBERDROLA Group includes the derivative financial instruments which did not satisfy the conditions necessary for hedge accounting in this category, based on the requirements established for this purpose in IAS 39: "Financial instruments".

Impairment of financial assets at amortised cost

The IBERDROLA Group recognised valuation adjustments resulting from credit losses expected from financial assets and contract assets at amortised cost.

The IBERDROLA Group will apply the general model for calculation of expected loss on financial assets other than trade and lease receivables, where the simplified model will be applied.

Under the general model, credit losses expected in the next twelve months are recorded unless the credit risk of financial instruments has significantly increased from the initial recording. In such case, they will qualify as expected credit losses over the life of the asset. IBERDROLA Group recognises that the credit risk of a financial instrument has not increased in a significant manner since its initial recognition if it is determined that at reporting date it has a low credit risk.

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Under the simplified model, they qualify as expected credit losses over the life of the asset. The IBERDROLA Group has adopted the practical solution whereby it calculates the expected credit loss on trade receivables by using a matrix of provisions in accordance with its experience of losses historically adjusted for available prospective information.

Valuation adjustments and reversals of trade receivables and contract assets are recognised in "Valuation adjustments in trade and other contract assets" in the consolidated income statement. Impairment losses recognised and reversed relating to other financial assets valued at amortised cost are recorded in the "Finance cost" section of the consolidated statement of comprehensive income (see Note 43).

Derecognition of financial assets

Financial assets are derecognised when the rights to receive cash flows in relation thereto have extinguished or have been transferred or when the risks and profits are considered to have been substantially assigned arising from its ownership.

The derecognition of a financial assets implies a recognition in the consolidated income statement of the difference between is carrying amount and the consideration received, net of expenses, including assets obtained or liabilities assumed and any deferred gain or loss from other comprehensive income.

Classification and assessment of financial liabilities

The IBERDROLA Group classifies all finance liabilities at amortised cost using the effective interest method, except for the derivatives which do not meet the conditions necessary for hedge accounting in accordance with the requirements established for this purpose in IAS 9: "Financial instrument" recognised at fair value.

Derecognition of financial assets and liabilities

A financial liabilities are derecognised when they are extinguished, this means, when the obligation under the liability is discharged or cancelled or expires. Moreover, when a debt instrument between IBERDROLA and the counterparty is replaced by another on substantial different terms, the original financial liability is derecognised and the new liability is recognised. Similarly, substantial modifications in the terms of an existing financial liability are treated in the same way.

The difference between the carrying value of the financial liability or of the part of it that has given below and the paid consideration, including the attributable transaction costs, and in which any transferred asset different from the assumed cash or liability is also included, recognised in the consolidated income statement of the period in which it takes place.

IBERDROLA considers that the conditions are substantially different if the current value of the discounted cash flows under the new conditions, including any net paid fee of any received fee, and using the original effective interest rate for the discount, differs at least 10 per cent from the current discounted value of the cash flows that still remain from the original financial liability.

When a debt instrument exchange is made that does not have substantially different conditions, the original financial liability is not under the consolidated statement of financial position, recording the amount of the paid fees as an adjustment of its book value. The amortised cost of the financial liability is determined using the effective interest rate method. The effective interest rate is the rate that matches the carrying amount of the financial liability at the date of modification with the cash flows payable under the new terms.

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Interests and dividends

Interest income is accrued on a time proportional basis, by reference to the outstanding principal and the applicable effective interest rate, which is the rate that exactly discounts estimated future cash receipts through the expected life of the asset to that asset's carrying amount.

Dividend income is recognised when the IBERDROLA Group companies are entitled to receive them.

Contracts to buy or sell non-financial items

The IBERDROLA Group performs a detailed analysis of all its contracts to buy or sell non-financial items to ensure they are classified correctly for accounting purposes.

As a general rule, those contracts that are settled net in cash or in another financial asset are classified as derivatives and are recognised and measured as described in this note, except for contracts entered into and held for the purpose of the receipt or delivery of a non-financial item in accordance with the IBERDROLA Group's purchase, sale, or usage requirements.

Contracts to buy or sell non-financial items to which the treatment described in IAS 9 "Finance instruments" is not applicable, are designated as own-use contracts and are recognised as the IBERDROLA Group receives or delivers the rights or obligations originating thereunder.

Derivative financial instruments and hedge accounting

Financial derivatives are initially recognised at acquisition cost in the consolidated statement of financial position and the required value adjustments are subsequently made to reflect their fair value at all times. Gains and losses arising from these changes are recognised in the consolidated income statement, unless the derivative has been designated as a cash flow hedge or a hedge of a net investment in foreign countries.

At hedge inception, hedging relationships were formally defined and documented, as were risk management aims and strategy. At the commencement of the hedging relationship, ongoing assessment also ensured that hedge effectiveness thresholds were being met prospectively.

Changes in temporary value of options hedging a component related to a forecasted transaction are recognised in the consolidated comprehensive income statement. If the hedged component results in the recognition of a non-financial asset or liability, the accumulated amount is recognised as a non-financial asset or liability adjustment in the consolidated comprehensive income statement. For other hedges, the deferred amount in the consolidated comprehensive income statement is reclassified as profit for the year or for periods in which the expected cash flows affect the profit.

Changes in temporary value of options hedging a component related to a period of time are recognised in the consolidated comprehensive income statement. The accumulated amount in another comprehensive income is systematically amortised during the period over which the hedge adjustment for the intrinsic option value affecting the consolidated income statement or the consolidated comprehensive income statement when the fundamental contractual terms match the hedged component. The Group also separates the term of term contracts and the differences in exchange rates of financial instruments applying criteria similar to those in previous sections. The election is made on a contract by contract basis.

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The accounting treatment for hedging transactions is as follows:

1. Fair value hedges:

All changes in the fair value of the derivative financial instruments designated as hedging, or the exchange rate component of a monetary item in the case of non-derivative hedge instruments, such as changes in the fair value of the hedged item produced by the hedged risk are recognised with a charge or credit to the same caption of the consolidated income statement.

2. Cash flow hedges:

The IBERDROLA Group recognises the portion of the gain or loss on the measurement at fair value of a hedging instrument that is determined to be an effective hedge under “Valuation adjustments ", in the case of cash flow hedges and "Translation differences", in the case of net investment hedges. The portion of the hedge deemed ineffective, as well as the specific component of the gain or loss or cash flows related to the hedging instrument, excluding the assessment of hedge effectiveness, are recognised in the consolidated income statement.

The gain or loss accumulated in these captions is transferred to the consolidated income statement caption affected by the hedged item as it affects the consolidated income statement.

If a hedge of a future transaction results in a non-financial asset or liability, this balance is taken into account when determining the initial value of the asset or liability generating the hedging transaction.

If a hedge of future transactions results in a financial asset or a liability, this balance is maintained in “Valuation adjustments” until the hedged risk in the future transaction has an impact on the consolidated income statement

3. Fair value hedges and net investment in foreign operations:

The IBERDROLA Group recognises the portion of the gain or loss on the measurement at fair value of a hedging instrument that is determined to be an effective hedge under “Valuation adjustments ", in the case of cash flow hedges, and "Translation differences", in the case of net investment hedges. The portion of the hedge deemed ineffective, as well as the specific component of the gain or loss or cash flows related to the hedging instrument, excluding the assessment of hedge effectiveness, are recognised under “Financial Income” and “Financial Cost” in the consolidated income statement.

Discontinuation of hedge accounting

The IBERDROLA Group prospectively discontinues the fair value hedge accounting in the cases in which the hedging instrument matures, is sold, let go of or exercised, the goal of the risk management has changes, there is no financial relation between the hedge element and the hedged item, the credit risk effect dominates value changes, the hedge instrument matures or is liquidated or the underlying hedge ceases to exist.

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When hedge accounting is discontinued, the cumulative amount at that date recognised under "Adjustments for changes in value" and "Translation differences" in cash flow hedges and net investment hedges abroad, respectively, is retained under said headings until the hedged transaction occurs, at which time the gain or loss on the transaction will be adjusted. If a hedged transaction is no longer expected to occur, the gain or loss recognised under the aforementioned headings is transferred to the consolidated income statement.

Implicit derivatives

Implicit derivatives in financial liabilities and transactions whose main contract is out of the scope of IFRS 9: Derivatives embedded in other financial instruments are recognised separately when the IBERDROLA Group considers that their risks and characteristics are not closely related to the financial instruments in which they are embedded, providing the entire contract is not carried at fair value, and changes in value are recognised in the consolidated income statement.

Fair value of derivative financial instruments

The fair value of the derivative financial instruments is calculated as follows (Note 15):

- For derivatives quoted on an organised market corresponds to its market price at year end.
- To measure derivatives not traded on an organised market, the IBERDROLA Group uses assumptions in accordance with market conditions at year end. In particular,
    - the fair value of interest rate swaps is calculated as the value discounted at market interest rates of the interest rate swap contract spread.
    - currency futures are measured by discounting the future cash flows calculated using the forward exchange rates at year end.;
    - finally, the fair value of contracts to trade non-financial items falling under the scope of IAS 9 is calculated on the basis of the best estimate of future price curves for the underlying non-financial items at the year end of the consolidated annual accounts, using, wherever possible, prices established on futures markets.

These measurement models take into account the risks of the asset or liability, among these, the credit risk of both the counterparty (Credit Value Adjustment) and the entity itself (Debit Value Adjustment). The credit risk is calculated according to the following parameters:

- Exposure at default: the amount of the risk arising at the time of non-payment by a counterparty, taking into account any collateral or compensation arrangements connected to the transaction.
- Probability of default: the probability that a counterparty will breach its obligations to pay the principal and/or interests, depending mainly on the features of the counterparty and its credit rating.
- Loss given default: the estimated loss in the event of default.

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Offsetting of financial instruments principle

The financial assets and liabilities can be offset: the corresponding net amount must be shown in the Statement of financial position if the company currently has a legally enforceable right to offset the recognised amounts and the intention of settling them for the net amount or realising the assets and settling the liabilities simultaneously.

3.m) Treasury shares

At year end, the IBERDROLA Group's treasury shares are included under "Treasury shares" in the consolidated statement of financial position and are measured at acquisition cost.

The gains and losses obtained on disposal of treasury shares are recognised in "Other reserves" in the consolidated statement of financial position.

3.n) Capital grants

This heading includes any non-repayable government grants for financing property, plant and equipment, including the cash received from the US Government in the form of investment tax credits as a result of setting up wind power facilities. All capital grants are taken to "Other operating income" in the consolidated income statement as the financed facilities are depreciated.

3.o) Facilities transferred or financed by third parties

According to the regulation applicable to electricity distribution in the countries in which IBERDROLA operates, the Group occasionally receives cash payments from third parties for the construction of electricity grid connection facilities or direct assignment of such facilities. Both the cash received and the fair value of the facilities received are taken to "Deferred income" heading in the consolidated statement of financial position. These amounts are subsequently recognised under "Other operating income" in the consolidated income statement as the facilities are depreciated.

3.p) Post-employment and other employee benefits

The contributions to be made to the defined contribution post-employment benefit plans are expensed under the "personnel expenses" heading in the consolidated income statement on an accrual basis.

In the case of the defined benefit plans, the IBERDROLA Group recognises the expenditure relating to these obligations on an accrual basis over the working life of the employees by commissioning the appropriate independent actuarial studies using the projected unit credit method to measure the obligation accrued at the year end. The provision recognised under this concept represents the present value of the defined benefit obligation reduced by the fair value of the related plans.

New measurement of net liabilities corresponding to defined provision commitments including positive or negative actuarial differences, the performance of the plan assets, excluding amounts included in the net interest on assets or liabilities and any changed impacting the limit of assets, are recognised under "Other reserves" heading when they arise.

If the fair value of the assets exceeds the present value of the obligation, the net asset is not recognised in the consolidated statement of financial position limited to the updated value of future revenue to receive from the plan o reduction in future contributions to said plan.

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The IBERDROLA Group determines the net financial costs (income) related with their commitments for pensions by applying the discount rate used in its measurement on their value at the beginning of the period once considering the changes in the net commitments for pensions made during the period in terms of contributions and repayments made. The net interest and the amount corresponding to other expenses related with the commitments undertaken are recorded in the consolidated income statement.

The IBERDROLA Group determines the discount rate with reference to the market yields at the end of the reporting period, corresponding to the bonds or business obligations of high credit quality (IBERDROLA Group considers rating equivalent to AA/Aa). In the countries where there is not a deep market to such bonds and obligations, the discount rate is determined with reference to Government bonds.

For the Eurozone, United Kingdom and the United States of America, there is a deep bond market with a sufficient period of maturity to cover all payments expected. In reference to the countries related to the Eurozone, the depth of the bond or obligation market is evaluated for the monetary union and not for the particular country. In the case of Brazil and Mexico, the discount rate has been determined taking into account the Brazilian sovereign credit, because a deep corporative market does not exist as they don´t satisfy the indicated credit qualifications.

The IBERDROLA Group applies a weighted average discount rate that reflects the estimate timing and amount of benefit payment, as well as the currency in which the benefits are to be paid.

The calculation methodology is mainly in accordance with the following principles:

- The universe and spectrum of the outstanding bonds that meet the criteria of an AA/Aa rating is generated. The source of information corresponds with Bloomberg. The IBERDROLA Group has adopted the notional issues that are higher than Euros 50 million or its equivalent in local currency as the selection criteria.

- Once the bonds' database is obtained, the result is screened and the bonds that show any deficiencies are eliminated.

- The sample is grouped in accordance with the bonds' duration and the return on each duration and outstanding nominal amount of the issue is shown. As far as possible, the price return is in accordance with the midpoint of the bid/ask spread.

- The benefit payment is calculated using a mathematical formula, i.e., the minimum approximation of the quadratic function, resulting in a market return curve in accordance with the duration. The market curve result will provide the discount rates for each future maturity date of the bonds.

- For markets in which government bonds or corporate bonds with maturity dates beyond 25/30 years are not available, the reference sovereign rates for those terms combines with the AA corporate credit spread at liquid terms.

- As far as possible, the price return is in accordance with the midpoint of the bid/ask spread.

The discount rate reflects the time value of money and estimated schedule for the benefit payments. However, it does not reflect the actuarial risk, investment, credit or deviation in compliance with the actuarial assumptions risk.

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3.q) Collective redundancy procedure and other early retirement plans for employees

IBERDROLA recognises termination benefits when the Group can no longer remove the offer or when the expenses of restructuring are recognised from which the payment of severance payments arises, in the case that said recognition is made previously.

The payments related with restructuring processes are recognised when the IBERDROLA Group has an implicit debenture, i.e., at the time that there is a detailed formal plan to perform the restructuring (in which are identified, at least, the company activities, or part of them, implied, the main locations affected, the location, function and approximate number of employees that will be paid for the termination of their contracts, the repayments that will be carried out, and the dates on which the plan will be implemented) and has generated a valid expectation amongst the affected personnel which the restructuring will be carried out, either for having started to execute the plan or for having announced its main characteristics.

The IBERDROLA Group recognises the full amount of the expenditure relating to these plans when the obligation arises by performing the appropriate actuarial studies to calculate the present value of the actuarial obligation at year end. The actuarial gains and losses are recognised in the consolidated income statement.

3.r) Provision for CO2 emissions

The IBERDROLA Group records a provision for liabilities and charges in order to recognise the obligation to deliver CO2 emission allowances in Spain and ROCs (Renewables Obligation Certificates) in Scotland (Note 26), under “Supplies” in the consolidated income statement.

3.s) Production facility closure costs

The IBERDROLA Group will incur in several decommissioning costs of its production plants, among which include those arising from necessary tasks to fit the land where they are located. Additionally, in accordance with the current legislation, the Group must perform certain tasks prior to the decommissioning of its nuclear plants, of which Empresa Nacional de Residuos Radioactivos, S.A. (hereinafter, ENRESA) is responsible for.

The estimated present value of these costs is capitalised with a credit to “Provisions – Other provisions” at the beginning of the useful life of the related asset (Note 26).

This estimate is subject to annual revision so that the provision reflects the present value of the full amount of the estimated future costs. The value of the asset is only adjusted for variances with respect to the initial one.

The IBERDROLA Group applies a risk-free rate to financially update the provision because the estimated future cash flows to satisfy the obligation reflect the specific risks of the corresponding liability. The risk-free rate used corresponds to the yield at year end on which reports, government bonds with enough depth and solvency in the same currency and similar due date to the obligation.

Any change in the provision as a result of its discounting is recognised in “Finance cost” in the consolidated income statement.

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3.t) Other provisions

The IBERDROLA Group recognises provisions to cover present obligations, whether these are legal or implied, which arise as a result of past events, provided that it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation (Note 26). A provision is recognised when the liability or obligation arises, with a charge to the relevant heading in the consolidated income statement depending on the nature of the obligation, for the present value of the provision when the effect of discounting the value of the obligation to present value is material. The change in the provision due to its discounting each year is recognised under "Finance cost" in the consolidated income statement.

These provisions include those recorded to cover environmental damage, which were determined on the basis of a case-by-case analysis of the situation of the polluted assets and the cost of decontaminating them.

3.u) Current and non-current debt classification

In the consolidated statement of financial position debts are classified by their maturity date at year end. Debts that are due within twelve months are classified as current items and those due within more than twelve months as non-current items.

3.v) Revenue recognition

Revenues from sales is measured at the fair value of the assets or rights received as consideration for the goods and services provided in the normal course of the Group companies' business, net of discounts and applicable taxes.

The amount of the consideration to be received from the customer does not match the financial component in those cases in which, at the start of the contract, the period between the moment at which the asset or service in question is transferred and the moment at which the customer makes payment is a year or less.

Regulated income

Income from regulated activities where remuneration is in accordance with a fixed margin is booked by the IBERDROLA Group under "Net revenue" in the consolidated income statement for the corresponding year.

In the case of some regulated activities carried out by the IBERDROLA Group, any discrepancies between costs estimated when setting the annual tariff and costs actually incurred are recognised as income or expense for the year in which they arise only if its proceed or payment is certain, regardless of future sales.

Revenues from Construction contracts

IBERDROLA Group undertakes construction projects whose revenues are recognised during the time they are being executed since the asset's control in the client's favour is transferred in an ongoing manner.

Income is related to construction contracts recognised in an amount proportionate to the degree of completion of the construction project by measuring the contract costs incurred to date as a proportion of the total estimated costs until the termination of the contract.

Changes to construction work and any claims are included within contract revenue the contract amendments are legally required.

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Revenues from the sale of real estate

As to real estate sales, the IBERDROLA Group follows the principle of recognising income at the time when legal title is transferred to the purchaser, which usually matches the date of notarisation of the respective contracts.

Criteria applied on previous years

Up until 2018 the Group's income was recognised, mainly, in accordance with IAS 18: "Revenue recognition" and IAS 11: "Construction contracts". IAS 18 determined that revenue recognition from a model based on transfer of risk, whereas IFRS 15 revenue from customer contracts is based on transfer of control.

The main differences between IFRS 15 and the revenue recognition applied to previous years are detailed in Note 2.a).

3.w) Transactions in foreign currency

Transactions carried out in currencies other than the functional currency of the Group companies are recorded at the exchange rates prevailing at the transaction date.

The monetary assets and liabilities denominated in foreign currency have converted to euros applying the existing rate at the close of the financial year, while the non-monetary ones assessed at historical cost are converted applying the exchange rates applied on the date on which the transaction took place.

During the year, the differences arising between the exchange rates at which the transactions were recorded and those in force at the date on which the related proceeds are made are charged or credited to "Financial Cost" or "Financial Income", as appropriate, to the consolidated income statement.

Those foreign currency transactions in which the IBERDROLA Group has decided to mitigate translation risk through the use of financial derivatives or other hedging instruments are recorded as described in Note 3.l.

3.x) Income Tax

Since 1986, IBERDROLA has filed consolidated tax Returns with certain Group companies. Foreign companies are taxed according to the current legislation of their respective jurisdiction.

The expense or income for the corporate income tax includes both the current and deferred tax. The tax on the current or deferred earnings is recognised in the consolidated income statement, unless arising from a transaction or economic success that has been recognised in the same year or in a different one, against net equity or from a business combination.

The assets or liabilities from tax on the current earnings are assessed for the quantities expected to pay or recover from the tax authorities, using the regulations and tax rates that are approved or are about to be approved on the closing date.

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Income Tax is accounted for using the general balance liability method, which consists of determining deferred tax assets and liabilities on the basis of the carrying amounts of assets and liabilities and their tax base, using the tax rates that can objectively be expected to be in force when the assets or liabilities are realised or settled. Deferred tax assets and liabilities arising as a result of direct charges or credits to equity are also accounted for with a debit or credit to equity.

The IBERDROLA Group recognises deferred tax liabilities in all cases but those when:

- arise from the initial recognition of the goodwill or from an asset or liability in a transaction that is not a business combination and on the date of the transaction does not affect the accounting income or the taxable income;

- correspond to temporary differences related with investments in subsidiary companies, associates and joint ventures over which the Group has the ability to control the moment of their reversal and was not probable that their reversal occurred in a foreseeable future.

The IBERDROLA Group recognises deferred tax assets in all cases but when:

- it is probable that there are sufficient future tax earnings for clearing or when the tax legislation includes the possibility of future conversion of assets for deferred tax in a credit due to the public administration. However, the deferred tax assets that arise from the initial recognising of assets or liabilities in a transaction that is not a business combination and on the date of the transaction does not affect the accounting income or the taxable income, are not recognised;

- correspond to temporary differences related with investments in subsidiaries, associates and joint ventures inasmuch as the temporary differences will not be reinvested in a foreseeable future and are not awaiting creating future positive tax earnings to clear the differences.

Deductions in order to avoid double taxation and other tax credits as well as tax relief earned as a result of economic events occurring in the year are deducted from the Income Tax expense, unless there are doubts as to whether they can be realised.

The existence of uncertainties is considered in the taxable events, credits for negative taxable income or applied deductions. In those cases in which the asset or the liability for tax calculated with these criteria, exceeds the amount in the self-settlements, this is presented as current or not current on the consolidated statement of financial position taking into account the expected recovery or settlement date, considering, where applicable, the amount of the corresponding interest on arrears on the liability as earned in the profit and loss account. The IBERDROLA Group records the changes in facts and circumstances regarding tax uncertainties as a change in the estimate.

3.y) Final radioactive waste management costs

On 8 November 2003, the Royal Decree 1349/2003 was published regulating the ENRESA activities and its financing. This royal decree grouped together the previous legislation regulating the activities that ENRESA develops as well as its financing, and repeals, inter alia, the Royal Decree 1899/1984, of 1 August 1984.

Meanwhile, the Royal Decree-law 5/2005 and the Law 24/2005 establish that the costs relating to the management of radioactive waste and spent fuel from nuclear plants, and to the dismantling and closure of the plants attributable to their operation and incurred after 31 March 2005, will be financed by the owners of the nuclear plants in use.

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On the other hand, on 7 May 2009, the Royal Decree-law 6/2009 was published, adopting various energy sector measures and approving the social tariff. The principal measures introduced are as follows:

- Necessary costs incurred in the management of radioactive waste and nuclear fuel at nuclear power stations that are definitively dismantled before the state-owned radioactive waste management company ENRESA begins operating, which had not yet been done at the date of these consolidated annual accounts, and all necessary costs incurred in dismantling and closing these power stations, will be treated as diversification and capacity guarantee costs.

  Amounts used to cover the cost of managing radioactive waste generated by research activities directly related to nuclear electricity generation and the costs deriving from the reprocessing of spent fuel sent overseas prior to the entry into force of the Electricity Industry Law 54/1997, and all other costs that may be specified by the royal decree, shall also be considered diversification and capacity guarantee costs.

- Amounts used to register provisions to cover the costs incurred in managing radioactive waste and spent fuel generated at operational nuclear power stations after the establishment of ENRESA as well as dismantling and closure costs will not be treated as supply diversification and security costs, since these will be financed by the owners of the nuclear power stations while they are operational, irrespective of the date on which they are generated.

- The balance of ENRESA's provision remaining after deduction of the amounts needed to cover the supply security and diversification costs will be used to cover costs not included in this category.

- To cover the costs associated with nuclear power plants in operation, the companies owning the stations must pay a charge directly proportional to the volume of energy generated at each plant according to the methodology proposed by them

After a detailed analysis of the impact of the Royal Decree-law 6/2009, the IBERDROLA Group considers that the rate is the best estimate available of the accrued expenses originated for that royal decree-law.

3.z) Earnings per share

Basic earnings per share are calculated by dividing the net profit for the year attributable to the parent company by the weighted average number of ordinary shares outstanding during the year, excluding the average number of shares of the parent company held by Group companies (Notes 20 and 53).

Meanwhile, diluted earnings per share are calculated by dividing the net profit for the year attributable to the parent company by the weighted average number of ordinary shares outstanding during the year, adjusted by the weighted average number of ordinary shares that would have been outstanding assuming the conversion of all the potential ordinary shares into ordinary shares of IBERDROLA. For these purposes, it is considered that shares are converted at the beginning of the year or at the date of issue of the potential ordinary shares, if the latter were issued during the current period.

3.aa) Non-current assets held for sale and discontinued operations

If the carrying amount of a non-current asset (or a disposable group of assets) is recovered principally through its sale rather than through its continued use, the IBERDROLA Group classifies it as held for sale and values it at the lower of its carrying amount and its fair value less the costs of sale.

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The impairment losses related with the disposal asset groups are assigned first to the goodwill and then to the rest of assets and liabilities proportionally. Value adjustments that could affect the stocks, financial assets, deferred tax assets, assets related with commitments with staff are not recognised. These assets are assessed in accordance with the principles contained in the previous sections. The losses recognised at the time of initial classification in this sub-heading and the capital gains and/or losses that are highlighted later are recognised in the consolidated income statement.

The elements classified as non-current kept for their disposal are not amortised.

A discontinued operation is a component of the entity that either has been sold or disposed of by other means, or is classified as held for sale and:

- represents a business line or geographical area that is significant and can be considered separately from the rest;
- is part of a single and coordinated plan to sell or dispose by other means a business line or geographical area that can be considered separately from the rest; or
- is a subsidiary acquired exclusively with intention to resale.

The IBERDROLA Group recognises a single heading in the consolidated statement of comprehensive income comprising the total of:

- profit or loss after tax from discontinued operations, and
- profit or loss after tax recognized by measurement at fair value less costs of sale, or sale or disposal by other means of the assets or disposable groups of assets that constitutes the discontinued operation.

During the second half of 2017, the activities related to the provision of engineering and construction services were abandoned, meeting the requirements to be considered a discontinued activity. Profit or loss after tax of the discontinued operations is included in “Net profit for the year from discontinued operations (net)” of the consolidated income statement for 2018 and 2017.

3.ab) Consolidated statements of cash flow

In the consolidated statements of cash flow, which were prepared using the indirect method, the following terms are considered:

- Operating activities: the typical activities of the Group companies, as well as other activities that are not investing or financing activities.
- Investing activities: the acquisition, sale or disposal by other means of long-term assets and other investments not included in cash and cash equivalents.
- Financing activities: activities that result in changes in the size and composition of the equity and liabilities of the company that are not operating activities.

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3.ac) Share-based employee compensation

The delivery of IBERDROLA shares to employees as compensation for their services is recognised under "personnel expenses" in the consolidated income statement as the employees perform the remunerated services, with a credit to equity under "Equity – Other reserves" in the consolidated statement of financial position at the fair value of the securities portfolio on the delivery date, defined as the date the IBERDROLA Group and its employees reach an agreement establishing the terms of the share delivery.

Fair value is determined in reference to the market value of shares at the concession date deducting estimated dividends, to which employees are not entitled, during the irrevocability period.

If remuneration in accordance with securities portfolio is paid in cash, the amount booked as "Personnel expenses" in the consolidated income statement is taken to "Other non-current payables" or "Trade and other payables - Other current liabilities" on the liabilities side of the consolidated statement of financial position, as appropriate. The fair value of the cash-settled compensation is remeasured at each reporting date.

The amount recognised on the consolidated income statement is adjusted to reflect the number of the market conditions and other conditions that are not related with vesting, they are considered in the assessment of the fair value of the instrument. The rest of the conditions are considered adjusting the number of securities portfolio included in the determination of the transaction amount, so that finally, the amount recognised for the services received, is in accordance with the number of securities portfolio that will prospectively be consolidated.

The securities portfolio retained to make the payment of the corresponding tax obligations to the employee do not change the qualification of the plan as settled on securities portfolio.

4. FINANCING AND FINANCIAL RISK POLICY

The IBERDROLA Group is exposed to risks inherent to the different countries, industries and markets in which it operates and in the businesses it carries out, which could prevent it from achieving its objectives and executing its strategies successfully. Section 4 of the consolidated directors' report contains additional information on the Group's risks.

In particular, the financing and financial risk policy of the IBERDROLA Group approved by the board of directors identifies the risk factors described below. The IBERDROLA Group has an organisation and systems which allow the financial risks to which the group is exposed to be identified, measured and controlled.

<u>Interest rate risk</u>

The IBERDROLA Group is exposed to the risk of fluctuations in interest rates affecting cash flows and fair value in respect of financial liabilities.

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In order to adequately manage and limit this risk, the IBERDROLA Group determines the desired annual structure of debt between fixed and floating interest rate, taking into account the situation of the financial markets, the pegging of income, either interest rate or price index. On a yearly basis, actions to be carried out are throughout the year are determined: new sources of financing (at a fixed, floating or indexed rate) and/or the use of interest rate derivatives. On a yearly basis, actions to be carried out are determined throughout the year: new sources of financing (at a fixed, floating or indexed rate) and/or the use of interest rate derivatives.

The debt structure at 31 December 2018 and 2017, after considering the effect of hedging derivatives (Note 28), is as follows:

Thousands of Euros	31.12.2018	31.12.2017
Fixed interest rate	22,081,044	18,025,210
Floating interest rate	15,245,428	18,665,288
Total gross loans and borrowings (Note 27)	**37,326,472**	**36,690,498**
Cash and cash equivalents(Note 19)	2,801,157	3,197,340
Other current payables	77,840	63,970
Total gross loans and borrowings	**34,447,475**	**33,429,188**

Floating rate borrowings and IBERDROLA Group cash placements are basically pegged to market rates (mainly Euribor, Libor- pound sterling, Libor-dollar and the CDI in the case of the debt of Brazilian subsidiaries).

Currency risk

The IBERDROLA Group is exposed to exchange rate movements in the currencies in which financing transactions and business operations are effected against the functional currency with which the Group's various companies operate. These functional currencies are first and foremost the euro, the US dollar, sterling and the Brazilian real.

Similarly, the IBERDROLA Group is exposed to exchange rate risk as a consequence of its net investment in foreign companies (mainly Scottish Power, Avangrid and Neonergía) due to fluctuations in the spot rates of the various functional currencies (sterling, the US dollar and the Brazilian real, respectively) against the euro. Exchange rate variations represent a risk in terms of net asset valuation and translation of results which might impact on the IBERDROLA Group's financial circumstances.

The IBERDROLA Group mitigates exchange rate risk in the operating currency of each group company by maintaining foreign currency debt or through financial derivatives.

Note 5.c of these consolidated annual accounts includes information on the potential impact of the Brexit on the IBERDROLA Group.

Commodity price risk

The IBERDROLA Group's activities require the acquisition and sale of raw materials (natural gas, coal, fuel oil, gas oil, emission allowances, etc.), whose price is subject to the volatility of international markets (global and regional) where those raw materials are traded.

Likewise, the prices for such raw materials are linked to the price indexes of other raw materials (mainly oil) and, therefore, they also depend on the volatility of the global oil market.

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The margin obtained in the operations depends on the relative competitiveness of the IBERDROLA Group's plants compared to its competitors. This relative competitiveness also depends on raw material prices.

The use of derivatives in risk management

As far as the contracting of derivatives in order to mitigate the aforementioned risk from interest rates, exchange rates and the price of raw materials, the critical terms of the hedging instrument are established under equivalent terms of the hedged element, in line with the IBERDROLA Groups risk management policy. These terms include:

- The notional value of the hedging instrument is equal to or less than that of the hedged element.
- The underlying currency of the hedging instrument is the same as that of the hedged element.
- The term of the hedging instrument is equal to or less than that of the hedged element.
- The variable benchmark interest rate applicable to the hedging instrument is the same as that of the hedged operation, if appropriate.
- The interest frequency of the hedging instrument is the same as that of the hedged element.

Derivatives hired for interest rate, exchange rate and raw material hedging are described in Note 28.

Liquidity risk

Exposure to adverse situations in the debt or capital markets or the IBERDROLA Group´s economic and financial situation can hinder or prevent the IBERDROLA Group from obtaining the financing required to properly carry on its business activities.

IBERDROLA Group's liquidity policy is designed to ensure that it can meet its payment obligations without having to obtain financing under unfavourable terms. For this purpose, it uses various management measures such as the arrangement of committed credit facilities of sufficient amount, term and flexibility, diversification of the coverage of financing needs through access to different markets and geographical areas, and diversification of the maturities of the debt issued.

For 2019 the IBERDROLA Group is expected to face the ordinary investment program established with the cash flow generated from its operations and access to the bank financial markets, capital markets and supranational moneylenders (such as EIB), even though, the Group has the treasury and sufficient credits and loans available to meet these investments.

At 31 December 2018 and 2017, the IBERDROLA Group had undrawn loans and credit facilities amounting to Euros 10,210,609 and 6,863,917 thousand, respectively.

The liquidity position of the IBERDROLA Group is Euros 13.012 million. The breakdown is shown below by maturities of the liquidity position at 31 December 2018 and 2017, considering the balance of "Cash and cash equivalents" in the consolidated statement of financial position.

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Thousands of Euros	2018	2017
Available maturity		
2018	–	794,991
2019	671,213	364,250
2020	193,605	179,655
2021 onwards	9,345,791	5,525,021
Total	**10,210,609**	**6,863,917**
Cash and cash equivalents(Note 19)	2,801,157	3,197,340
Total adjusted liquidity	**13,011,766**	**10,061,257**

Credit risk

The IBERDROLA Group is exposed to the credit risk arising from the possibility that counterparties (customers, financial institutions, partners, etc.) might fail to comply with contractual obligations.

Credit risk is managed and limited adequately in accordance with the type of transaction and the credit quality of the counterparties. Specifically, there is a corporate credit risk policy which establishes criteria for admission, approval systems, authorisation levels, rating tools, exposure measurement methodologies, exposure limits, mitigation tools, etc.

Below balances for financial assets and contract assets are detailed at 31 December 2018 and 2017 by country:

Thousands of Euros	Other non-current financial investments (Note 13.b)		Other current financial investments (Note 13.b)		Trade and other non-current assets (Note 14)		Trade receivables and other current (Note 18)	
	31.12.2018	31.12.2017	31.12.2018	31.12.2017	31.12.2018	31.12.2017	31.12.2018	31.12.2017
Spain	105,451	172,744	167,609	195,090	1,005,490	288,532	2,335,330	2,368,870
United Kingdom	61	16,089	40,018	115,702	80,354	44,111	1,004,961	898,377
United States	55,187	49,230	65,071	62,544	10,247	72,932	1,022,335	910,691
Mexico	5,947	3,972	2,193	8,846	303,212	303,062	158,976	123,404
Brazil	2,514,505	2,363,590	276,831	180,391	76,813	108,624	1,227,178	1,292,174
RoW	4,236	6,940	19,846	36,310	4,136	21,429	349,602	262,856
Total	**2,685,387**	**2,612,565**	**571,568**	**598,883**	**1,480,252**	**838,690**	**6,098,382**	**5,856,372**

Balances “Other current and non-current financial investments” correspond to concession agreements executed with Brazilian public administrations (Note 11) and receivables related to regulated activities in Spain. With regard to credit risk on trade receivables and other contract assets, the cost of defaults has remained moderate at levels close to 1% of total turnover of this activity, despite the difficult economic environment of recent years.

With regard to the cash and cash equivalents from the consolidated financial statement, the credit quality of the counter parties is BBB+ according to the Standard and Poor’s rating.

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Sensitivity analysis

The following sensitivity analyses show, for each type of risk (without reflecting the interdependence among risk variables), how profit for the year and equity might be affected by reasonably possible changes in each risk variable at 31 December 2018 and 2017. Therefore, the sensitivity analysis does not show the effect on profit for the year and equity that might have arisen if during 2018 and 2017 the risk variables had been different.

– Financial:

The sensitivity of consolidated profit and equity to the variation in interest rates is as follows:

Thousands of Euros	Increase/ decrease in interest rate (basis points)	Impact on profit of the year before taxes Income/(Expense)	Direct impact on equity before taxes	Impact on equity before taxes
2018	25	45	112,923	112,968
	(25)	(45)	(112,923)	(112,968)
2017	25	171	67,229	67,400
	(25)	(171)	(67,229)	(67,400)

The sensitivity of the consolidated profit and equity of the IBERDROLA Group to changes in the dollar/euro, pound sterling /euro and Brazilian real/euro exchange rate is as follows:

Thousands of Euros	Change in the dollar/euro exchange rate	Impact on profit of the year before taxes Income/(Expense)	Direct impact on equity before taxes	Impact on equity before taxes
2018	Depreciation 5%	(2,826)	(774,761)	(777,587)
	Appreciation 5%	3,123	856,315	859,438
2017	Depreciation 5%	(166)	(680,585)	(680,751)
	Appreciation 5%	183	752,226	752,409

Thousands of Euros	Change in the sterling pound/euro exchange rate	Impact on profit of the year before taxes Income/(Expense)	Direct impact on equity before taxes	Impact on equity before taxes
2018	Depreciation 5%	409	(583,133)	(582,724)
	Appreciation 5%	(451)	644,515	644,064
2017	Depreciation 5%	771	(524,700)	(523,929)
	Appreciation 5%	(853)	579,932	579,079

Thousands of Euros	Change in the Brazilian real/euro exchange rate	Impact on profit of the year before taxes Income/(Expense)	Direct impact on equity before taxes	Impact on equity before taxes
2018	Depreciation 5%	–	(221,775)	(221,775)
	Appreciation 5%	–	245,120	245,120
2017	Depreciation 5%	9,479	(242,586)	(233,107)
	Appreciation 5%	(10,477)	268,121	257,644

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- Raw materials:

The sensitivity of the consolidated profit and the equity to changes in the market prices of the main raw materials is as follows:

Thousands of Euros				
Year 2018	Variation in price	Impact on profit of the year before taxes Income/(Expense)	Direct impact on equity before taxes	Impact on equity before taxes
Gas	5%	(2,356)	30,100	27,744
	(5)%	2,360	(30,337)	(27,977)
Electricity	5%	5,825	71,949	77,774
	(5)%	(5,581)	(71,949)	(77,530)
CO2	5%	(171)	–	(171)
	(5)%	171	–	171
Coal	5%	(552)	621	69
	(5)%	552	(621)	(69)

Thousands of Euros				
Year 2017	Variation in price	Impact on profit of the year before taxes Income/(Expense)	Direct impact on equity before taxes	Impact on equity before taxes
Gas	5%	(1,229)	14,232	13,003
	(5)%	1,363	(14,296)	(12,933)
Electricity	5%	7,126	36,388	43,514
	(5)%	(7,202)	(36,388)	(43,590)
CO2	5%	(62)	227	165
	(5)%	62	(227)	(165)
Coal	5%	(1,116)	412	(704)
	(5)%	1,116	(412)	704

5. USE OF ESTIMATES AND SOURCES OF UNCERTAINTY

5.a) Accounting estimates

The most significant estimates made by the IBERDROLA Group in these consolidated annual accounts are as follows:

- Unbilled power supplied:

  Sales for each year includes an estimate of the power supplied to customers of liberalised markets but not billed because it had not been measured at year end due to the regular meter-reading period. Estimated unbilled power at 31 December 2018 and 2017 amounted to Euros 2,066,981 and Euros 2,005,863 thousand, respectively. This amount is included under "Trade and other current assets" in the consolidated statements of financial position at 31 December 2018 and 2017 (Note 18).

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- Settlements of regulated activities in Spain:

  At the end of each year, the IBERDROLA Group estimates the definitive settlement of regulated activities in Spain for that year, establishing any shortfall in revenue and the amount that will be recovered in the future on the basis of the announcements made by the authorities and the periods during which this recovery will take place (Note 35).

  These estimates are made on the basis of the provisional settlements published up to the date the consolidated annual accounts were authorised for issue and all available sector information.

- Contracts to trade energy supplies:

  As mentioned in Note 3.h, the IBERDROLA Group analyses its contracts to trade energy supplies to ensure they are properly classified for accounting purposes. This analysis involves estimating final customer demand and other variables. These estimates are revised at regular intervals.

- Provisions for liabilities and charges:

  As indicated in Note 3.t, the IBERDROLA Group recognises provisions to cover present obligations arising from past events. For this purpose, it must assess the outcome of certain legal, tax or other procedures that are ongoing at the date of these consolidated annual accounts were authorised for issue in accordance with the best information available.

- Useful lives:

  The IBERDROLA Group's tangible assets operate over very prolonged periods of time. The Group estimates their useful lives for accounting purposes (Note 3.e) taking into account each asset's technical characteristics, the period over which they are expected to generate economic benefits and the applicable legislation in each case.

- Costs incurred in closing and dismantling electricity production and distribution facilities:

  The IBERDROLA Group periodically revises the estimates made concerning the costs to be incurred in dismantling its facilities.

- Provision for pensions and similar obligations and restructuring plans:

  At each year end, the IBERDROLA Group estimates the current actuarial provision required to cover obligations relating to restructuring plans, pensions and other similar obligations to its employees. In certain cases, it involves the valuation of the assets affected to certain plans. In making these estimates, the IBERDROLA Group receives advice from independent actuaries and expert appraisers (Notes 3.p, 3.q and 25).

- Fair value of investment property:

  The IBERDROLA Group appraises its investment property each year. While these appraisals are particularly important given the current situation of the real estate market, the IBERDROLA Group considers that its appraisals, commissioned by independent valuers, appropriately reflect this situation.

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- Impairment of assets:

  As described in Notes 3.i and 12, the IBERDROLA Group, in accordance with applicable accounting regulations, tests the cash-generating units that require testing for impairment each year. Specific tests are also conducted if indications of impairment are detected. These impairment tests involve estimating the future performance of the businesses and the most appropriate discount rate in each case. The IBERDROLA Group believes its estimates in this respect are appropriate and consistent with the current market situation and reflect its investment plans and the best available estimate of its future expense and income, and that its discount rates appropriately reflect the risk of each cash-generating units.

- Other intangible assets:

  As disclosed in Note 3.b of these consolidated annual accounts, "Other intangible assets" in the consolidated statement of financial position include wind farm projects in the development phase acquired in business combinations. The IBERDROLA Group estimates that these projects meet the identifiability requirement under IAS 38 for them to be capitalised, and that the Group's future investment plans will include the construction of the facilities proposed in these projects.

5.b) Sources of uncertainty

There are certain aspects that, at the date of the formulation of these consolidated annual accounts, constitute a source of uncertainty concerning the accounting effect:

- Article 12.5 of the amended Corporate Income Tax Act, in the version drafted prior to Act 31/2011, establishes an applicable deduction for those companies that have acquired significant holdings in foreign companies. IBERDROLA is applying said deductibility for the financial goodwill arising from the acquisitions of Scottish Power PLC. (now Scottish Power Limited) and Energy East Inc. (now AVANGRID).

  In 2007 the Official Journal of the European Union published a formal investigation procedure launched by the European Commission to determine whether or not this deduction complied with European law, a process that concluded with three EC decisions issued in 2009, 2011 and 2014 (known as the First Decision, the Second Decision and the Third Decision). In differing contexts, these decisions concluded that Article 12.5 was a form of State aid incompatible with the common market, establishing the recovery of the applicable deductions.

  After a long process, the General Court passed a series of rulings on 15 November 2018 that established that tax deduction for goodwill, in the terms outlined in Spanish regulations, is a selective measure, despite the fact that all companies subject to corporate income tax may access the advantage that this measure provides for, thus confirming the EC's First and Second Decision. Spain and IBERDROLA (among other companies) have lodged an application for annulment of the Third Decision before the General Court of the European Union which is pending ruling.

  We expect that these November 2018 rulings will be challenged in a new cassation appeal before the Court of Justice of the European Union. However, what is most important to IBERDROLA is that these General Court rulings maintain legitimate expectations, confirming the provisions of the first two decisions that allow the application of the deduction for goodwill relating to acquisitions of holdings made before 21 December 2007 or where the operation had been irrevocably agreed before this date. This legitimate expectation is the basis for the Group's application for deduction of goodwill.

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From the perspective of the Spanish Administration, an aid retrieval procedure has been initiated by virtue of the General Tax Act recovering from IBERDROLA the amount Euros 665 million (Euros 576 million as tax base and Euros 89 million as late interests accrued) by virtue of section 12.5. IBERDROLA paid said amount by (i) compensating the return of the 2016 corporate income tax in the amount of Euros 363 million and (ii) paying the amount of Euros 302 million in February 2018. All this was carried out in accordance with the Third Decision.

In any case, actual recovery of the aid will be provisional, subject to the final outcome of the appeals submitted against the three European Commission decisions.

- The IBERDROLA Group has an interest in several nuclear plants, all of which are located in Spain. The operating licences in effect for nuclear plants have a term of 30 to 40 years from their coming into operation. Those plants are governed by the Sustainable Economy Law (Ley de Economía Sostenible), enacted on 15 February 2011, which provides, with no time limit, that the share of nuclear power in the production mix must be determined in accordance with its production timetable and the licence renewals requested by nuclear plant owners within the framework of the prevailing law.

  Taking this into account, as well as the investment and maintenance policies followed at its nuclear plants, the IBERDROLA Group considers that the corresponding operating licences will be renewed at least until those plants are 40 years old. Accordingly, for accounting purposes the plants will be depreciated over the resulting period (Note 3.e).

  However, as long as regulatory changes affect the future use of nuclear technologies, IBERDROLA will revise their useful life estimates, as required by the accounting standards.

- The Notes 31 and 44 of these consolidated annual accounts describe the principal contingent liabilities of the IBERDROLA Group, the majority of which have arisen in ongoing litigation, the future course of which cannot be determined with certainty at the reporting date of these consolidated annual accounts.

- The IBERDROLA Group is currently involved in negotiations and/or arbitration regarding some of its long-term contracts to supply or sell raw materials and believes that their outcomes will not have a significant change on the amounts shown in the consolidated annual accounts.

The IBERDROLA Group and its legal and tax advisors consider that no losses of assets and no significant liabilities will arise for the IBERDROLA Group as a result of the matters detailed in the paragraphs above.

5.c) IBERDROLA and the United Kingdom's exit from the European Union (Brexit)

On the 29 March 2019, the United Kingdom is expected to conclude its withdrawal from the European Union.

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After intense negotiations on matters such as the cost of separation, the mutual recognition of the rights of citizens and the prevention of a return to a hard border between Northern Ireland and the Irish Republic, on 25 November 2018, the Council of the European Union approved two key documents: the EU-UK Withdrawal Agreement (a legally binding document that establishes the terms of the UK's exit from the European Union, including citizen's rights and the Irish backstop) and the Political Declaration (which establishes the basis for a future negotiation of the relationship between the United Kingdom and the EU post-Brexit, including trade relations and matters of UK-EU security). To date, this agreement has not been passed by the UK parliament, the government is seeking changes to the deal and there is talk of delaying Brexit beyond 29 March.

If the EU-UK Withdrawal Agreement is not passed by parliament, there is the risk of a no-deal Brexit on 29 March, which would probably mean that the trade relationship between the European Union and the EU will be regulated by World Trade Organization (WTO) rules. The government of the United Kingdom has published a series of technical documents that cover some of the key areas of concern in the event of a no-deal scenario. Essentially, these documents seek to minimise impact as much as possible, including changes existing agreements. However, WTO rules would mean that UK-EU trade, which is currently fluid, would become cross-border trade, subject to customs controls and tariffs. In the event of a no-deal scenario, an economic downturn is forecast for the United Kingdom. IBERDROLA and SCOTTISH POWER are therefore preparing to offset any negative impact arising from this situation. To this end the business and corporate areas have drawn up a no-deal Brexit risk map, as well as the implementation of measures designed to monitor and allay this impact. Some of the key areas of risk that were considered are explained below:

Risk	Measures
Impact stemming from the UK's decision to leave the EU and market reaction to events arising during the negotiations. This impact may include movements in the value of sterling and other financial instruments. In the longer term, there may be positive or negative changes to the UK economy in the political and regulatory environment in which the Group operates.	As well as monitoring new legislative developments and ongoing measures related to Brexit, the existing financial risk policy takes into account the most common financial risk in the short term, such as adverse fluctuations to exchange and interest rates. Any long-term impact on the UK economy and its impact on the Group and its business will be managed in line with future developments. A large legal team that is monitoring any potential risk which might arise from a regulatory perspective is in contact with governments and regulators in order to minimise any impact.
Interruptions to the supply chain: delays to the import of equipment and components that are essential to key project, resulting in setbacks.	The key materials and supplies have been identified, with extra orders put in to increase stock levels on 29 March 2019. We have also studied extra storage needs, taking steps to guarantee sufficient provisions.
Exposure to exchange rates and additional tariffs if WTO rules are applied.	The exchange rate has been covered in existing contracts. There has been a legal review of critical contracts to determine any possible exposure to new tariffs.
Contractual risk to existing non-trade contracts, including the risk of reopening, clauses such as force majeure, change of law and material adverse change.	There has been a legal review of critical contracts to determine any potential exposure and the specific mitigation of each contract.
Contractual risk affecting existing trade contracts (affecting wholesale and retail energy sales), including master trade agreements and broker and swap contracts.	Risk assessment of all contracts, although some only deal with the United Kingdom, and are therefore not affected, as the majority of counter parties and swaps are in the UK.
Free movement of employees: possible restrictions affecting EU citizens working in the UK or international assignments from other IBERDROLA Group companies, who are currently not present in the United Kingdom but who wish to operate there.	Recent announcements from the UK government confirm that EU citizens in Britain will form a part of the agreement with the EU. Ongoing initiative to assess the impact on and support for affected employees during the process. Contingency agreements are being put in place for workers outside the United Kingdom.
Data protection: the impact of the General Data Protection Regulation on the UK's regulations and status post-Brexit could affect the transfer of data between Group companies and suppliers in the normal course of business.	All inter-company contracts have been reviewed in order to update contractual clauses. High-risk suppliers have been identified and, where necessary, negotiation have commenced to modify contractual terms.

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Even in the event that agreement is reached, Brexit may yet have risks and opportunities for IBERDROLA and SCOTTISH POWER. Until the exit terms and nature of the future relationship are clear, it will not be possible to reach definitive conclusions. Many of the risks described previously regarding a no-deal scenario stem from the so-called horizontal problems which may affect many sectors in the economy. IBERDROLA and SCOTTISH POWER will continue to monitor the impact of Brexit, taking the necessary steps as the outcome of leaving becomes clearer.

6. MODIFICATION TO CONSOLIDATION PERIMETER

In 2018, IBERDROLA Group undertook the following sales of stock in Group companies:

- At the closing of 2017, the US and Canada gas business complied with the requirements set in IFRS 5: “Non-current assets held for sale and discontinued operations” for their recognition as such in the consolidated annual accounts, as long as i) there was a sale plan at a reasonable cost compared to fair value of assets subject to the transaction and ii) the sale could be expected to be completed in less than a year.

  As of 31 December 2017, the IBERDROLA Group reported assets and liabilities linked to the gas business in the US and Canada for sale in the sub-headings “Assets held for sale” and “Liabilities linked to assets held for sale” in the consolidated annual accounts.

  On March 1, 2018, Avangrid Renewables Holdings, Inc., subsidiary of AVANGRID, has formalized the sale of the gas trading business, which operated through the company Enstor Energy Services, LLC, to the company CCI U.S. Asset Holdings LLC, a subsidiary of Castleton Commodities International, LLC. Additionally, on May 1, 2018, Avangrid Renewables Holdings, Inc. has formalized the sale of Enstor Gas, LLC, which managed the gas storage business unit, to Amphora Gas Storage USA, LLC, a subsidiary of ArcLight Capital Partners, LLC.

  Said transactions resulted in gross losses of Euros 13,881 thousand recorded under “Losses on disposal of non-current assets” in the consolidated financial statement of 2018 (Note 41).

- In November 2018 90% of IBERDROLA Energía Solar of Puertollano, S.A. was sold to Sociedad Ence Energía, S.L.U. for Euros 72,300 thousand, which resulted in gross capital gains of Euros 12,470 thousand recorded under “Profits on disposal of non-current assets” in the consolidated financial statement of 2018 (Note 41).

- On 16 October 2018, Scottish Power agreed the sale of Scottish Power Generation Ltd. to Drax Group PLC. (DRAX), an operation that was concluded on 31 December 2018 for Pounds Sterling 693 million (Euros 779,101 thousand). The agreement includes a series of variable considerations which, as of 31 December 2018, were valued at zero Euros.

  The transaction has implied a gross capital gain of Euros 25,579 thousand which has been recorded under the heading "Gains on sale of non-current assets" in the consolidated financial statement for the year 2018 (Note 41).

- In December 2018, the IBERDROLA Group sold an 80% ownership interest in Coyote Ridge Wind LLC to WEC Infrastructure for a sale price of Euros 50,789 thousand, giving rise to a gross loss of Euros 23,116 thousand, which has been recorded under "Losses on disposal of non-current assets" in the consolidated statement of income for 2018 (Notes 13.a and 41).

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As regards to 2017, on 24 August 2017, the incorporation of the activity and businesses of Elektro Holding, S.A. (ELEKTRO) in Neoenergia S.A. (NEOENERGIA) was completed, according to the agreement of the NEOENERGIA shareholders (BB Banco de Investimento S.A.- Banco do Brasil, Caixa de Previdência dos Funcionários do Banco do Brasil –Previ and IBERDROLA Energía, S.A.U. - IBERDROLA ENERGÍA), notified on 8 June 2017 and once the suspensive conditions have been met that were subject to the operation. Through this transaction, IBERDROLA Group acquired NEOENERGIA compared to the previous control granted by its prior stake. This thus results in an acquisition in stages.

NEOENERGIA is a leading private electricity group in Brazil, which operates in 11 states and is present in the energy generation, transmission, distribution and marketing business. Currently, do Brasil and Previ are holders of 12% and 49% respectively of the capital of NEOENERGIA, with 39% remaining owned by IBERDROLA ENERGÍA. After the effectiveness of the operation, on Banco do Brasil and Previ own approximately 9.35% and 38.21% respectively of the capital of NEOENERGIA, and IBERDROLA ENERGÍA now holds 52.45%.

The operation was structured between NEOENERGIA and ELEKTRO via the Brazilian legal form called "*incorporação*", which involved an increase in share capital in NEOENERGIA that will be fully subscribed by IBERDROLA ENERGÍA and will imply the termination of ELEKTRO and the transfer en bloc of its equity to NEOENERGIA, which acquired the rights and obligations of the former through universal succession.

The competent Brazilian authorities, Conselho Administrativo de Defesa Econômica (CADE), have authorised the merger operation between NEOENERGIA and ELEKTRO without restrictions, as it appears published in the Official Journal from 4 July.

The fair value of the assets and liabilities of NEOENERGIA on 24 August 2017 and its carrying value on this date was the following:

Thousands of Euros	Note	Fair value at 24.08.2017	Fair value at 24.08.2017
Intangible assets	8	3,646,381	2,611,485
Property, plant and equipment	10	1,136,997	1,136,997
Non-Current Financial investments		2,879,125	2,707,592
Deferred tax assets	31	176,485	176,485
Non-Current Trades and other accounts receivable		52,048	52,048
Inventories		14,145	14,145
Current Trades and other accounts receivable		1,014,685	1,014,685
Current Financial investments		763,303	763,303
Cash and cash equivalents		76,366	76,366
Total		**9,759,535**	**8,553,106**

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Thousands of Euros	Note	Fair value at 24.08.2017	Fair value at 24.08.2017
Provision for pensions and similar Non-current obligations	25	273,900	273,900
Other non-current provisions	26	269,544	129,657
Non-current financial debt	29	2,667,380	2,667,380
Other non-current payables		128,992	128,992
Deferred tax liabilities	31	452,915	20,586
Provision for pensions and similar current obligations	25	7,985	7,985
Other current provisions	26	45,201	45,201
Current financial debt	29	1,228,822	1,228,822
Current Trade and other payables		1,361,369	1,361,369
Total		**6,436,108**	**5,863,892**
Net assets		**3,323,427**	
Fair value of previous stake in NEONERGIA at 39%		(1,321,844)	
Adjustments in NEOENERGIA shares due to previous control (1)		8,723	
Recognition of non-controlling interests	20	(1,798,535)	
Goodwill arising on the acquisition	**8**	**244,069**	
Total acquisition cost		**455,840**	

(1) For the purposes of calculating acquisition cost, the value of NEONERGIA shares has been reduced in Euros 8,723 thousand due to the existence of previous control by IBERDROLA Group over certain assets over which NEONERGIA in turn had an interest.

As mentioned before, the IBERDROLA Group has acquired an additional stake in NEOENERGIA in exchange for the 47.55% interest it had in ELEKTRO, of which IBERDROLA S.A. was the indirect holder of 100% of its shares through the Group company IBERDROLA ENERGÍA.

As a consequence, Euros 606,918 thousand has been recognised in “Equity - Non-controlling interests” in the 2017 consolidated statement of financial position, which represents the 47.55% non-controlling interest in the carrying amount of ELEKTRO at the transaction date (Note 20). The difference between this amount and fair value of ELEKTRO given as consideration resulted in a charge of Euros 493,293 thousand to “Equity - Other reserves” and a credit of Euros 342,214 thousand to “Equity - Translation differences” in the statement of financial position (negative net impact of Euros 151,079 thousand).

As a consequence of this business combination achieved in stages, an amount of Euros 44,012 thousand was taken to 'Gains/losses on disposal of non-current assets' in the 2017 consolidated income statement (Note 41), which included the following effects:

- Measurement of the previous shareholding in NEOENERGIA at the fair value on the acquisition date, which involved a gain of Euros 325.274 thousand as the difference between the fair value of Euros 1,321,844 thousands and a book value of Euros 996,570 thousand.

- Debit and credit in the consolidated income statement for the losses recognised before the transaction under 'Translation differences' and 'Valuation adjustments ' for an amount of Euros 296,213 thousand and Euros 666 thousand, respectively, from the prior investment of the IBERDROLA Group.

- Measurement of the previous shareholding in which IBERDROLA Group had an interest at the fair value on the acquisition date, resulting in a capital gain of Euros 14,285 thousand.

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The IBERDROLA Group has opted to measure the non-controlling interests in NEOENERGIA at their fair value at the acquisition date, crediting Euros 1,798,535 thousand to 'Equity –Non-controlling interests' of the consolidated statement of financial position at 31 December 2017 (Note 20).

The contribution of the net assets incorporated in the transaction with NEOENERGIA to the 2017 net profit from continuing operations of the IBERDROLA Group has amounted to a loss of approximately Euros 3,030 thousand from 24 August 2017, before considering the profit of the Euros 44,012 thousand previously described. Had this acquisition taken place on 1 January 2017, the increase in consolidated revenues in 2017 would have amounted to Euros 3,414,226 thousand and the decrease in net profit from continuing operations would have been Euros 21,825 thousand.

Goodwill resulting from this business combination, of Euros 244,069 thousand, is mainly comprised of future economic benefits derived from the activity of NEOENERGIA that do not qualify for separate recognition at the time of the business combination.

The costs incurred in the acquisition were not significant.

7. GEOGRAPHICAL AND BUSINESS SEGMENT REPORTING

The IBERDROLA Group combines their segments tending to the nature of the business activities in the different geographic areas in which said activities take place. The operating segments identified by IBERDROLA bearing in mind the changes described in Note 2.d are as follows:

- Networks business: including all the energy transmission and distribution activities, and any other regulated activity carried out in Spain, the United Kingdom, the United States and Brazil.
- Liberalised business: includes electricity generation and retail businesses carried out by the Group in Spain and Continental Europe, the United Kingdom, Mexico, and Brazil.
- Renewable business: activities related to renewable energies (mainly wind and hydroelectric) in Spain, the United Kingdom, the United States, Mexico, Brazil and the Rest of the world.
- Other businesses: groups supply and gas storage up to the moment of sale (Note 41) and other non-energy related businesses.

Additionally, Corporation includes the costs of the Group's structure (Single Corporation), and of the administration services of the corporate areas that are subsequently invoiced to the other companies through specific service agreements.

Transactions between the different segments are generally carried out at arm’s length.

The key figures for the operating segments identified are as follows:

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Business segmentation reporting for 2018

	Liberalised					Renewables							Networks					Other business, Corporation and adjustments	
Thousands of Euros	Spain and continental Europe	United Kingdom	Mexico	Brazil	Total	Spain	United Kingdom	United States	Mexico	Brazil	RoW	Total	Spain	United Kingdom	United States	Brazil	Total		Total
REVENUE																			
External revenues	12,789,028	4,942,455	2,252,552	477,457	**20,461,492**	367,908	119,913	1,026,925	92,976	56,100	250,988	**1,914,810**	1,994,890	1,113,669	4,274,777	5,184,180	**12,567,516**	132,055	**35,075,873**
Intersegment revenue	295,742	80,220	(6,303)	315,432	**685,091**	1,328,206	577,560	–	(1,981)	187,701	38,697	**2,130,183**	130,644	161,879	–	1,199	**293,722**	3,046	**3,112,042**
Eliminations					**(154,406)**							**–**					**–**	**(2,957,636)**	**(3,112,042)**
Total revenue					**20,992,177**							**4,044,993**					**12,861,238**	**(2,822,535)**	**35,075,873**
RESULTS																			
Segment operating profit	478,866	55,301	533,518	71,386	**1,139,071**	588,298	355,549	213,982	39,803	76,071	123,218	**1,396,921**	1,174,156	605,293	712,063	542,756	**3,034,268**	(130,887)	**5,439,373**
Result of equity-accounted investees - net of taxes	23,590	–	–	–	**23,590**	3,624	1,527	(3,548)	–	11,303	(9)	**12,897**	2,769	(18)	11,067	–	**13,818**	5,599	**55,904**
ASSETS																			
Segment assets	7,091,946	6,297,480	4,483,086	468,940	**18,341,452**	8,386,777	5,555,003	11,967,083	1,327,027	1,560,275	2,282,958	**31,079,123**	12,117,292	12,141,816	21,308,069	5,186,168	**50,753,345**	3,631,729	**103,805,649**
Equity-accounted investees	10,409	–	–	–	**10,409**	62,216	7,834	195,226	–	661,553	–	**926,829**	29,773	–	123,696	–	**153,469**	618,811	**1,709,518**
LIABILITIES																			
Segment liabilities	2,577,697	1,342,529	1,085,490	122,222	**5,127,938**	1,135,109	907,132	3,841,665	316,362	240,994	358,465	**6,799,727**	5,587,747	2,456,186	7,121,821	1,694,157	**16,859,911**	1,933,997	**30,721,573**
OTHER INFORMATION:																			
Total cost incurred during the period in the acquisition of property, plant and equipment and non-current intangible assets	230,805	194,654	628,716	16,223	**1,070,398**	369,023	365,037	307,934	324,683	99,184	221,090	**1,686,951**	495,395	564,223	1,053,862	725,883	**2,839,363**	148,926	**5,745,638**
Change in Trade and other receivables(Expenses)/ income	46,557	66,496	2,323	(287)	**115,089**	9	(355)	(72)	14	260	1,059	**915**	611	955	72,462	61,629	**135,657**	1,995	**253,656**
amortisation and depreciation expenses	475,311	185,425	102,581	20,912	**784,229**	329,397	162,313	359,158	25,615	53,071	117,313	**1,046,867**	534,596	313,195	546,677	350,613	**1,745,081**	79,697	**3,655,874**
Expenses of the period other than amortisation and depreciation that did not result in cash outflows	13,802	8,189	(3,730)	–	**18,261**	5,415	–	429	–	–	363	**6,207**	14,744	8,033	72,905	2,845	**98,527**	95,299	**218,294**

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Business segment reporting for 2017:

Re-stated (Note 2.d)	Liberalised					Renewables							Networks					Other business, Corporation and adjustments	I
Thousands of Euros	Spain and continental Europe	United Kingdom	Mexico	Brazil	Total	Spain	United Kingdom	United States	Mexico	Brazil	RoW	Total	Spain	United Kingdom	United States	Brazil	Total		Tota
REVENUE																			
External revenues	12,125,066	4,797,481	2,334,028	671	**19,257,246**	192,518	59,966	971,154	73,422	58,722	125,380	**1,481,162**	1,885,658	1,050,463	4,083,179	3,371,006	**10,390,306**	134,548	**31,263,262**
Intersegment revenue	52,320	49,027	(19,061)	398,863	**481,149**	1,100,780	541,842	(48)	346	34,836	582	**1,678,338**	131,575	171,565	–	685	**303,825**	98,313	**2,561,625**
Eliminations					**(170,197)**							**–**					**–**	**(2,391,428)**	**(2,561,625)**
Total revenue					**19,568,198**							**3,159,500**					**10,694,131**	**(2,158,567)**	**31,263,262**
RESULTS																			
Segment operating profit	359,883	(124,197)	429,517	38,887	**704,090**	293,810	239,221	(297,566)	25,646	40,998	49,172	**351,281**	1,001,297	603,027	778,598	276,812	**2,659,734**	(1,002,474)	**2,712,631**
Result of equity-accounted investees - net of taxes	(4,331)	(51)	–	8,835	**4,453**	6,846	1,128	(43,877)	–	(6,384)	(38)	**(42,325)**	2,921	(89)	14,669	6,399	**23,900**	(14,761)	**(28,733)**
ASSETS																			
Segment assets	7,084,711	7,038,957	3,754,452	609,431	**18,487,551**	8,597,935	5,071,435	11,255,377	957,661	1,693,914	2,195,210	**29,771,532**	11,925,746	11,898,622	19,779,894	5,655,755	**49,260,017**	3,279,660	**100,798,760**
Equity-accounted investees	31,383	–	–	–	**31,383**	65,125	6,457	178,077	–	710,242	–	**959,901**	29,781	–	122,654	–	**152,435**	647,177	**1,790,896**
LIABILITIES																			
Segment liabilities	2,339,126	1,472,739	1,104,965	178,356	**5,095,186**	1,076,841	933,910	3,546,940	298,709	277,654	373,739	**6,507,793**	5,735,668	2,458,169	6,630,179	2,047,965	**16,871,981**	2,004,074	**30,479,034**
OTHER INFORMATION:																			
Total cost incurred during the period in the acquisition of property, plant and equipment and non-current intangible assets	222,803	222,599	707,916	12,433	**1,165,751**	214,771	432,683	973,640	227,576	132,347	624,851	**2,605,868**	489,240	692,245	944,008	324,810	**2,450,303**	59,260	**6,281,182**
Change in Trade and other receivables(Expenses)/ income	(30,722)	65,290	–	(11,530)	**23,038**	79,118	11,472	103	10	8,619	–	**99,322**	(2,376)	754	59,269	16,358	**74,005**	1,034	**197,399**
Amortisation and depreciation expenses	450,249	166,989	95,845	23,509	**736,592**	242,662	143,241	827,209	26,874	16,371	47,816	**1,304,173**	520,569	282,276	496,148	195,326	**1,494,319**	873,586	**4,408,670**
Expenses of the period other than amortisation and depreciation that did not result in cash outflows	45,012	3,468	2,239	–	**50,719**	4,029	(75)	9,179	–	–	98	**13,231**	97,248	24,328	72,385	21,680	**215,641**	154,270	**433,861**

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Additionally the net revenue and non-current assets by geographical area is as follows:

Thousands of Euros	31.12.2018	31.12.2017
Net Revenue		
Spain	14,282,389	13,733,470
United Kingdom	6,176,037	5,907,910
United States	5,324,939	5,016,448
Mexico	2,345,528	2,407,450
Brazil	5,717,489	3,430,399
ROW	1,229,491	767,585
Total	**35,075,873**	**31,263,262**

Thousands of Euros	31.12.2018	31.12.2017
Non-current assets (*)		
Spain	22,783,838	22,881,482
United Kingdom	21,972,709	22,433,802
United States	30,063,052	28,192,131
Mexico	4,818,762	3,770,088
Brazil	5,699,371	6,290,435
ROW	2,200,428	2,086,497
Total	**87,538,160**	**85,654,435**

(*) Non-current financial investments, deferred tax assets and trade receivables and other non-current are excluded.

In addition, the reconciliation between segment assets and liabilities and the total assets and liabilities in the consolidated statement of financial position is as follows:

Thousands of Euros	31.12.2018	31.12.2017
Segment assets	**103,805,649**	**100,798,760**
Non- Current Financial investments	5,191,132	5,013,504
Current Financial investments	1,177,821	1,323,224
Cash and cash equivalents	2,801,157	3,197,340
Assets held for sale	62,164	355,731
Total assets	**113,037,923**	**110,688,559**

Thousands of Euros	31.12.2018	31.12.2017
Segment liabilities	**30,721,573**	**30,479,034**
Equity	43,976,554	42,733,186
Non-current securities portfolio having the substance of financial liability	140,582	14,762
Long-term financial debt	31,138,863	29,784,705
Current securities portfolio having the substance of financial liability	36,647	32,519
Current Financial debt	7,023,143	7,509,809
Liabilities linked to assets held for sale	561	134,544
Total liabilities and equity	**113,037,923**	**110,688,559**

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8. INTANGIBLE ASSETS

The changes in 2018 and 2017 in intangible assets and the appropriate accumulated amortisations and procurement has been as follows:

Thousands of Euros	Balance at 01.01.2017	Translation differences	Modification of the consolidation perimeter (Note 6)	Additions/ (charge)/ reversals	Capitalised Personnel expenses(Note 37)	Transfers	Decreases, disposals or reductions	Assets held for sale (Note 41)	Write-off	Balance at 31.12.2017	First application of IFRS 15 (Note 2.a.)	Translation differences	Modification of the consolidation perimeter (Note 6)	Additions/ (charge)/ reversals	Capitalised Personnel expenses(Note 37)	Transfers	Decreases, disposals or reductions	Balance at 31.12.2018
Cost:																		
Goodwill	8,711,053	(573,238)	244,069	–	–	–	–	–	(449,480)	7,932,404	–	(77,605)	(16,956)	–	–	–	–	7,837,843
Concessions, Patents, licenses, trademarks and others	7,696,409	(796,107)	1,034,895	8,501	–	(336)	–	(12,695)	–	7,930,667	–	(31,055)	(318,228)	5,704	8,725	23,888	(3,858)	7,615,843
Intangibles assets under IFRIC 12 (Notes 3.b. and 11)	966,774	(404,484)	4,802,502	338,120	34,372	(189,211)	(41,717)	–	–	5,506,356	–	(688,654)	–	739,358	55,408	(271,146)	(64,639)	5,276,683
Computer software	1,960,017	(116,012)	–	157,639	7,927	40,599	(9,634)	(527)	–	2,040,009	–	25,506	(12,057)	144,163	8,644	(10,823)	(18,831)	2,176,611
Customer acquisition costs	–	–	–	–	–	–	–	–	–	–	298,028	(2,564)	–	161,784	–	–	–	457,248
Other intangible assets	4,504,425	(444,142)	32,755	5,939	–	(71,660)	(7,017)	(471,230)	–	3,549,070	–	97,144	–	24,805	1,122	(73,742)	(332,303)	3,266,096
Total cost	**23,838,678**	**(2,333,983)**	**6,114,221**	**510,199**	**42,299**	**(220,608)**	**(58,368)**	**(484,452)**	**(449,480)**	**26,958,506**	**298,028**	**(677,228)**	**(347,241)**	**1,075,814**	**73,899**	**(331,823)**	**(419,631)**	**26,630,324**
Accumulated depreciation and procurement:																		
Concessions, Patents, licenses, trademarks and others	779,847	(55,164)	–	104,311	–	(142)	–	(5,355)	–	823,497	–	(36,948)	(305,838)	141,299	–	2,215	–	624,225
Intangible assets under IFRIC 12 (Note 3.b. and 11)	310,498	(172,658)	2,221,975	134,587	–	–	(26,495)	–	–	2,467,907	–	(309,147)	–	260,855	–	5,519	(47,520)	2,377,614
Computer software	1,364,497	(72,083)	–	182,870	–	1,852	(9,586)	(486)	–	1,467,064	–	16,599	(11,374)	132,754	–	(10,823)	(17,695)	1,576,525
Customer acquisition costs	–	–	–	–	–	–	–	–	–	–	123,027	(1,073)	–	80,580	–	–	–	202,534
Other intangible assets	651,214	(46,021)	1,796	120,325	–	(3,175)	(252)	(49,726)	–	674,161	–	14,218	–	121,648	–	(1,061)	(299,962)	509,004
Total accumulated depreciation	**3,106,056**	**(345,926)**	**2,223,771**	**542,093**	**–**	**(1,465)**	**(36,333)**	**(55,567)**	**–**	**5,432,629**	**123,027**	**(316,351)**	**(317,212)**	**737,136**	**–**	**(4,150)**	**(365,177)**	**5,289,902**
Impairment allowance (Note 40)	**798,459**	**(81,435)**	**–**	**25,756**	**–**	**(18,706)**	**–**	**(346,224)**	**–**	**377,850**	**–**	**15,012**	**–**	**(52,688)**	**–**	**–**	**–**	**340,174**
Total accumulated depreciation and procurement	**3,904,515**	**(427,361)**	**2,223,771**	**567,849**	**–**	**(20,171)**	**(36,333)**	**(401,791)**	**–**	**5,810,479**	**123,027**	**(301,339)**	**(317,212)**	**684,448**	**–**	**(4,150)**	**(365,177)**	**5,630,076**
Total net cost	**19,934,163**	**(1,906,622)**	**3,890,450**	**(57,650)**	**42,299**	**(200,437)**	**(22,035)**	**(82,661)**	**(449,480)**	**21,148,027**	**175,001**	**(375,889)**	**(30,029)**	**391,366**	**73,899**	**(327,673)**	**(54,454)**	**21,000,248**

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"Other intangible assets" includes, among other items, wind farm projects in the development phase which meet the identifiability requirement under IAS 38: "Intangible assets", as they are separable and susceptible to individual sale and are carried at acquisition cost. The IBERDROLA Group transfers these assets to "Property, plant and equipment" in the consolidated statement of financial position when construction of each wind farm commences.

The amounts incurred in due to research and development activities (expenses and investment) in 2018 and 2017 totals Euros 266,547 and 246,392 respectively.

The fully amortised intangible assets in use at 31 December 2018 and 2017 amounted to Euros 1,122,173 and 1,093,271 thousand, respectively.

The IBERDROLA Group maintains at 31 December 2018 and 2017 commitments to acquire intangible assets for Euros 18,942 and 48.559 thousand, respectively.

In addition, at 31 December 2018 and 2017, there were no significant restrictions on the ownership of intangible assets, except for the regulated businesses that may require authorisation of the corresponding regulator for specific transactions.

The allocation of goodwill to the different cash-generating units at 31 December 2018 and 2017 is as follows:

Thousands of Euros	31.12.2018	31.12.2017 Re-stated (Note 2.d)
Electricity and gas generation and supply in the UK	4,256,753	4,330,358
Regulated activities in the UK	832,954	858,779
Renewables in the UK	495,720	493,279
Renewables in the USA	866,431	828,687
Regulated activities in the USA	1,044,989	999,482
Regulated activities in Brazil	153,038	198,115
Electricity generation and retail in Brazil	41,059	46,760
Renewable activities in Brazil	120,976	137,772
Other activities	25,923	39,172
Total	**7,837,843**	**7,932,404**

The allocation of indefinite life and in-progress intangible assets at 31 December 2018 and 2017 to the different cash generating units is as follows:

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	2018			2017		
Thousands of Euros	Intangible assets with indefinite useful lives	Intangible assets in progress	Total	Intangible assets with indefinite useful lives	Intangible assets in progress	Total
Electricity distribution in Scotland	738,734	–	738,734	751,075	–	751,075
Electricity distribution in Wales and England	710,979	–	710,979	722,856	–	722,856
Electricity transmission in the UK	280,772	–	280,772	285,463	–	285,463
Renewable in the USA	–	126,756	126,756	–	150,563	150,563
Electricity and gas distribution in New York (NYSEG)	1,041,374	–	1,041,374	996,025	–	996,025
Electricity and gas distribution in New York (RG&E)	938,641	–	938,641	897,766	–	897,766
Electricity transmission and distribution in Maine (CMP)	258,609	4,908	263,517	247,347	9,758	257,105
Electricity transmission and distribution in Connecticut (UI)	1,084,487	–	1,084,487	1,037,259	–	1,037,259
Gas distribution in Connecticut (CNG)	273,647	–	273,647	261,730	–	261,730
Gas distribution in Connecticut (SCG)	537,200	–	537,200	513,807	–	513,807
Gas distribution in Massachusetts (BGC)	36,638	–	36,638	35,042	–	35,042
Others	–	387,560	387,560	–	374,647	374,647
Total	**5,901,081**	**519,224**	**6,420,305**	**5,748,370**	**534,968**	**6,283,338**

The undefined useful life assets mostly correspond to the acquisition cost of licences to operate in different businesses that make up the main activity of the activities performed by the IBERDROLA Group.

9. REAL ESTATE INVESTMENTS

The changes in 2018 and 2017 in the IBERDROLA Group's investment property were as follows:

Thousands of Euros	Balance at 01.01.2017	Additions/ (charge)/ reversals	Transfers	Decreases, disposals or reductions	Balance at 31.12.2017	Additions/ (charge)/ reversals	Transfers	Decreases, disposals or reductions	Balance at 31.12.2018
Real estate investments	545,115	4,169	61,434	(108,759)	501,959	11,878	(23)	(742)	513,072
Impairment allowance	(27,835)	–	1,030	–	(26,805)	960	–	–	(25,845)
Accumulated depreciation	(54,938)	(6,965)	–	10,778	(51,125)	(7,533)	(49)	72	(58,635)
Total net cost	**462,342**	**(2,796)**	**62,464**	**(97,981)**	**424,029**	**5,305**	**(72)**	**(670)**	**428,592**

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The investment property owned by the IBERDROLA Group relates primarily to properties destined for leasing. The income accrued during fiscal years 2018 and 2017 for this operation are Euros 26,764 and 25,177 thousand, respectively, and were registered in sub-heading "Turnover" of the consolidated income statement. The operating expenses directly related to real estate investments during fiscal years 2018 and 2017 were not significant.

The fair value of real property investments in operation fully amortised intangible assets at 31 December 2018 and 2017 amounted to Euros 479,864 and Euros 477,299 thousand, respectively. This fair value (classified in Level 3) is determined via expert independent appraisals made annually in accordance with the Assessment Standards published by the Royal Institution of Chartered Surveyors (RICS) of Great Britain, in their January 2014 edition. The assessments on 31 December 2018 and 2017 have been made by Knight Frank España.

The assets have been valued individually and not as part of a property portfolio.

The methods applied for the calculation of fair value have been the discount of cash flows, the capitalisation of revenue and the comparison method, contrasted, as much as possible, with comparable transactions to reflect the reality of the market and the prices to which they are currently closing the asset operations of similar characteristics to the reference operations.

The discount of cash flows is in accordance with a prediction of the probable net income that real estate investment will generate for a period of time and considers its residual value at the end of the period. Cash flows are discounted at an internal rate of return that reflects the urban, construction and business risk of the asset.

The variables and key assumptions of the cash flow discount method are:

- Net income that the property will generate for a certain period of time, keeping in mind the initial contractual situation, development of renters and expected income, marketing costs, divestment expenses (variable percentage depending on the sale price 1%-3%), etc.

- Discount rate or objective internal return rate adjusted to reflect the risk that the investment entails depending on the localisation, occupation, renter quality, property age, etc.

- Disposal return, which consists of an estimate of the exit (sale) price of the property applying an estimated return for the close of the transaction at that date, considering the criteria of obsolescence, liquidity and market uncertainty.

For property for hire that does not include many variables as extensive and involves leased property for a period of time greater than 10 years and up and one renter, the capitalisation method for income is usually applied. This method consists of the perpetual capitalisation of the current contractual income via a capitalisation rate that inherently includes the risks and uncertainties that could arise in the market.

At 31 December 2018 and 2017, none of the investment properties had been fully depreciated and there were no restrictions on their realisation. Moreover, there were no contractual obligations to acquire, build, develop, repair or maintain investment property.

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10. PROPERTY, PLANT AND EQUIPMENT

The changes in 2018 and 2017 in "Property, plant and equipment" and the appropriate accumulated amortisations and procurement has been as follows:

Thousands of Euros	Balance at 01.01.2017	Translation differences	Modification of the consolidation perimeter (Note 6)	Additions and charge (reversals)	Transfers	Decreases, disposals or reductions	Assets held for sale (Note 41)	Write-off	Balance at 31.12.2017	Translation differences	Modification of the consolidation perimeter (Note 6)	Additions/ charge/(reversals)	Transfers	Decreases, disposals or reductions	Write-off	Balance at 31.12.2018
Cost:																
Land and constructions	**2,299,587**	**(166,584)**	**21,668**	**50,966**	**55,432**	**(70,153)**	**(4,146)**	**–**	**2,186,770**	**42,770**	**(59,955)**	**61,919**	**121,624**	**(28,845)**	**(2,289)**	**2,321,994**
Electricity plant in operation:																
Hydroelectric power plants	6,843,335	(66,744)	483,853	782	41,505	(1,546)	–	–	7,301,185	(45,882)	(314,643)	12,006	5,303	–	(1,478)	6,956,491
Thermal power plants	1,216,695	(80)	–	1,739	2,035	–	–	–	1,220,389	8	–	81	5,269	(73)	–	1,225,674
Combined cycle power plant	7,975,124	(533,449)	387,961	10,181	370,015	(70,487)	–	–	8,139,345	122,547	(1,218,052)	11,760	243,107	(75,290)	–	7,223,417
Nuclear power plants	7,508,330	–	–	64,495	106,402	(56,230)	–	–	7,622,997	(1)	–	15,977	106,638	(54,040)	–	7,691,571
Wind farms	23,003,959	(1,774,746)	173,632	200,975	1,600,322	(41,179)	–	–	23,162,963	379,751	111,256	40,334	1,408,562	(253,536)	(20,713)	24,828,617
Facilities:																
- Gas storage and other alternative plants	1,547,485	(108,079)	–	148	(56,357)	(6,678)	(1,275,314)	–	101,205	2,369	–	11	41,242	(4,072)	(1,223)	139,532
- Electricity Transmission	7,394,848	(700,661)	–	–	1,212,265	(14,540)	–	–	7,891,912	139,539	–	2,521	411,060	(5,304)	(21,672)	8,418,056
- Gas transmission	52,162	(3,974)	–	–	(38,652)	–	(6,507)	–	3,029	(39)	–	165	(790)	–	(2,365)	-
- Electricity distribution	30,186,048	(1,157,705)	–	85,628	1,295,496	(1,620,725)	–	–	28,788,742	183,229	16,121	88,936	1,181,079	(109,930)	(22,970)	30,125,207
- Gas distribution	2,885,851	(375,723)	–	–	302,575	(7,319)	(36,496)	–	2,768,888	131,024	–	–	138,576	(6,097)	(3,358)	3,029,033
Meters and metering devices	2,105,937	(118,329)	–	148,325	(24,739)	(60,493)	–	–	2,050,701	24,581	–	102,068	68,453	(278,054)	(1,243)	1,966,506
Dispatching centres and other facilities	1,858,624	(35,986)	–	48,939	259,591	(152,930)	–	–	1,978,238	5,404	(32,358)	15,795	136,830	(17,601)	(256)	2,086,052
Total Electricity plant in operation	**92,578,398**	**(4,875,476)**	**1,045,446**	**561,212**	**5,070,458**	**(2,032,127)**	**(1,318,317)**	**–**	**91,029,594**	**942,530**	**(1,437,676)**	**289,654**	**3,745,329**	**(803,997)**	**(75,278)**	**93,690,156**
Others in use	**1,707,060**	**(104,005)**	**2,320**	**151,910**	**38,757**	**(79,215)**	**(4,823)**	**–**	**1,712,004**	**33,482**	**(4,905)**	**203,381**	**4,017**	**(48,107)**	**(679)**	**1,899,193**
Electricity plant under construction	**6,165,502**	**(424,346)**	**351,302**	**5,180,922**	**(4,736,672)**	**(19,436)**	**–**	**(37,499)**	**6,479,773**	**40,190**	**(23,006)**	**4,381,212**	**(3,778,551)**	**(4,233)**	**–**	**7,095,385**
Prepayments and other PP&E under construction(*)	**561,171**	**(42,442)**	**4,668**	**518,888**	**(591,653)**	**(93,515)**	**–**	**–**	**357,117**	**4,022**	**(4,185)**	**507,962**	**(76,927)**	**(229,842)**	**(2,803)**	**555,344**
Total cost	**103,311,718**	**(5,612,853)**	**1,425,404**	**6,463,898**	**(163,678)**	**(2,294,446)**	**(1,327,286)**	**(37,499)**	**101,765,258**	**1,062,994**	**(1,529,727)**	**5,444,128**	**15,492**	**(1,115,024)**	**(81,049)**	**105,562,072**

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(*) Prepayment amounts at 31 December 2018 and 2017 amount to Euros 152,724 and 46.708 thousand respectively.

Thousands of Euros	Balance at 01.01.2017	Translation differences	Modification of the consolidation perimeter	Additions/ (charge)/ reversals	Transfers	Decreases, disposals or reductions	Assets held for sale (Note 41)	Write-off	Balance at 31.12.2017	Translation differences	Modification of the consolidation perimeter (Note 6)	Additions and charges/ reversals	Transfers	Decreases, diisposals or reductions	Write-off	Balance at 31.12.2018
Accumulated depreciation and provisions:																
Buildings	**501,034**	**(34,968)**	**2,665**	**35,707**	**5,735**	**(50,419)**	**(972)**	**–**	**458,782**	**8,006**	**3,515**	**84,732**	**–**	**(5,185)**	**–**	**549,850**
Electricity plant in operation:																
Hydroelectric power plants	3,781,892	(18,920)	112,248	104,263	(160)	(1,547)	–	–	3,977,776	(12,340)	(172,034)	108,089	–	–	–	3,901,491
Thermal power plants	1,028,596	(26)	–	33,550	–	–	–	–	1,062,120	8	–	48,862	–	(73)	–	1,110,917
Combined cycle power plant	3,033,371	(188,960)	140,080	243,875	(5,719)	(66,467)	–	–	3,156,180	39,589	(674,419)	223,172	–	(60,160)	–	2,684,362
Nuclear power plants	5,513,862	–	–	267,732	–	(55,612)	–	–	5,725,982	–	–	284,433	–	(52,857)	–	5,957,558
Wind farms	7,130,700	(469,740)	31,495	749,008	(94,428)	(9,971)	–	–	7,337,064	125,049	97,141	830,022	–	(101,314)	–	8,287,962
Facilities:																
- Gas storage and other alternative plants	361,098	(24,561)	–	26,834	(12,170)	(3,390)	(303,370)	–	44,441	426	–	3,743	–	(3,822)	–	44,788
- Electricity Transmission	1,612,248	(157,679)	–	145,509	122,359	(12,988)	–	–	1,709,449	37,877	–	141,697	–	(3,447)	–	1,885,576
- Gas transmission	13,131	(1,049)	–	195	(7,829)	–	(2,334)	–	2,114	(2,114)	–	–	–	–	–	-
- Electricity distribution	11,442,209	(407,799)	–	710,790	(143,299)	(1,611,442)	–	–	9,990,459	75,883	9,867	766,929	–	(96,488)	–	10,746,650
- Gas distribution	1,234,218	(157,392)	–	41,839	20,230	(5,544)	(10,178)	–	1,123,173	52,834	–	48,162	–	(3,977)	–	1,220,192
Meters and metering devices	999,514	(44,116)	–	121,502	(12,483)	(57,627)	–	–	1,006,790	7,553	–	112,020	–	(265,865)	–	860,498
Dispatching centres and other facilities	867,276	(16,333)	–	53,650	8,248	(152,344)	–	–	760,497	1,464	(32,856)	72,020	–	(13,253)	–	787,872
Total Electricity plant in operation	**37,018,115**	**(1,486,575)**	**283,823**	**2,498,747**	**(125,251)**	**(1,976,932)**	**(315,882)**	**–**	**35,896,045**	**326,229**	**(772,301)**	**2,639,149**	**–**	**(601,256)**	**–**	**37,487,866**
Others in use	**1,071,005**	**(47,649)**	**1,848**	**102,536**	**977**	**(76,002)**	**(3,113)**	**–**	**1,049,602**	**12,304**	**(1,573)**	**118,549**	**(9,722)**	**(43,316)**	**–**	**1,125,844**
Total accumulated depreciation	**38,590,154**	**(1,569,192)**	**288,336**	**2,636,990**	**(118,539)**	**(2,103,353)**	**(319,967)**	**–**	**37,404,429**	**346,539**	**(770,359)**	**2,842,430**	**(9,722)**	**(649,757)**	**–**	**39,163,560**
Impairment allowance (Note 40)	887,180	(47,679)	71	608,646	(179,575)	(244)	(989,949)	–	278,450	4,061	–	13,565	–	(6,884)	–	289,192
Total accumulated depreciation and provisions	**39,477,334**	**(1,616,871)**	**288,407**	**3,245,636**	**(298,114)**	**(2,103,597)**	**(1,309,916)**	**–**	**37,682,879**	**350,600**	**(770,359)**	**2,855,995**	**(9,722)**	**(656,641)**	**–**	**39,452,752**
Total net cost	**63,834,384**	**(3,995,982)**	**1,136,997**	**3,218,262**	**134,436**	**(190,849)**	**(17,370)**	**(37,499)**	**64,082,379**	**712,394**	**(759,368)**	**2,588,133**	**25,214**	**(458,383)**	**(81,049)**	**66,109,320**

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The breakdown by business of the main investments made in property, plant and equipment in 2018 and 2017, additional to the ones included in the acquisition of NEONERGIA (Note 6) and not including the capitalization of personnel (Note 37) nor financial expenses (Note 42) is as follows:

Thousands of Euros	31.12.2018	31.12.2017 Re-stated (Note 2.d)
Liberalised business		
Spain and Continental Europe	127,226	216,364
United Kingdom	112,480	200,296
Mexico	620,012	710,948
Brazil	16,147	12,137
Renewable business		
Spain	366,609	210,861
United Kingdom	364,493	806,764
United States	304,186	970,463
Mexico	340,641	192,937
Brazil	95,633	130,471
RoW	220,858	229,079
Network business		
Spain	477,772	484,467
United Kingdom	558,695	678,662
United States	1,019,288	895,638
Brazil	17,708	912
Corporation and other	63,812	52,489
Total	**4,705,560**	**5,792,488**

"Amortisation and provisions" in the consolidated income statement for 2018 includes Euros 94,614 thousand for impairment and write-offs of property, plant and equipment of the IBERDROLA Group (Note 40). In 2017 this heading included a debit of Euros 646,145 thousand.

The fully amortised intangible assets in use at 31 December 2018 and 2017 amounted to Euros 2,211,844 and 2,277,060 thousand, respectively.

The IBERDROLA Group maintains at 31 December 2018 and 2017 commitments to acquire Property, Plant and Equipment for Euros 3,308,813 and 4,130,359 thousand respectively.

At 31 December 2018 and 2017, “Property, plant and equipment – Other elements in use” included Euros 221,257 y 203,835 thousand, respectively, for assets held under finance leases corresponding primarily to IBERDROLA Group´s corporate offices in Madrid, among other financial assets. Details of minimum payments on the lease contracts at 31 December 2018 and 2017 are as follows:

Thousands of Euros	31.12.2018	31.12.2017
2018	–	13,569
2019	31,061	12,927
2020-2022	30,376	31,454
From 2023 onwards	117,367	116,904
Total	**178,804**	**174,854**
Financial Cost	36,501	28,890
Present value of the payments	142,303	145,964
Total	**178,804**	**174,854**

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The present value of instalments is recognised in “Financial debt - Loans and borrowings” in current and non-current liabilities on the consolidated income statement at 31 December 2018 and 2017.

11. CONCESSION ARRANGEMENTS

Details of electricity service concession arrangements in Brazil within the scope of IFRIC 12: “Service Concession Arrangements” (Note 3.b):

Distribution

Company	Location	Concession date	Maturity date	No. of towns	Tariff cycle	Last review
Elektro Redes, S.A.	Estado do Sao Paulo	27/08/1998	26/08/2028	223	4 years	Aug-15
Elektro Redes, S.A.	Estado do Mato Grosso do Sul	27/08/1998	26/08/2028	5	4 years	Aug-15
Companhia de Eletricidade do Estado do Bahia, S.A.	Estado da Bahia	06/08/1997	07/08/2027	415	5 years	Apr-18
Companhia Energética de Pernambuco, S.A.	Estado de Pernambuco	30/03/2000	30/03/2030	184	4 years	Apr-17
Companhia Energética de Pernambuco, S.A.	Distrito de Fernando de Noronha	30/03/2000	30/03/2030	1	4 years	Apr-17
Companhia Energética de Pernambuco, S.A.	Estado da Paraíba	30/03/2000	30/03/2030	1	4 years	Apr-17
Companhia Energetica do Rio Grande do Norte, S.A.	Estado do Rio Grande	31/12/1997	30/12/2027	167	5 years	Apr-18

Transmission in operation

Company	Location	Concession date	Expiry date	Tariff cycle	Last review
Afluente Transmissão de Energia Elétrica, S.A.	Estado da Bahia	06/08/1997	08/08/2027	5 years	2015
S.E. Narandiba, S.A. (SE Narandiba)	Estado da Bahia	28/01/2009	28/01/2039	5 years	2014
S.E. Narandiba, S.A. (SE Extremoz)	Estado do Rio Grande do Norte	10/05/2012	10/05/2042	5 years	2017
S.E. Narandiba, S.A. (SE Brumado)	Estado da Bahia	27/08/2012	27/08/2042	5 years	(1)
Potiguar Sul Transmissão de Energia, S.A.	Estado da Paraíba do Rio Grande do Norte	01/08/2013	01/08/2043	5 years	(2)

(1) First revision in 2018
(2) Revision in 2019

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Transmission in construction

Company	Location	Concession date	Expiry date
EKTT 1-A Serviços de Transmissão de Energia Elétrica SPE S/A	Estados do Tocantis, Bahia e Piauí	08/03/2018	08/03/2048
EKTT 2-A Serviços de Transmissão de Energia Elétrica SPE S/A	Estados da Paraíba e Ceará	08/03/2018	08/03/2048
EKTT 12-A Serviços de Transmissão de Energia Elétrica SPE S/A	Estados do Mato Grosso do Sul e São Paulo	31/07/2017	31/07/2047
EKTT 13-A Serviços de Transmissão de Energia Elétrica SPE S/A	Estado de São Paulo	31/07/2017	31/07/2047
EKTT 14-A Serviços de Transmissão de Energia Elétrica SPE S/A	Estado de Santa Catarina	31/07/2017	31/07/2047
EKTT 15-A Serviços de Transmissão de Energia Elétrica SPE S/A	Estado do Ceará	31/07/2017	31/07/2047

The duration of each concession is 30 years, and they may be extended for up to 30 years at the request of the concession holder and at the discretion of the concession grantor, which is the Agência Nacional de Energia Elétrica (ANEEL). The concession holder may not transfer such assets or use them as collateral without the prior written consent of the regulator. At the end of a concession the property reverts automatically to the concession grantor and the amount of indemnification due to the concession holder is assessed and determined. Appendix II details in more depth the Brazilian regulation applicable to the concessions above.

Income from previous concession agreements include the provision of construction services (Note 35) and of operation and maintenance services in the facilities already built owned by the awarding public administration. The provision of these services constitutes two separate obligations subject to different margins.

Construction services have duration of 3 to 5 years, whereas operation and maintenance services are started on the date the facilities are delivered. As a general rule, this delivery date determines the start of the annual payments agreed on the concession agreements. The collection of said annual payments is extended during the concession period (normally 30 years). This circumstance determines a material financial element.

12. IMPAIRMENT OF NON-FINANCIAL ASSETS

Methodology of impairment tests

At least yearly, the IBERDROLA Group analyses its assets for indications of impairment. If such indications are found, an impairment test is conducted.

In addition, the IBERDROLA Group conducts a systematic analysis of the impairment of cash-generating units that include goodwill or intangible assets in progress or with indefinite useful life.

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Additionally, it must be noted that in October 2018 the sale of practically all traditional generation assets in the United Kingdom to the company Drax Smart Generation, subsidiary of Drax Group, was agreed. The sale was completed in December 2018 (Note 41). Following this sale, the cash-generating unit for electricity and gas Generation and Supply in the United Kingdom is based in the supply activity.

The projections used in the impairment tests are in accordance with the best forecast information held by the IBERDROLA Group and include the investment plans for each country prevailing at that time.

a) Assumptions used in liberalised business:

- Production of the facilities: the hours of operation used are consistent with those in previous years, and in line with the expected evolution of the energy mix of the countries where the IBERDROLA Group operates.

- Selling prices of electricity and gas: the selling prices used are the ones agreed upon in the signed price purchase agreements. For unsold production, future prices in the market where the IBERDROLA Group operates are used.

- Gas purchase prices: the prices used are taken from long-term purchase agreements signed by the IBERDROLA Group, estimating the variables included in them according to external studies.

- Electricity and gas retail margin: growth forecasts were used for the number of customers and unit margins in accordance with the knowledge of the markets in which the IBERDROLA Group operates and the company's relative position in each of them.

- Investment: the best information available has been used on investment plants under way which are going to be put in use in the coming years.

- Operation and maintenance costs: maintenance agreements for existing facilities have been considered. Other operating costs were projected consistent with the expected growth of each cash-generating unit, assuming its headcount grows at the same pace.

b) Assumptions used in the Networks business:

- Regulated income: approved remuneration was used for the years in which it was available, while for subsequent periods, updating mechanisms of this remuneration, which were applied in line with the estimated costs of the corresponding cash-generating units, were used.

- Investment: the projections were in accordance with investment plans consistent with the demand growth in each and the undertakings in the concession agreements with the minimum required by the different regulators and the estimate of future remuneration used.

- Operation and maintenance costs: the best estimation available of trends in operating and maintenance costs was used, taking into account its consistency with the remuneration assumed to be received in each year.

c) Assumptions used in the renewables business:

- Facilities' production: the operating hours of each wind farm were consistent with their historical output. In this respect, the long-term predictability of the facilities' output was taken into account, which was also covered in practically all countries by regulatory mechanisms that enabled wind farms to produce whenever meteorological and network conditions so allowed.

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- Selling prices of electricity: the selling prices used are the ones agreed upon in the signed sales agreements. For unsold production, future prices in the market where the IBERDROLA Group operates are used. In any case, existing support mechanisms were taken into account.

- As described in Note 5.b, an estimate has been made of the regulation that will apply to USA facilities applicable from 31 December 2019.

- Investment: the projections were in accordance with the best information available about the plants that were expected to enter operation in the coming years, taking into account the price set in the contracts to buy wind turbines from various suppliers, including SIEMENS GAMESA (Note 50), as well as the technical and financial capacity of the IBERDROLA Group to successfully fulfil said planned projects.

- Operation and maintenance costs: the prices set in land leases and maintenance agreements for the entire useful life of the facilities were used, where the high predictability of the costs of wind farms must be taken into account.

d) Projection period and nominal growth:

The projection period of future cash flows and the nominal growth rate (g) used to extrapolate these projections beyond the reporting period for the different groups of cash-generating units are as follows:

	2018		2017	
	No. of years	g	No. of years	g
Electricity and gas generation and supply in the UK	Useful life / 10	- 2.0%	Useful life / 10	- 1.5%
Electricity transmission and distribution in the UK	10	2.5%	10	2,5%
Renewables in the UK	Useful life	-	Useful life	-
Electricity transmission and distribution in the US	10	1.0%	10	1,0%
Renewable Renewables in the USA	Useful life	-	Useful life	-
Electricity generation and retail in Brazil	Useful life / 15	- 4.5%	n/a	n/a
Electricity transmission and distribution in Brazil	Concession life	-	Concession life	-
Renewable energies in Brazil	Useful life	-	n/a	n/a

Although IAS 36: “Impairment assets” recommends the use of projections not exceeding five years for impairment test purposes, IBERDROLA has decided to use the periods included in this table for the following reasons:

- The most appropriate method for assets in the conventional or renewables generation business is to use their remaining useful lives, especially when in many cases very long-term energy sale contracts have been signed and long-term estimated prices curves are frequently used in the operating activity of the IBERDROLA Group (contracts, hedges, etc.).

- Electricity transmission and distribution concessions include longer regulatory periods and the method that the regulator will use to calculate the new tariff at the beginning of the new regulatory period is known.

- The IBERDROLA Group considers its projections to be reliable and that past experience demonstrates its ability to predict cash flows in periods such as those under consideration.

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The nominal growth rate considered in the electricity and gas transmission and distribution activities in the United Kingdom, United States and Brazil is consistent with the market and inflation growth forecasts available to the IBERDROLA Group for these markets.

e) Discount rate:

The methodology for calculating the discount rate used by IBERDROLA consists of adding the specific risks of the asset or risk premium of the asset or business in question to the time value of money or risk-free rate of each market.

The risk-free rate corresponds to 10-year Treasury bonds issued in the market, with sufficient depth and solvency. In countries with economies or currencies lacking sufficient depth and solvency, a country risk and currency risk are estimated so that the aggregate of all these components approximates to be the finance cost without the risk spread of the asset.

The asset's risk premium corresponds to the specific risks of the asset, the calculation of which takes into account the betas estimated on the basis of comparable companies performing the same main activity.

The discount rates before taxes used for the impairment test for the different groups of cash-generating units were as follows:

	Rates 2018	Rates 2017
Electricity and gas generation and supply in the UK	7.01%	6.25%
Electricity transmission and distribution in the UK	4.57%	4.75%
Renewable energies in the UK onshore/offshore	5.72%/6.29%	5.95%/6.85%
Electricity transmission and distribution in the US	5.49%	5.48%
Renewable energies in the US onshore/offshore	6.29%/7.49%	6.13%/7.58%
Electricity generation and retail in Brazil	13.90%	n/a
Electricity transmission and distribution in the Brazil	12.34%	12.56%
Renewable energies in Brazil	13.61%	n/a

Impairment and write-downs recognised in 2018 and 2017

During 2018 and 2017, the IBERDROLA Group has recognised the following impairment as a consequence of the impairment tests carried out (Note 40):

- As a consequence of the periodic impairment tests carried out in 2018 and 2017 on the renewables facilities under construction in the USA (Note 3.b), the IBERDROLA Group reversed part of the provision accounted for in relation its intangible assets in past years. In 2018 and 2017 this reversal amounted to Euros 52,688 thousand and to Euros 42,959 thousand, respectively.

- In 2017 in the renewables energies cash-generating unit in the US, the recoverable amount is Euros 449,480 thousand lower than the carrying amount due to the tax reform resulting in substantial changes in both the composition of carrying amounts and the tax rate. This amount has been written-off from goodwill (Note 8).

Sensitivity analysis

The IBERDROLA Group has performed several sensitivity analyses of the impairment test results carried out in a systematic manner including reasonable changes in a series of basic assumptions defined for each cash-generating unit (or groups of cash-generating units):

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- Electricity and gas generation and supply in the UK and Brazil:
    - Decrease of 10% in energy produced.
    - Decrease of 10% in margin per kWh.
    - Decrease of 10% in electricity and gas customer growth.
    - Decrease of 10% in electricity and gas supply per kWh.
    - Increase of 10% in operating and maintenance costs.
    - Increase of 10% in investment costs.
- Electricity transmission and distribution in the United Kingdom, United States and Brazil:
    - Decrease of 10% in rate of return on which regulated remuneration is based.
    - Increase of 10% in operating and maintenance costs.
    - Decrease of 10% in investment (resulting in a subsequent decrease in remuneration).
- Renewables in the United Kingdom, United States and Brazil:
    - Decrease of 5% in energy produced.
    - Decrease of 10% in total price per kWh, solely applicable to production for which there are no long-term sales agreements.
    - Increase of 10% in operating and maintenance costs.
    - Increase of 10% in investment costs.

Moreover, the IBERDROLA Group has performed an additional sensitivity analysis, consisting in increasing the applicable discount rate to the United Kingdom and United States by 50 basis point and to Brazil by 100 basis points.

These sensitivity analyses, carried out separately for each basic assumption, would not reveal the existence of any depreciation, except in the following cases:

- Electricity generation and supply in the UK, whose value in use is close to each book value, so that practically any negative variation of the key hypothesis would mean that the value in use would be lower than its carrying amount.
- Renewable energies production in the US, whose value in use is Euros 138 million more than its carrying amount, in which a decrease of 0.6% in energy produced, a lower market price of 1.2% or an increase of 10 basis points in the discount rate would mean that the value in use would be lower than its carrying amount.

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13. INVESTMENTS

13.a) Equity-accounted investees

Movement in the carrying amounts of equity-accounted investees, associates and joint ventures of the IBERDROLA Group (Appendix I) in 2018 and 2017 is as follows:

Thousands of Euros	Associated companies	Neonergia Subgroup	Flat Rock Subgroup	Other joint ventures	Total
Balance at 01.01.2017	**642,485**	**1,114,073**	**144,788**	**338,309**	**2,239,655**
Investment	6,387	10,422	2,215	58,307	**77,331**
Modification of the consolidation perimeter (Note 6)	–	770,306	–	–	**770,306**
Transfers	–	–	–	88,886	**88,886**
Profit for the year from continuing operations	6,346	(7,189)	(2,302)	14,188	**11,043**
Profit for the year from discontinued operations	328	–	–	–	**328**
Value adjustment (provision)/reversion	–	–	–	(39,776)	**(39,776)**
Other comprehensive income	10,295	(12,453)	–	664	**(1,494)**
Dividends	(210,465)	(38,026)	(3,107)	(27,062)	**(278,660)**
Translation differences	(14,323)	(133,664)	(16,656)	(30,040)	**(194,683)**
Disposals	(41,576)	(993,227)	–	(99,964)	**(1,134,767)**
Diluted effect merger SIEMENS-GAMESA (Note 41)	250,695	–	–	–	**250,695**
Others	2,032	–	–	–	**2,032**
Balance at 31.12.2017	**652,204**	**710,242**	**124,938**	**303,512**	**1,790,896**
Investment	3,879	48,997	982	37,447	**91,305**
Modification of the consolidation perimeter	4,821	–	–	(46,197)	**(41,376)**
Transfers	19,569	–	22,492	(19,569)	**22,492**
Profit for the year from continuing operations	11,370	11,301	(3,353)	5,658	**24,976**
Profit for the year from discontinued operations	697	–	–	–	**697**
Other comprehensive income	(2,743)	–	–	(9,150)	**(11,893)**
Dividends	(6,135)	(13,363)	(6,437)	(27,120)	**(53,055)**
Translation differences	(36,034)	(95,785)	6,214	14,819	**(110,786)**
Disposals	–	–	–	(4,460)	**(4,460)**
Others	1,128	161	(2)	(565)	**722**
Balance at 31.12.2018	**648,756**	**661,553**	**144,834**	**254,375**	**1,709,518**

The balance corresponding to the NEOENERGIA Subgroup at 31 December 2018 and 2017 mainly includes the shares in Companhia Hidreletrica Teles Pires, S.A (TELES PIRES), Norte Energia, S.A. (NORTE ENERGÍA) and Energetica Aguas da Pedra, S.A. (EAPSA) held by IBERDROLA Group through NEOENERGIA.

Companies' balance of the participated entities at 31 December 2018 includes an amount of Euros 571,414 thousand relating to the IBERDROLA Group's ownership interest in SIEMENS GAMESA, the share price of which at year-end amounted to Euros 584,958 thousand.

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Main Transactions

The main transactions performed by the IBERDROLA Group in connection with these equity investments accounted for using the equity method are described in the following paragraphs.

Year 2018

- In December 2018 IBERDROLA Group sold its 80% interest in its subsidiary Coyote Ridge Wind, LLC, keeping the remaining 20%, over which exercises significant influence and which is now held as equity-accounted investee (Notes 6 and 41).

- In June 2018, the IBERDROLA Group sold its 20% stake in the company Tirme, S.A., for an amount of Euros 35,100 thousand, which implied a gross capital gain of Euros 30,928 thousand which have been recorded under "Income from companies accounted for using the equity method - net of taxes".

- IBERDROLA Group, through the company Vineyard Wind, LLC, takes part in the development of a large scale offshore wind farm off the coast of Massachusetts, United States, construction of which is set to commence in 2019. In 2018, IBERDROLA Group invested Euros 37,067 thousand, taking the group's future investment commitments to approximately Euros 100 million (Note 50).

Year 2017

- In relation to the merger agreement for the wind businesses of Gamesa Corporación Tecnológica, S.A. (GAMESA) and of Siemens AG (SIEMENS) initiated in 2016 by virtue of which Siemens Wind HoldCo would be absorbed (as absorbed company) by GAMESA (as absorbing company):

    - On 13 March 2017 the European competition authorities authorised the merger without commitments, and all the conditions precedent to which the merger was subject were met.

    - On 29 March 2017 the board of directors of GAMESA acknowledged compliance with all the conditions for executing the merger deed, which was filed with the Vizcaya Mercantile Registry on 3 April.

  As a result of the above, GAMESA issued shares representing approximately 59% of the capital given to SIEMENS, causing a dilution in the percentage interest held by the IBERDROLA Group, which dropped from 19.69% to 8.07% (Note 41).

  Despite holding an interest of less than 20%, the IBERDROLA Group considers it has significant influence over Siemens Gamesa Renewable Energy, S.A.(hereinafter, SIEMENS GAMESA), amongst other aspects, due to the status of IBERDROLA as a main shareholder as well as to the presence of one of its representatives on its board of directors and the fact that significant transactions have been carried out with this company.

- On 27 April 2017, the IBERDROLA Group sold its interest in Amara, S.A.U. (Note 41).

- As indicated in Notes 2.c. and 7, on 8 June 2017 the shareholders of NEOENERGIA and IBERDROLA ENERGÍA reached an agreement on the takeover of the Brazilian subsidiary. After the operation took effect, on 24 August 2017, IBERDROLA ENERGÍA's investment rose to 52.45% (compared to 39% before the transaction), in exchange for the businesses of ELEKTRO. The takeover by NEOENERGIA has been recognised in accordance with the requirements of business combinations achieved in stages.

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Summary of financial information

A summary of the financial information at 31 December 2018 (at 100% and before intercompany eliminations) for the most significant equity-accounted subgroups is as follows:

	NORTE ENERGIA		TELES PIRES		EAPSA		Flat Rock Subgroup	
Thousands of Euros	**31.12.2018**	**31.12.2017**	**31.12.2018**	**31.12.2017**	**31.12.2018**	**31.12.2017**	**31.12.2018**	**31.12.2017**
Segment						Liberalised-Brazil		Renewables – USA
Percentage holding		5.25%		26.75%		26.75%		100%
Current assets	195,966	175,235	37,327	85,647	16,290	21,034	10,126	3,330
Non-current assets	9,611,303	10,443,300	1,150,246	1,332,982	318,000	375,217	318,384	258,311
Total assets	**9,807,269**	**10,618,535**	**1,187,573**	**1,418,629**	**334,290**	**396,251**	**328,510**	**261,641**
Current Liabilities	832,300	949,420	83,786	100,438	19,786	23,256	8,041	715
Non-Current Liabilities	6,003,096	6,803,595	768,145	917,628	98,018	121,243	30,799	13,064
Total assets	**6,835,396**	**7,753,015**	**851,931**	**1,018,066**	**117,804**	**144,499**	**38,840**	**13,779**
Income from ordinary activities	1,020,144	721,344	192,146	242,853	62,214	69,178	17,994	14,728
Amortisation and depreciation	(165,519)	(92,205)	(41,260)	(50,740)	(6,638)	(6,230)	(17,758)	(14,391)
Income from interests	16,272	26,905	–	9,143	1,157	2,269	79	32
Expenses from interests	(274,788)	(209,149)	(73,569)	(102,748)	(6,496)	(8,794)	(329)	(347)
Tax (expense)/income	(109,587)	(86,548)	2,666	22,135	(2,669)	(3,928)	–	386
Profit for the year from continuing operations	209,159	(77,168)	(93,418)	(64,322)	19,572	23,171	(6,963)	(12,049)
Total comprehensive profit	**209,159**	**(77,168)**	**(93,418)**	**(64,322)**	**19,572**	**23,171**	**(6,963)**	**(12,049)**
Other information								
Cash and cash equivalents	20,601	2,998	6,226	47,437	5,933	8,184	7,613	2,057
Current financial liabilities (*)	576,430	479,081	53,779	56,799	15,653	16,708	–	47
Non-Current financial liabilities (*)	5,934,007	6,564,756	708,671	856,687	57,848	74,074	–	–

(*) Excluding trade and other payables

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13.b) Other investments

The detail of "Other non-current financial assets" and "Other current financial assets" in the IBERDROLA Group's consolidated statement of financial position is as follows:

Thousands of Euros	31.12.2018	31.12.2017
Non-current (Note 4)		
Receivables in Brazil (Notes 3.b and 11)	2,196,551	2,084,988
Long-term deposits and guarantees	281,942	282,156
Fixed-income securities	4,061	4,116
Concessional guarantee of the sufficiency tariff in Brazil (Note 11)	1,922	55,642
Long-term deposits	52,429	28,757
Credits to third parties	70,999	87,576
Assets for pension plans (Note 25)	7,007	3,326
Other investments in equity-accounted investees	9,195	4,824
Others	80,413	79,995
Bad debt provisions	(19,132)	(18,815)
Total	**2,685,387**	**2,612,565**
Current (Note 4)		
Receivables in Brazil (Notes 3.b and 11)	11,606	17,167
Short-term deposits and guarantees	716	2,065
Concessional guarantee of the sufficiency tariff in Brazil (Note 11)	227,698	129,244
Accounts receivable for financing imbalance in revenues in 2018	25,727	–
Accounts receivable for financing imbalance in revenues in 2017	–	57,297
Other investments in equity-accounted investees	7,542	5,970
Short-term deposits	241,305	158,126
Others	66,603	236,808
Bad debt provisions	(9,629)	(7,794)
Total	**571,568**	**598,883**

Receivables in Brazil

"Receivables in Brazil" reflects the amount receivable by the Brazilian companies upon collection of their service concession arrangements (Notes 3.b and 11). Law N°12.783/13 provides that such amount will be determined by the reference to the reposition value (Valor Novo de Reposiçao, VNR) of the concession assets which have not been amortised at the end of the concession period using the residual value of the Regulatory Asset Base (Base de Remuneração Regulatoria BRR) at the end of the contractual term of the concession.

The method specified by the regulator allows reasonable estimates of receivables resulting from the concession as long as the awarding public administration protects the value of the Regulatory Asset Base after each ordinary tariff review. Ordinary reviews are conducted every four or five years, based on the concession. This means that after the regulator has conducted a tariff review the value of the Regulatory Asset Base prior to that date it is adjusted for Brazilian Market Prices General Index (or Índice General de Precios de Mercado Brasileño - IGPM). The next tariff review will determine the value of the regulatory asset base with regard to additions in the interval between two tariff reviews.

To estimate the amount of the financial asset, observable values are used. Specifically, the net replacement value, as calculated by the energy regulator in the course of the latest tariff review. The amount is updated in the intervals between tariff reviews by additions to the underlying fixed assets and translation differences or, as the case may be, any changes in the method of calculation of the net realizable value and the IGPM.

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Long-term deposits and guarantees

The "Long term deposits and guarantees" heading essentially corresponds to the portion of guarantees and deposits received from customers at the time of recruitment as security of electricity supply (which are recorded in "Non-Current Liabilities - Other non-current payables" in the consolidated statement of financial position - Note 30) and have been deposited with the competent Public Administrations in accordance with the current legislation in Spain.

Collection right due to imbalanced financing

Act 24/2013 of the Electricity Sector establishes that, in the case that in a period an imbalance occurs due to an income deficit in the settlements of the electricity sector, its quantity may not exceed 2% of the estimated incomes for the system for this period. Furthermore, the accumulated debt due to imbalances in preceding periods may not exceed 5% of the income estimated for the system. If these limits are exceeded, the entrance tolls will be reviewed at least in a total equivalent to the excess of these limits. This law establishes, furthermore, that the part of the imbalance due to an income deficit that, without exceeding these limits, is not compensated via the increase of tolls and charges, will be financed by those subject to the settlement system proportionally to the remuneration that corresponds to them for the activity they carry out.

In 2018 and 2017, the IBERDROLA Group estimated that the definitive settlement of the Spanish electricity system for 2018 and 2017, respectively, would have a surplus, even though, the provisional settlements made until 31 December 2018 and 2017 had a revenue deficit. IBERDROLA Group's financed deficit as of 31 December 2018 and 2017 amounted to Euros 222,841 and 215,889 respectively.

In 2018 and 2017 the amounts of Euros 197,114 and 158,592 thousand respectively correspond to financed deficit and have been subject to a non-recourse factoring contract with credit assignment. Therefore said amounts have been derecognised in the consolidated financial statements at 31 December 2018 and 2017.

IBERDROLA Group's financed deficit as of 31 December 2017 has been collected in 2018.

14. TRADE AND OTHER ASSETS-NON-CURRENT

Details of "Non-current trade and other receivables" in the consolidated statements of financial position is as follows:

Thousands of Euros	31.12.2018	31.12.2017
Receivables from Brazilian customers	80,691	107,840
Contract assets (Note 2.a.)	303,407	435,136
Public Administrations receivables	658,258	–
Others	442,271	299,975
Bad debt provisions	(4,375)	(4,261)
Total (Note 4)	**1,480,252**	**838,690**

Balances with third parties other than public administrations correspond to assets arising in the normal course of business of the IBERDROLA Group and, therefore, are recognised at amortised cost. This broadly coincides with its fair value.

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15. MEASUREMENT AND COMPENSATION OF FINANCIAL INSTRUMENTS

Most of the financial assets and liabilities registered in the consolidated statements of financial position correspond to the financial instruments classified under the category of loans and receivables, charges and payables.

Fair value in the heading "Financial debt - loans and other receivables" in current and non-current liabilities in the consolidated annual accounts of IBERDROLA Group as of 31 December 2018 and 2017 amounts to Euros 38,422,381 and 38,208,032 thousand. Carrying amount is Euros 37,326,472 and 36,690,498, respectively. Said value is classified in Level 2. The fair value of the derivative financial instruments does not differ significantly from book value thereof.

The sensitivity of the fair value of the IBERDROLA Group's borrowings, after the effect of hedge accounting, to changes in the euro-dollar euro- sterling pound and euro-Brazilian Reals exchange rates is as follows:

Thousands of Euros	2018		2017	
Exchange rate variation	Depreciation 5%	Appreciation 5%	Depreciation 5%	Appreciation 5%
Debt's fair value variation:				
US dollar	(326,675)	361,062	(276,383)	305,476
Sterling Pound	(151,563)	167,517	(126,534)	139,854
Brazilian reals	(224,082)	247,670	(221,734)	245,074

The estimated fair value of borrowings bearing fixed interest rates, after the effect of hedge accounting at 31 December 2018 and 2017, calculated by discounting future cash flows at market interest rates, amounted to Euros 22,752,999 thousand and Euros 18,675,372 thousand, respectively. The interest rate curve used to make this calculation takes into account the risks associated with the electricity industry and the credit rating of the IBERDROLA Group. The sensitivity of that fair value to interest rate fluctuations is as follows:

Thousands of Euros	31.12.2018		31.12.2017	
Variation of interest rate	+0.25%	+(0.25)%	+0.25%	+(0.25)%
Variation in debt value	(272,305)	300,099	(246,825)	253,059

The IBERDROLA Group measures certain available-for-sale assets and derivative financial instruments at fair value, provided they can be measured reliably, classifying them into three levels:

- Level 1: assets and liabilities quoted in liquid markets.
- Level 2: assets and liabilities whose fair value is determined using valuation techniques with observable market data.
- Level 3: assets and liabilities whose fair value is determined using valuation techniques without observable market data.

The breakdown of financial instruments measured at fair value by levels is as follows:

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Thousands of Euros	Value at 31.12.2018	Level 1	Level 2	Level 3
Derivative financial instruments (financial assets)	1,333,649	4,721	1,221,240	107,688
Derivative financial instruments (financial liabilities)	(835,534)	(208)	(699,489)	(135,837)
Total (Note 28)	**498,115**	**4,513**	**521,751**	**(28,149)**

Thousands of Euros	Value at 31.12.2017	Level 1	Level 2	Level 3
Derivative financial instruments (financial assets)	1,267,298	10,952	1,159,198	97,148
Derivative financial instruments (financial liabilities)	(604,016)	(87,528)	(501,210)	(15,278)
Total (Note 28)	**663,282**	**(76,576)**	**657,988**	**81,870**

The reconciliation between initial and final balances for financial instruments classified as Level 3 of the fair-value hierarchy is as follows:

	Derivative Financial instruments	
Thousands of Euros	2018	2017
Initial balance	**81,870**	**30,534**
Income and expense recognised in consolidated income statement	6,655	15,544
Income and expense recognised in equity	(17,298)	(4,930)
Purchases	(9,402)	(1,736)
Sales and settlements	(7,422)	(5,990)
Translation differences	(597)	(6,247)
Transfers	(81,955)	54,695
Final balance	**(28,149)**	**81,870**

The fair value of Level 3-classified financial instruments has been determined by the discounted cash flow method. Projections of these cash flows are in accordance with assumptions not observable in the market, and mainly correspond to purchase and sale price estimates that the Group normally uses, in accordance with its experience in the markets.

None of the possible foreseeable scenarios of the indicated assumptions would result in a material change in the fair value of the financial instruments classified at this level.

In addition, the IBERDROLA Group´s financial assets and liabilities are compensated and presented net on the consolidated statement of financial position when a legally enforceable right exists to offset the amounts recognised and the Group intends to settle the assets and liabilities net or simultaneously. The breakdown of netted financial assets and liabilities at 31 December 2018 and 2017 is as follows:

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	31.12.2018					
				Uncompensated amounts under compensation agreements		
Thousands of Euros	Gross amount	Compensated amount	Net amount	Financial instruments	Financial guarantee	Net amount
ASSET DERIVATIVES						
Current						
Raw materials	544,729	(356,914)	187,815	(59,254)	(6,745)	121,816
Others	5,705	(636)	5,069	(1)	–	5,068
Non-current						
Raw materials	143,668	(16,126)	127,542	(11,123)	(29,770)	86,649
Others	58,284	–	58,284	–	(53,490)	4,794
Total	**752,386**	**(373,676)**	**378,710**	**(70,378)**	**(90,005)**	**218,327**
OTHER FINANCIAL ASSETS						
Receivables	510,806	(380,637)	130,169	(38,454)	(7,841)	83,874
LIABILITIES DERIVATIVES						
Current						
Raw materials	495,500	(356,913)	138,587	(59,254)	(9,852)	69,481
Others	2,122	(637)	1,485	(1)	(1)	1,483
Non-current						
Raw materials	68,401	(16,126)	52,275	(11,123)	(14,864)	26,288
Others	2	–	2	–	–	2
Total	**566,025**	**(373,676)**	**192,349**	**(70,378)**	**(24,717)**	**97,254**
OTHER FINANCIAL LIABILITIES						
Payables	694,988	(380,637)	314,351	(38,454)	(33,179)	242,718

	31.12.2017					
				Uncompensated amounts under compensation agreements		
Thousands of Euros	Gross amount	Compensated amount	Net amount	Financial instruments	Financial guarantee	Net amount
ASSET DERIVATIVES						
Current						
Raw materials	433,974	(297,850)	136,124	(46,882)	(10,735)	78,507
Others	9,605	(2,001)	7,604	–	(990)	6,614
Non-current						
Raw materials	119,594	(4,024)	115,570	(11,887)	(32,726)	70,957
Others	49,836	(17)	49,819	–	(48,675)	1,144
Total	**613,009**	**(303,892)**	**309,117**	**(58,769)**	**(93,126)**	**157,222**
OTHER FINANCIAL ASSETS:						
Receivables	459,917	(385,027)	74,890	(35,157)	(5,009)	34,724
LIABILITIES DERIVATIVES						
Current						
Raw materials	384,035	(297,848)	86,187	(46,882)	(4,896)	34,409
Others	6,483	(2,001)	4,482	–	(1)	4,481
Non-current						
Raw materials	20,985	(4,026)	16,959	(11,887)	(2,469)	2,603
Others	17	(17)	–	–	–	–
Total	**411,520**	**(303,892)**	**107,628**	**(58,769)**	**(7,366)**	**41,493**
OTHER FINANCIAL LIABILITIES						
Payables	634,887	(385,027)	249,860	(35,157)	(8,301)	206,402

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16. NUCLEAR FUEL

Details of and movement in "Nuclear Fuel" of the consolidated statement of financial position at 31 December 2018 and 2017, are as follows:

Thousands of Euros	Fuel loaded into the reactor core	Nuclear fuel in progress	Total
Balance at 01.01.2017	**250,448**	**72,182**	**322,630**
Additions	–	135,311	135,311
Capitalised borrowing costs (Notes 3.g and 42)	–	2,193	2,193
Transfers	141,188	(141,188)	–
Fuel consumed (Note 3.g)	(128,251)	–	(128,251)
Balance at 31.12.2017	**263,385**	**68,498**	**331,883**
Additions	–	63,198	63,198
Capitalised borrowing costs (Notes 3.g and 42)	–	633	633
Transfers	82,082	(82,082)	–
Fuel consumed (Note 3.g)	(123,040)	–	(123,040)
Balance at 31.12.2018	**222,427**	**50,247**	**272,674**

The IBERDROLA Group's nuclear fuel purchase commitments at 31 December 2018 and 2017 amount to Euros 485,015 thousand and Euros 433,577 thousand, respectively.

17. INVENTORIES

At 31 December 2018 details of "Inventories" (Note 3.h) in the consolidated statements of financial position is as follows:

Thousands of Euros	31.12.2018	31.12.2017
Energy materials	215,277	212,475
Emission allowances and renewables obligation certificates	351,575	338,534
Real estate inventories	1,177,230	1,224,092
Land and plots	962,665	985,623
Developments under construction	200,763	229,361
Completed developments	13,802	9,108
Other inventories	581,230	226,644
Real estate inventories impairment allowance	(151,481)	(131,624)
Total	**2,173,831**	**1,870,121**

Variations in the impairment allowance in 2018 and 2017 are as follows:

Thousands of Euros	2018	2017
Opening balance	**131,624**	**125,205**
Charges	2,284	20,832
Reversals	(2,622)	(13,404)
Applications and others	20,195	(1,009)
Closing balance	**151,481**	**131,624**

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"Revenue" in the 2018 and 2017 consolidated income statements includes Euros 81,274 thousand and Euros 169,045 thousand, respectively, in respect of sales of real estate inventories.

At 31 December 2018, the IBERDROLA Group has "take or pay" contracts with several natural and liquefied natural gas suppliers for the supply of 28 bcm of gas during the period from 2019 to 2039, earmarked for supply and for consumption at the Group's electricity production facilities. The prices under these contracts are determined on the basis of formulas commonly used in the market, which index the price of gas to the performance of other energy variables. Moreover, at 31 December 2018, the IBERDROLA Group has purchase commitments of 10 bcm of natural gas in the National Balancing Point (NBP) (11 bcm at 31 December 2017).

Information on the commitments under said contracts at 31 December 2018 is as follows:

Thousands of Euros	31.12.2018
2019	2,457,288
2020	585,429
2021	467,174
2022	441,506
2023	463,858
From 2024 onwards	5,500,374
Total	**9,915,629**

18. TRADE AND OTHER CURRENT ASSETS

The breakdown of this heading in the consolidated statements of financial position is as follows:

Thousands of Euros	31.12.2018	31.12.2017
Trade receivables (Note 5.a)	5,949,227	5,521,173
Receivables	543,840	735,201
Contract assets (Note 2.a.)	221,477	232,530
Receivables from equity-accounted investees	6,587	9,610
Bad debt provisions	(622,749)	(642,142)
Total (Note 4)	**6,098,382**	**5,856,372**

Generally, the amounts included under this caption on the consolidated statement of financial position do not accrue any interest.

Movement in the impairment allowance in 2018 and 2017 is as follows:

Thousands of Euros	2018	2017
Initial balance	**642,142**	**412,953**
First application of IFRS 9 (Note 2.a.)	31,021	–
Charges	344,868	219,397
Applications	(274,314)	(212,575)
Translation differences	(29,730)	(53,594)
Transfers	852	1,674
Surplus	(92,067)	(5,202)
Modification of the consolidation perimeter (Note 6)	(23)	279,489
Final balance	**622,749**	**642,142**

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Practically all of this provision corresponds to gas and electricity consumers.

19. CASH AND CASH EQUIVALENTS

The breakdown of this heading in the consolidated statements of financial position is as follows:

Thousands of Euros	31.12.2018	31.12.2017
Cash	143,868	188,165
Short-term deposits	2,657,289	3,009,175
Total	**2,801,157**	**3,197,340**

Short-term deposits mature within a period of less than three months and bear market interest rates. There are no restrictions on significant cash withdrawals.

20. EQUITY

Subscribed capital

Movement in 2018 and 2017 in the different items of share capital of IBERDROLA is as follows:

	Date recorded Companies Registry	% Capital	Number of shares	Nominal	Euros
Balance at 01.01.2017		–	**6,362,079,000**	**0.75**	**4,771,559,250**
Free capital increase	25 January 2017	1,539	97,911,000	0.75	73,433,250
Capital reduction	25 May 2017	3,405	(219,990,000)	0.75	(164,992,500)
Free capital increase	21 July 2017	1,242	77,515,000	0.75	58,136,250
Balance at 31.12.2017		–	**6,317,515,000**	**0.75**	**4,738,136,250**
Free capital increase	29 January 2018	1,913	120,859,000	0.75	90,644,250
Capital reduction	22 June 2018	3,081	(198,374,000)	0.75	(148,780,500)
Free capital increase	25 July 2018	2,526	157,629,000	0.75	118,221,750
Balance at 31.12.2018			**6,397,629,000**	**0.75**	**4,798,221,750**

The free capital increases made in 2018 and 2017 correspond to the issues approved by the shareholders at their General Meeting through which the IBERDROLA scrip dividend system is implemented.

Information on the holders of free- allocation rights who accepted IBERDROLA's irrevocable commitment to purchase rights is as follows:

	Free of charges allocation rights		Rights waved [1]
	Number	Thousands of Euros	Number
Free capital increase			
25 January 2017	1,956,083,947	264,071	38
21 July 2017	2,596,794,942	381,729	37
29 January 2018	699,283,602	97,899	30

(1) IBERDROLA has waived its right to certain free allocation rights so that new shares issued are a full figure.

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Additionally, the holders of 58,717,340 shares opted for receiving the interim dividend paid (Euros 0.14 gross per share) amounting to a gross total of Euros 8,220 thousand in interim dividend distributed. As a result, these shareholders have expressly forgone 58,717,340 free allotment rights and therefore 1,276,464 new shares.

Additionally, on 21 June 2018 and 24 May 2017, capital reductions were carried out through the redemption of treasury shares already held, as approved by the shareholders at their General Meeting held on 13 April 2018 and 31 March 2017, respectively, through the amortisation of treasury shares.

There was no movement in IBERDROLA's share capital other than those resulting from the transactions described above, and IBERDROLA has no share capital obligations other than those provided for in the Spanish Companies Act.

IBERDROLA´s shares are listed for trading on the Spanish electronic trading system ("Mercado Continuo Español"), and form part of the IBEX-35 and the European Eurostoxx-50 indexes.

Significant shareholders

Since IBERDROLA's shares are represented by book entries, the exact interest held by its shareholders is unknown. The table below summarises significant direct and indirect interests in the share capital of IBERDROLA at 31 December 2018 and 2017, as well as any financial instruments disclosed by the shareholders in compliance with the Royal Decree 1362/2007 of 19 October 2007. This information is in accordance with filings made by these shareholders in the official registers of the National Securities Market Commission (Comisión Nacional del Mercado de Valores - CNMV) or to the Company itself and its respective annual accounts or press releases, and is presented in the 2018 IBERDROLA Group´s Annual Corporate Governance Report.

Among direct or indirect shareholders with a significant interest, IBERDROLA treats any shareholder who exerts a significant influence as a "significant shareholder" when they i) sit on the board of directors or a similar governing body or ii) they have the possibility of exercising the proportional representation system. Therefore, the Company considers Qatar Investment Authority as a significant shareholder, which is the only shareholder who qualifies as such at 31 December 2018 and 2017.

	% of voting rights 2018				
Holder	Direct	Indirect	Total	Financial instruments 2018	Directors in IBERDROLA 2018
Qatar Investment Authority (1)	–	8.646	8.646	–	–

	% of voting rights 2017				
Holder	Direct	Indirect	Total	Financial instruments 2017	Directors in IBERDROLA 2017
Qatar Investment Authority (1)	–	8.570	8.570	–	–

(1) Parent company of Qatar Holding Luxembourg II, S.A.R.L., direct holder of the investment.

In addition, details of other companies having direct and indirect voting rights greater than 3% of the share capital at 31 December 2018 and 2017 are as follows:

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	% of voting rights 2018			% of voting rights 2017		
Holder	**Direct**	**Indirect**	**Total**	**Direct**	**Indirect**	**Total**
Norges Bank	3.332	–	3.332	3.210	–	3.210
Blackrock, Inc	–	5.131	5.131	–	3.030	3.030
Capital Research and Management Company (CRMC)	–	–	–	–	3.100	3.100

Financial management

The IBERDROLA Group's main financial management objectives are to ensure a solid financial profile, robust solvency ratios, optimisation of the liquidity position and management of financial risks, all the while maintaining a sustainable remuneration policy for its shareholders.

At 31 December 2018 Moody´s, Standard & Poor´s y Fitch's ratings were Baa1, BBB+ and BBB+, respectively.

Leverage ratios at 31 December 2018 and 2017 were as follows:

Thousands of Euros	**31.12.2018**	**31.12.2017**
Financial debt - Loans and borrowings (Note 27)	37,326,472	36,690,498
Securities portfolio having the substance of a financial liability (Note 22)	177,229	47,281
Liability derivatives	486,453	377,398
Gross debt	**37,990,154**	**37,115,177**
Asset derivative	911,966	969,398
Other current loans	77,840	63,970
Cash and cash equivalents (Note 19)	2,801,157	3,197,340
Cash assets	3,790,963	4,230,708
Net debt	**34,199,191**	**32,884,469**
Equity		
Parent company	36,582,199	35,509,260
Non-controlling shareholders	5.668,803	5,671,380
Perpetual subordinated bonds	1,725.552	1,552,546
	43,976,554	**42,733,186**
Leverage	**43.75%**	**43.49%**

Derivative financial instruments detailed in the table above include those relating to financing operations whose breakdown is as follows (Note 28):

	2018					
	Derivative assets			Derivative liabilities		
Thousands of Euros	**Short term**	**Long term**	**Total**	**Short term**	**Long term**	**Total**
Interest rate hedges	29,462	110,135	139,597	3,905	(109,077)	(105,172)
Interest rate hedges	346,919	404,239	751,158	(242,663)	(121,484)	(364,147)
Total hedging derivatives	**376,381**	**514,374**	**890,755**	**(238,758)**	**(230,561)**	**(469,319)**
Interest rate derivatives	4,980	–	4,980	(100)	(34)	(134)
Interest rate derivatives	–	183	183	(377)	(575)	(952)
Treasury shares derivatives	–	16,048	16,048	–	(16,048)	(16,048)
Total non-hedging derivatives	**4,980**	**16,231**	**21,211**	**(477)**	**(16,657)**	**(17,134)**
Total	**381,361**	**530,605**	**911,966**	**(239,235)**	**(247,218)**	**(486,453)**

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	2017					
	Derivative assets			Derivative liabilities		
Thousands of Euros	Short term	Long term	Total	Short term	Long term	Total
Interest rate hedges	42,810	104,531	147,341	31,367	(69,300)	(37,933)
Interest rate hedges	502,059	301,682	803,741	(168,028)	(141,488)	(309,516)
Total hedging derivatives	**544,869**	**406,213**	**951,082**	**(136,661)**	**(210,788)**	**(347,449)**
Interest rate derivatives	3,017	–	3,017	(12,255)	–	(12,255)
Interest rate derivatives	–	2,621	2,621	(596)	(4,420)	(5,016)
Treasury shares derivatives	–	12,678	12,678	–	(12,678)	(12,678)
Total non-hedging derivatives	**3,017**	**15,299**	**18,316**	**(12,851)**	**(17,098)**	**(29,949)**
Total	**547,886**	**421,512**	**969,398**	**(149,512)**	**(227,886)**	**(377,398)**

Powers delegated by the shareholders at their General Meeting

The shareholders at their General Meeting held on 8 April 2016 resolved, under items seven and eight on the agenda, to delegate powers to the board of directors, with express powers of delegation, for a period of five years, to:

- increase share capital in the terms and up to the limits stipulated in Article 297.1 b) of the Spanish Companies Act ("Ley de Sociedades de Capital"), with authorisation to exclude preferential subscription rights, and

- issue bonds or debentures swappable for and/or convertible into shares in the Company or other companies, and warrants on new or existing shares in the Company or other companies, up to a maximum amount of Euros 5,000 million. This authorisation includes the delegation of powers to, where applicable: (i) determine the basis and procedures for conversion, swap or exercise; (ii) increase share capital by the amount required to cover applications for conversion; and (iii) exclude shareholders' preferential subscription rights on the issue.

Both authorisations have a joint limit to a maximum nominal amount of 20% of the share capital.

Legal reserve

Under the Spanish Companies Act, 10% of net profit for each year must be transferred to the legal reserve until the balance of this reserve reaches at least 20% of the share capital.

The legal reserve can only be used to increase share capital provided that the balance left on the reserve is at least equal to 10% of the share capital after the increase. Except for this purpose, until the reserve exceeds 20% of share capital it may only be used to offset losses if no other reserves are available.

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Revaluation reserves

The balance of "Revaluation reserves" arose as a result of the revaluation of property, plant and equipment made by IBERDROLA pursuant to Royal Decree-law 7/1996. This balance can be used, free of tax, to offset losses both prior years' accumulated losses and current year losses or losses which might arise in the future, and to increase share capital. From 1 January 2007, the balance of this reserve can be taken to unrestricted reserves, provided that the monetary surplus has been realised. The surplus will be deemed to have been realised on the portion on which depreciation has been taken for accounting purposes or if the revalued assets have been transferred or derecognised. If the balance of this account is used in any way other than as specified in Royal Decree-law 7/1996, it would be taxable.

Share premium

The Spanish Companies Act expressly permits the use of the share premium account balance to increase capital and does not establish any specific restrictions as to its use.

Other restricted reserves

"Other restricted reserves" in "Equity" on the consolidated statement of financial position includes other restricted reserves set up mainly by IBERDROLA in accordance with article 335.c) of the Spanish Companies Act, arising from the capital reductions carried out in prior years through the redemption of treasury shares. Restricted reserves corresponding to Group companies other than the parent, IBERDROLA, are included under "Retained earnings" of the same heading.

Non-controlling interests

Movement in this heading in 2018 and 2017 is as follows:

Thousands of Euros	AVANGRID subgroup	NEONERGIA subgroup	Other	Total
Balance at 01.01.2017	**3,277,109**	**24,787**	**144,002**	**3,445,898**
Modification of the consolidation perimeter (Note 6)	–	2,320,651	–	2,320,651
Share capital increase	–	318,086	241	318,327
Profit/(Loss) for the year of non-controlling interests	294,822	30,412	8,496	333,730
Other comprehensive income	(2,784)	8,595	135	5,946
Dividends	(89,880)	(2,453)	(8,999)	(101,332)
Translation differences	(412,362)	(142,085)	(1,530)	(555,977)
Transactions with non-controlling interests	–	–	(67,503)	(67,503)
Others	(5,943)	(19,990)	(2,427)	(28,360)
Balance at 31.12.2017	**3,060,962**	**2,538,003**	**72,415**	**5,671,380**
Share capital increase	9,727	128,954	10,571	149,252
Profit for the year transactions with non-controlling interests	99,796	165,979	19,972	285,747
Other comprehensive profit	(12,627)	4,440	255	(7,932)
Dividends	(82,295)	(106,713)	(8,947)	(197,955)
Translation differences	131,673	(325,715)	622	(193,420)
Other	(19,787)	(3,241)	(15,241)	(38,269)
Balance at 31.12.2018	**3,187,449**	**2,401,707**	**79,647**	**5,668,803**

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In March 2018 the subsidiary company Neonergia, S.A., resolved to increase share capital in BRL 999,999,963, taking into consideration the percentage of ownership of its shareholders, resulting in a payment of Euros 115,795 thousand in "Equity in non-controlling interests" in the consolidated financial statement.

On 27 December 2017, NEOENERGIA approved a capital increase of BRL 2,585 thousand (Euros 659,175 thousand). The IBERDROLA Group subscribed to this capital increase in proportion to its shareholding by means of a cash contribution of Euros 60,062 thousand and the writing-off of receivables from NEOENERGIA totalling Euros 285,643 thousand.

The summarised financial information related to subgroups in which IBERDROLA Group does not have a 100% interest refers to amounts consolidated before intercompany eliminations:

	AVANGRID Subgroup		NEONERGIA Subgroup	
Thousands of Euros	**31.12.2018**	**31.12.2017**	**31.12.2018**	**31.12.2017**
Current assets	1,271,334	1,452,916	2,595,495	2,772,747
Non-current assets	32,254,086	30,197,275	9,256,051	9,769,105
Total assets	**33,525,420**	**31,650,191**	**11,851,546**	**12,541,852**
Current Liabilities	2,754,223	2,647,748	1,794,650	2,929,339
Non-Current Liabilities	13,706,546	12,620,537	5,129,099	4,484,977
Total assets	**16,460,769**	**15,268,285**	**6,923,749**	**7,414,316**
Gross operating profit (EBITDA)	1,925,397	1,834,662	1,143,272	577,588
Valuation adjustments to trade	(906,613)	(59,248)	(63,731)	(13,447)
Amortisations, depreciation and provisions	(72,393)	(1,909,196)	(425,225)	(235,569)
Operating profit (EBITDA)	7,519	(29,207)	11,301	(9,160)
Financial result	(201,618)	(172,378)	(268,214)	(171,945)
Non-current asset profit/(loss)	(34,794)	1,006	893	44,098
Income tax	(186,914)	1,923,433	(60,640)	(43,157)
Non-controlling interests	(2,010)	(1,034)	(165,978)	(30,412)
Net profit for the year	**528,574**	**1,588,038**	**171,678**	**117,996**

Perpetual subordinated bonds

On 27 February 2013, the IBERDROLA Group's perpetual subordinated bonds issue was completed for an amount of Euros 525 million. The issue price was set at 99.472% of the face value, with a fixed annual coupon of 5.75% as from the issue date to 27 February 2018. On 27 February 2018 the IBERDROLA Group exercised its early redemption option on a series of subordinated bonds that it had issued for Euros 525 million. Redemption was at par, as laid down in the terms and conditions attaching to the bonds.

On 22 November 2017, the IBERDROLA Group's perpetual subordinated bonds issue was completed and disbursed, in the amount of Euros 1,000 million. The issue price was set at 100% of the face value, with a fixed annual coupon of 1.875% as from the issue date to 22 May 2023. From the first repricing date on, the coupon will be equal to the applicable five-year swap rate plus a 1.592% annual spread during the following five years, a 1.8492% annual spread during each of the five-year repricing periods beginning on 22 May 2028, 2033 and 2038, and a 2.5992% annual spread during the following five-year repricing periods.

Although these bonds do not have a contractual maturity date, the IBERDROLA Group has the option of redeeming them on 22 May 2023, and from that date on, every five years.

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On 19 March 2018, the IBERDROLA Group's perpetual subordinated bonds issue was completed and disbursed, in the amount of Euros 700 million. The issue price was set at 100% of the face value, with a fixed annual coupon of 2.625% as from the issue date to 26 March 2024. From the first repricing date on, the coupon will be equal to the applicable five-year swap rate plus a 2.061% annual spread during the following five years, a 2.311% annual spread during each of the five-year repricing periods beginning on 26 March 2029, 2034 and 2039, and a 3.061% annual spread during the following five-year repricing periods.

Although these bonds do not have a contractual maturity date, the IBERDROLA Group has the option of redeeming them in advance during the three previous months until (and included) on March 26, 2024, and from that date on, every five years.

The interest accruing on these bonds will not be callable but rather cumulative. However, the IBERDROLA Group will be obligated to settle the interest accrued in the event it distributes dividends.

After analysing the issue conditions, the IBERDROLA Group recognised the cash received with a credit to "Perpetual subordinated bonds" of the equity on the consolidated statement of financial position, as it considers that it does not meet the criteria for classification as a financial liability, given that the IBERDROLA Group does not have a commitment to deliver cash, as the circumstances that would require it to do so - namely distribution of dividends and exercise of its right to redeem the bonds - are fully under its control.

The amount of interests accrued on 31 December 2018 and 2017 whose payment would have taken place if IBERDROLA's profit distribution amounted to Euros 37,569 and 32,242 thousand respectively.

Valuation adjustments

The change in this reserve arising from valuation adjustments to available-for-sale assets and derivatives designated as cash flow hedges at 31 December 2018 and 2017 is as follows:

Thousands of Euros	01.01.2017	Change in fair value and other	Allocation to the values of hedged assets	Amounts allocated to income	31.12.2017	First application of IFRS 9 (Note 2.a.)	Change in fair value and other	Allocation to the values of hedged assets	Amounts allocated to income	31.12.2018
Valuation adjustments for equity-accounted investees (net of tax):	**2,959**	**10,442**	**–**	**16**	**13,417**	**–**	**(11,045)**	**–**	**14**	**2,386**
Available-for-sale assets (Note 2.a.)	**38**	**577**			615	(615)				
	38	**577**	**–**	**–**	**615**	**(615)**	**–**	**–**	**–**	**–**
Cash flow hedges (Note 2.a.):										
Interest rate swaps	(461,611)	51,156	–	51,561	(358,894)	–	(64,580)	–	63,389	(360,085)
Collars	(4,250)	(130)	–	128	(4,252)	–	(1,499)	–	–	(5,751)
Derivatives on commodities	117,606	88,042	–	31,070	236,718	–	199,105	–	(207,039)	228,784
Exchange insurances	133,550	(46,442)	(24,965)	(13,950)	48,193	–	39,424	(1,138)	5,125	91,604
	(214,705)	**92,626**	**(24,965)**	**68,809**	**(78,235)**	**–**	**172,450**	**(1,138)**	**(138,525)**	**(45,448)**
Hedge costs	**–**	**–**	**–**	**–**	**–**	**2,069**	**(86,950)**	**–**	**87,991**	**3,110**
Tax effect on available-for-sale assets and cash flow hedges	**62,314**	**(22,220)**	**4,787**	**(22,932)**	**21,949**	**(346)**	**(17,756)**	**170**	**3,739**	**7,756**
Total	**(149,394)**	**81,425**	**(20,178)**	**45,893**	**(42,254)**	**1,108**	**56,699**	**(968)**	**(46,781)**	**(32,196)**

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Treasury shares

The IBERDROLA Group buys and sells treasury shares in accordance with the prevailing law and the resolutions of the General Shareholders' Meeting. Such transactions include sale and purchase of company shares and of derivative instruments having company shares as the underlying asset.

At 31 December 2018 y 2017 the balances of the various instruments are as follows:

	31.12.2018		31.12.2017	
	No. of shares	Thousands of Euros	No. of shares	Thousands of Euros
Treasury shares of IBERDROLA	135,985,344	873,065	75,710,149	507,175
Treasury shares of SCOTTISH POWER	1,050,639	8,076	1,156,863	8,417
Swaps over treasury shares	11,810,088	77,599	6,000,000	41,646
Accumulators (exercised shares)	209,361	1,378	1,835,379	11,561
Accumulators (potential shares)	7,613,376	50,230	4,592,392	28,998
Total	**156,668,808**	**1,010,348**	**89,294,783**	**597,797**

(a) Treasury shares

Movement in 2018 and 2017 in the treasury shares of IBERDROLA and SCOTTISH POWER (Note 3.m) is as follows:

	IBERDROLA		SCOTTISH POWER	
	No. of shares	Thousands of Euros	No. of shares	Thousands of Euros
Balance at 01.01.2017	**151,224,777**	**868,936**	**1,374,405**	**9,580**
Additions	154,508,438	1,002,731	318,172	2,159
Share capital decrease	(219,990,000)	(1,280,176)	–	–
IBERDROLA scrip dividend (1)	1,896,638	–	95,524	–
IBERDROLA scrip dividend (2)	–	(9,379)	–	–
Disposals (3)	(11,929,704)	(74,937)	(631,238)	(3,322)
Balance at 31.12.2017	**75,710,149**	**507,175**	**1,156,863**	**8,417**
Additions	266,442,793	1,672,087	362,108	2,393
Share capital decrease	(198,374,000)	(1,245,420)	–	–
IBERDROLA scrip dividend (1)	5,117	–	144,747	–
IBERDROLA scrip dividend (2)	–	(11,044)	–	–
Disposals (3)	(7,798,715)	(49,733)	(613,079)	(2,734)
Balance at 31.12.2018	**135,985,344**	**873,065**	**1,050,639**	**8,076**

(1) Shares received
(2) Free allocation rights disposed
(3) Includes awards to employees

SCOTTISH POWER's Treasury Shares correspond to the matching shares held by the trust in the share plan called Share Incentive Plan.

During 2018 and 2017, treasury shares held by the IBERDROLA Group were below the legal limit.

(b) Derivatives settled by physical delivery

The IBERDROLA Group recognises these transactions directly in equity under "Treasury shares" and records the obligation to buy back the shares under "Loans and borrowingss and other financial liabilities – loans and others" on the liabilities side of the consolidated statement of financial position.

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- Total return swaps

The IBERDROLA Group has arranged four swaps on treasury shares with the following features: during the life of the contract it will pay the financial entity 3-month Euribor plus a spread on the notional and will receive the dividends corresponding to the shares paid out to the financial entity. On the expiration date IBERDROLA will buy the shares at the strike price set out in the contract.

The characteristics of these contracts at 31 December 2018 and 2017 are as follows:

	No. of shares as of 31.12.2018	Strike price	Maturity date	Interest rate	2018 thousands of Euros
Total Return Swap	5,810,088	6.188	24/07/2019	Euribor 3 months + 0.38%	35,953
Total Return Swap	6,000,000	6.941	25/07/2019	Euribor 3 months + 0.30%	41,646
Total	**11,810,088**				**77,599**

	No. of shares as of 31.12.2017	Strike price	Maturity date	Interest rate	2017 thousands of Euros
Total Return Swap	6,000,000	6.941	24/07/2018	Euribor 3 months + 0.45%	41,646
Total	**6,000,000**				**41,646**

- Treasury share accumulators

The IBERDROLA Group holds several purchase accumulators on treasury shares. These accumulators are obligations to buy in the future, with a notional amount of zero on the start date. The number of shares to be accumulated depends on the market price quoted on a range of observation dates throughout the life of the options – in this case, on a daily basis. A strike price is set, and a knockout level above which the structured product is “knocked out” and shares are no longer accumulated.

The accumulation mechanism is as follows:

- when the spot price is below the strike price, two units of the underlying security are accumulated;
- when the spot price is between the strike price and the knockout level, only one unit of the underlying security is accumulated; and
- when the spot price is above the knockout level, no shares are accumulated.

The characteristics of these contracts at 31 December 2018 and 2017 are as follows:

2018	No. of shares	Average Price of the period	Maturity date	Thousands of Euros
Exercised shares	209,361	6.5819	14/02/2019	1,378
Potential maximum (1)	7,613,376	6.5976	14/02/2019	50,230

2017	No. of shares	Average Price of the period	Maturity date	Thousands of Euros
Exercised shares	1,835,379	6.2990	18/07/2018	11,561
Potential maximum (1)	4,592,392	6.3144	10/01/2018 -	28,998

(1) Maximum number of additional shares that could be accumulated according to the described mechanism until the maturity of the structures (assuming that the cash price during the remaining life of the structure is always below the strike price).

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Distribution of dividends with charge to 2018 results

IBERDROLA´s board of directors has agreed to propose at the General Shareholders' Meeting, the distribution, chargeable to the results of 2018 and the retained earnings from previous years, a gross dividend whose gross amount will be the same as the following amounts:

(a) the Euros 131,426 thousand were paid as the interim dividend for 2018 on 5 February 2019 to the 870,368,973 IBERDROLA shares that opted for receiving their remuneration in cash within the scope of the second settlement of the IBERDROLA scrip dividend for 2018 in the amount of 0.151 Euros per share, and

(b) the amount to be determined by multiplying:

i) The gross amount per share, as additional dividend payment for 2018, will be distributed by the Company as part of the first settlement of the IBERDROLA scrip dividend optional dividend for 2019; by

ii) The total number of shares the holders may have opted for receiving as complementary dividend as part of the first settlement of the IBERDROLA scrip dividend optional dividend.

On the date of authorisation of these annual accounts, it is not possible to determine the amount of the complimentary dividend or, consequently, the amount of the dividend cannot be determined.

The payment of the complimentary dividend shall be made together with the execution of the increase in share capital that will be proposed at the General Shareholders' Meeting, to offer the shareholders the possibility of receiving their remuneration in cash (through the payment of the complimentary dividend) or in the free shares of the new issue of the Company (through the aforementioned increase in share capital).

The payment of the complimentary dividend is configured as one of the alternatives that the shareholder may choose when receiving their remuneration within the scope of the first execution of the IBERDROLA scrip dividend corresponding to 2019. As a consequence of the aforementioned, it will be understood that these shareholders who choose to receive their remuneration in cash by means of the complimentary dividend with respect to all or part of their shares, expressly, automatically and irrevocably waive the free allocation rights corresponding to these shares and therefore the possibility of putting them on the market or to receive new free shares corresponding to those free-allocation rights.

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21. LONG-TERM SHARE-BASED COMPENSATION PLANS

21.1 Shared-based compensation plans

2014-2016 Strategic Bonus Programme

On 25 April 2017 the board of directors, on the recommendation of the Appointments and Remuneration Committee, decided to pay the 2014-2016 Strategic Bonus on determining that 93.20% of the objectives had been met. By virtue thereof, having confirmed the bases underlying the delivery of the shares in the first settlement, in the second half of 2017 the first annual payments were made in the form of 2,497,353 shares. These shares included those delivered to executive directors (Note 47) and to senior management (Note 49).

Moreover, as a result of UIL´s integration, the 2014-2016 Strategic Bonus for AVANGRID´s company directors will be liquidated in cash for the accrued amount for 2015 and 2014, and was replaced in 2016 by a new one, which will be referenced to AVANGRID´s shares. The second and last settlement as scheduled was made in the first quarter of 2018

Furthermore and arising from the corporate restructuring operation in Brazil, the second phase of the liquidation of the 2014-2016 Strategic Bond corresponding to the 14 beneficiaries of the ELEKTRO Group was settled in cash in the first half of 2018. The amount corresponding to the cash settlement of the second phase rose to Euros 1,037 million.

Strategic bonus 2017-2019

The General Shareholders Meeting of 31 March 2017 approved under agenda item seven on the establishment of a Strategic Bonus for the executive directors, senior executives and other executive personnel of IBERDROLA and its subsidiaries (up to a maximum of 300 beneficiaries), tied to the IBERDROLA Group's performance in relation to certain metrics throughout the assessment period, from 2017 to 2019:

The payment period for the scheme will run from 2020 to 2022. Payments will be made in the form of shares on a deferred basis in those three years.

The maximum number of shares to be delivered to the beneficiaries of the *2017-2019 Strategic Bonus* will be 14,000,000 shares, equal to 0.22% of the share capital at the time this resolution is adopted. A maximum of 2,500,000 shares will be delivered to the executive directors in compliance with the terms and conditions of the scheme. As of 31 December 2018, 11,685,416 shares were issued as follows:

	No. Of shares
Balance 01.01.2017	**–**
Additions	12,535,000
Balance 31.12.2017	**12,535,000**
Additions	400,000
Cancelled	(1,249,584)
Balance 31.12.2018	**11,685,416**

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Also stemming from the corporate restructuring operation in Brazil, at its 19 December 2017 meeting, the IBERDROLA S.A. Board of Directors approved authorisation of the offer of the option to receive a cash sum as a partial early settlement of the programme to the 17 beneficiaries of the ELEKTRO Group. In the first half of 2018, the 17 beneficiaries of the ELEKTRO Group received a proportional part corresponding to the time between the date on which the remuneration began and 31 December 2017, the date of the partial early termination, after assessment by the Board of Directors of the level compliance with the targets that link accrual to the date of partial early termination. The amount corresponding to the partial early settlement rose to Euros 1,527 thousand.

2016-2019 long-term incentives AVANGRID shares bonus

The General Shareholders Meeting of 16 June 2016 approved under agenda item seven on the establishment of a Strategic Bonus for the executive directors, senior executives and other executive personnel of IBERDROLA and its subsidiaries (80 beneficiaries), tied to the IBERDROLA Group's performance in relation to certain metrics throughout the assessment period, from 2016 to 2019.

The maximum number of gross shares to be delivered to the group of the Bonus beneficiaries will be 2,500,000 shares, of which 1,199,596 shares were delivered at 31 December 2018.

The period 2020-2022 will be the settlement period, to be materialised in the deferred issue of shared during those three years.

Restrictive AVANGRID shares scheme

Under the scope of the Avangrid Omnibus Plan, a general plan establishing the governance framework for executive remuneration in cash and shares, 68,000 restricted shares were assigned to a number of executives in 2018. The granting of these shares is dependent on the eligible executives remaining in the company for two years after their assignment.

In relation to the bonuses described above, whose settlement will be in shares, the detail of the transactions under "Other reserves" on the consolidated financial statement is as follows:

Thousands of Euros	Strategic bonus 14-16	Strategic bonus 17-19	AVANGRID's 16-19 Strategic Bonus Programme (*)	Restrictive shares programme (*)	Total
Balance at 01.01.2017	**44,083**	**-**	**2,152**	**-**	**46,235**
Charges	23,162	11,884	4,569	-	39,615
Payment in shares	(27,125)	-	-	-	(27,125)
Payments in cash derecognition	(4,479)	-	-	-	(4,479)
Balance at 31.12.2017	**35,641**	**11,884**	**6,721**	**-**	**54,246**
Charges	9,095	26,718	(3,191)	765	33,387
Payment in shares	(21,699)	-	-	-	(21,699)
Payments in cash derecognition	(3,709)	-	-	-	(3,709)
Transfers	(1,247)	(1,581)	2	-	(2,826)
Balance at 31.12.2018	**18,081**	**37,021**	**3,532**	**765**	**59,399**

(*) Presented by 100%. The minority own 18,5%

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SCOTTISH POWER share-based incentive plan

Lastly, SCOTTISH POWER has share-based plans for its employees. There are two types of plans:

- Sharesave Schemes: savings plans in which employees decide the amount they want to contribute to the plan (between GBP 5 and GBP 250 on a monthly basis) and this is deducted monthly from their salary. At the end of a three or five year saving period, as applicable to each plan, employees may use the money saved to buy IBERDROLA shares at a discounted option price set at the beginning of the plan or to receive the amount saved in cash.

  The fair value of the employee's share purchase options is determined at the start of the plan, and is registered in the consolidated income statement over the plan's consolidation period (three or five years) with a credit to equity. The "Personnel expenses" heading in the 2017 and 2018 consolidated income statements includes Euros 700 and 904 thousand respectively for this concept, which have been taken to “Accumulated profit and remaining”, in the consolidated financial statement of changes in equity.

  Additionally, in 2018 and 2017 payments for options were made in the amounts of Euros 3,118 and Euros 175 thousand, respectively.

  The number of transactions of stock options are as follows:

	Number of accounts	Number of shares
Balance at 01.01.2017	**2,616**	**5,531,681**
Exercised	(90)	(125,025)
Derecognised	(117)	(279,308)
Balance at 31.12.2017	**2,409**	**5,127,348**
Exercised	(1,090)	(1,414,705)
Derecognised	(59)	(138,761)
Balance at 31.12.2018	**1,260**	**3,573,882**

- Share Incentive Plan: this plan has an option for purchasing shares with tax incentives plus a contribution from the company. The employees decide on the amount they wish to contribute, which is deducted from their monthly salary (the maximum contribution allowed by the law in the United Kingdom is GBP 125 on a monthly basis). The shares purchased with this contribution are called partnership shares. Additionally, SCOTTISH POWER complements the employee´s contribution to a maximum of GBP 50 monthly. The shares purchased with the company´s contribution are called matching shares.

  The contributions, both from the company and the employees, are contributed to a trust which buys the shares, and they are held in this trust until withdrawn by the employees. All shares are purchased in the market at the monthly market price.

  The partnership shares are owned by the employees who purchased them with their own money, however, the shares acquired with the contribution from the company (matching shares) are not consolidated until three years after the date of purchase. The matching shares acquired by the trust at 31 December 2018 and 2017 amount to 1,149,547 and 1,326,848 shares, respectively.

  The contributions of the Company are made in cash on a monthly basis and are charged to the income statement during the three years the employee must remain in the company in order to be entitled to these shares.

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"Personnel expenses" in the 2018 and 2017 consolidated income statements amounted to Euros 2,223 thousand and Euros 2,257 thousand, respectively for this concept, which have been recognised under “Other reserves” on the consolidated finance income statement.

Furthermore, 2018 and 2017 saw transfers to participants for exercised options totalling Euros 2,734 million and Euros 3,322 million , respectively.

21.2 Cash-based compensation plans

The following outlines long-term compensation plans with cash settlements.

2014-2016 Strategic bonus - IBERDROLA Distribución Eléctrica

The board of directors of IBERDROLA Distribución Eléctrica, on the recommendation of the Appointments and Remuneration Committee, decided to pay the 2014-2016 Strategic Bonus on determining that 93.20% of the objectives had been met. In the first half of 2018 the second of the three annual payments was made.

The second of the three settlements in cash resulted in the Euros 1,262 thousand being paid.

2017-2019 Strategic bonus - IBERDROLA Distribución Eléctrica

At its 13 December 2017 meeting, the IBERDROLA Distribución Eléctrica S.A. (Sociedad Unipersonal) board of directors approved a strategic bond payable to the Company's executive officers and directors undertaking regulated activities in Spain who are deemed to be "Persons Responsible for the Management of Regulated Companies", as stipulated in the "Code for the Separation of Activities of Companies in the IBERDROLA Group with Regulated Activities in Spain", or who, due to their position within the company or their responsibilities, are deemed to have decisively contributed to the creation of value (to a maximum of 12 beneficiaries).

This strategic bond is linked to the performance of IBERDROLA Distribución Eléctrica S.A. (Sociedad Unipersonal) with regard to a series of parameters over the period of evaluation from 2017 to 2019. The payment period for the scheme will run from 2020 to 2022. Payments will be made in the form of shares on a deferred basis in those three years.

Long-term NEOENERGIA 2018-2019 incentive

At its 27 September 2017 meeting, NEOENERGIA's Board of Directors approved a long-term incentive programme aimed at executives and employees who, through their position or level of responsibility in the NEOENERGIA Group, are felt to have contributed decisively to the creation of value (to a maximum of 100 beneficiaries), an initiative costing 50 million Brazilian reals.

This long-term incentive is linked to the NEOENERGIA Group's performance with regard to a series of parameters over the period of evaluation from 2018 to 2019.

The payment period for the scheme will run from 2020 to 2022. Payments will be made in the form of shares on a deferred basis in those three years.

"Personnel expenses" on the consolidated income statement from 2018 and 2017 includes a charge of Euros 4,072 and 1,636 thousand respectively corresponding to the amount accrued for this incentive plan has been recorded with charge and debit to the sub-headings "Other Provisions" of the consolidated statement of financial position.

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The movement of the bonds described above which are settled in cash is as follows:

Thousands of Euros	Strategic bonus 14-16	Strategic bonus 17-19	Bonus paid in cash Brazil	Bonus paid in cash USA	Total
Balance at 01.01.2017	**2,126**	**-**	**-**	**9,159**	**11,285**
Charges	2,096	698	-	1,278	4,072
Payments	(1,578)	-	-	(4,859)	(6,437)
Payments for deregistration	-	-	-	-	-
Translation differences	-	-	-	(967)	(967)
Balance at 31.12.2017	**2,644**	**698**	**-**	**4,611**	**7,953**
Charges	441	1,525	-	(330)	1,636
Payments	(1,262)	-	-	(4,204)	(5,466)
Disposal payments	(621)	-	-	-	(621)
Transfers	-	-	2,827	-	2,827
Translation differences	-	-	-	(77)	(77)
Balance at 31.12.2018	**1,202**	**2,223**	**2,827**	**-**	**6,252**

(*) Filed for 100%

22. SECURITIES PORTFOLIO HAVING THE SUBSTANCE OF A FINANCIAL LIABILITY

In the United States, the IBERDROLA Group has signed several contracts that have brought in third parties as non-controlling interests in some of its wind farms in exchange for cash and other financial assets primarily.

The main characteristics of these contracts are as follows:

- Regardless of the interest acquired by the non-controlling interests, the IBERDROLA Group retains the control and management of the wind farms; accordingly they are fully consolidated in these consolidated annual accounts.

- The non-controlling interests have the right to a substantial portion of the profits and tax credits generated by these wind farms up to the return level established at the beginning of the contract.

- The non-controlling interests remain in the equity of the wind farms until they achieve the stipulated returns.

- Once these returns have been obtained, the non-controlling interests must renounce their stake in the wind farms, thus losing their right to the profits and tax credits generated.

- Whether or not the non-controlling interests of the IBERDROLA Group obtain the agreed upon returns depends on the economic performance of the wind farms. Although the IBERDROLA Group is obliged to operate and maintain these facilities in an efficient manner and to take out the appropriate insurance policies, it is not obliged to deliver cash to the non-controlling interests over and above the aforementioned profits and tax credits.

Following an analysis of the economic substance of these agreements, the IBERDROLA Group classifies the consideration received at the outset of the transaction under “Non-current securities portfolio having the substance of a financial liability” and “Current securities portfolio having the substance of a financial liability” in the consolidated statement of financial position. Subsequently, this consideration is measured at amortised cost.

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The amount at 31 December 2018 and 2017 accrues an average interest rate in US dollars of 7.05% and 8.63%, respectively.

The change in this heading of the consolidated statements of financial position for 2018 and 2017 is as follows:

Thousands of Euros	2018	2017
Initial balance	**47,281**	**137,054**
finance cost accrued in the year	12,026	6,230
Payments	(65,658)	(76,427)
Translation differences	6,876	(13,294)
Derecognitions	–	(6,282)
Additions	176,704	–
Final balance	**177,229**	**47,281**

In May 2018 the Group executed a new contract through its US subsidiary El Cabo Wind LLC.

23. CAPITAL GRANTS

The change in this heading of the consolidated statements of financial position for 2018 and 2017 is as follows (Note 3.n):

Thousands of Euros	Capital grants	Investment Tax Credits	Total
Balance at 01.01.2017	**297,695**	**1,404,236**	**1,701,931**
Additions	10,385	29,568	39,953
Derecognitions	(92)	(1,423)	(1,515)
Translation differences	(9,392)	(174,808)	(184,200)
Allocation to the income statement (Note 3.n)	(16,200)	(58,635)	(74,835)
Modification of the consolidation perimeter (Note 6)	(223)	–	(223)
Balance at 31.12.2017	**282,173**	**1,198,938**	**1,481,111**
Additions	6,184	7,856	14,040
Derecognitions	(147)	–	(147)
Transfers	2,252	–	2,252
Translation differences	2,864	52,683	55,547
Allocation to the income statement (Note 3.n)	(17,121)	(57,516)	(74,637)
Modification of the consolidation perimeter (Note 6)	(238)	–	(238)
Balance at 31.12.2018	**275,967**	**1,201,961**	**1,477,928**

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24. FACILITIES TRANSFERRED OR FINANCED BY THIRD PARTIES

The change in this heading of the consolidated statements of financial position for 2018 and 2017 is as follows (Note 3.o):

Thousands of Euros	Transfer of assets from third parties	Assets financed from third parties	Total
Balance at 01.01.2017	**2,629,249**	**2,094,339**	**4,723,588**
Additions	92,921	228,651	321,572
Derecognitions	(2)	(8,213)	(8,215)
Translation differences	(4,381)	(79,672)	(84,053)
Allocation to the income statement (Note 3.n)	(116,001)	(73,743)	(189,744)
Balance at 31.12.2017	**2,601,786**	**2,161,362**	**4,763,148**
Additions	88,873	170,419	259,292
Derecognitions	(9)	(769)	(778)
Transfers	(1,018)	(1,234)	(2,252)
Translation differences	(266)	1,172	906
Allocation to the income statement (Note 3.n)	(118,321)	(78,599)	(196,920)
Balance at 31.12.2018	**2,571,045**	**2,252,351**	**4,823,396**

25. PROVISION FOR PENSIONS AND SIMILAR OBLIGATIONS

The breakdown of this heading in the consolidated statements of financial position is as follows:

Thousands of Euros	31.12.2018	31.12.2017
Defined benefit plans (Spain)	372,553	402,883
Long-service bonuses and other long-term benefits (Spain)	40,796	42,539
Defined benefit plans (United Kingdom)	569,204	637,521
Defined benefit plans (United States)	1,006,606	918,186
Defined benefit plans (Brazil)	210,432	248,537
Defined benefit plans and other long term benefits (Spain and other countries)	55,542	58,376
Restructuring plans	187,773	266,027
Total	**2.442.906**	**2,574,069**

Each year IBERDROLA estimates, in accordance with an independent actuarial report, the payments for pensions and similar benefits that it will have to meet in the coming year. These are recognised as current liabilities in the balance sheet.

25.a) Defined benefit plans and other non-current employee benefits

Spain

IBERDROLA Group's main commitments to providing defined benefits for its employees, in addition to those provided by Social Security, are as follows:

- Employees subject to IBERDROLA Group's collective labour agreement, who retired before 9 October 1996, are covered by a defined benefit retirement pension scheme, the actuarial value of which was fully externalised at 31 December 2018 and 2017.

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IBERDROLA Group has no liability of any kind for this group and has no claim on any potential excess generated in the assets of this plan over the defined benefits.

- Also, in relation to serving employees and employees who have retired after 1996 and are subjected to IBERDROLA Group's Collective Labour Agreement and members/beneficiaries of the IBERDROLA Pension Plan, risk benefits (e.g. widowhood, permanent disability or orphanage) which guarantee a defined benefit at the time the event giving rise to such benefits occurs, are instrumented through a pluriannual insurance policy. The guaranteed benefit consists of the difference between the present actuarial value of the above mentioned defined benefit at the time of the event and the member's vested rights at the time of the event, if the latter were lower. The premiums on the insurance policy for 2018 and 2017 are recognised under "Personnel expenses" in the income statement and came to Euros 10,621 thousand and Euros 10.065 thousand, respectively.

- In addition, IBERDROLA maintains a provision against certain commitments to its employees other than those indicated above, which are covered by internal funds linked to social security benefits, consisting mainly of free electricity supply, with an annual consumption limit, for retired employees and other long term benefits, primarily consisting of long-service bonus for active employees at 10, 20 and 30 years of service.

United Kingdom (SCOTTISH POWER)

SCOTTISH POWER employees residing in the United Kingdom, hired before 1 April 2006, are covered by several defined benefit retirement plans: ScottishPower Pension Scheme (SPPS) and Manweb Group of Electricity Supply Pension Scheme (Manweb).

One-off capital sums have been offered to pensioners and deferred beneficiaries, reducing the defined benefit burden.

USA (AVANGRID)

The former employees of SCOTTISH POWER that now form part of the workforce of the IBERDROLA Group in the United States, most of them belonging to the workforce of the Avangrid Renewables Holding Inc. (hereinafter, ARHI), are members of various post-employment plans (Supplemental Executive Retirement Plan, IBERDROLA Renewables Retiree Benefits Plan and IBERDROLA Renewables Retirement Plan).

With effect from 30 April 2011, a change affecting all plan participants occurred in the IBERDROLA Renewables Retiree Benefits Plan, whereby the benefit receivable at retirement age was set at the amount accrued until 30 April 2011 and the plan became a defined-contribution scheme from that date onwards.

On the other hand, the employees of the AVANGRID NETWORKS Group are affiliated to various defined benefit retirement pension plans (Qualified Pension Plans, Non Qualified Pension Plans), disability benefit plans (Long Term Disability Plans) and health insurance plans (Postretirement Welfare Plans).

UIL Group´s employees were covered by several defined benefit retirement plans (Qualified Pension Plans, Non Qualified Pension Plans) and health plans (Postretirement Welfare Plans).

Defined benefit pension schemes are closed to new entrants and wherever possible, only past service is recognised for those remaining.

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One-off capital sums have been offered to pensioners and deferred beneficiaries, reducing the defined benefit burden.

Brazil

Such as is indicated in Notes 2.c. 6, on 24 August 2017 NEOENERGIA was acquired through the incorporation of ELEKTRO. ELEKTRO, CELPE, COELBA and COSERN employees are covered by several defined benefit retirement plans. COELBA employees are covered by a post-employment health plan too.

Defined benefit pension schemes are closed to new entrants.

Other commitments with employees

In addition, some IBERDROLA Group companies have provisions to meet certain commitments with their employees, other than those described above, which are met by in-house pension funds.

The most significant information related to plans is as follows:

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					United States						Brazil							
	Spain		United Kingdom		ARHI		UIL		AVANGRID NETWORKS		ELEKTRO (1)		NEOENERGIA (2)		Other		Total	
Thousands of Euros	31.12.2018	31.12.2017	31.12.2018	31.12.2017	31.12.2018	31.12.2017	31.12.2018	31.12.2017	31.12.2018	31.12.2017	31.12.2018	31.12.2017	31.12.2018	31.12.2017	31.12.2018	31.12.2017	31.12.2018	31.12.2017
Present value of the obligation	(413,349)	(445,422)	(5,463,614)	(6,189,753)	(61,192)	(63,425)	(1,004,348)	(1,015,714)	(2,307,689)	(2,389,049)	(299,674)	(303,237)	(481,917)	(542,248)	(55,542)	(58,376)	(10,087,325)	(11,007,224)
Fair value of plan assets	–	–	4,894,410	5,552,232	30,514	34,622	609,765	661,511	1,726,344	1,853,869	330,695	343,432	331,671	348,118	–	–	7,923,399	8,793,784
Net asset / (Net provision)	**(413,349)**	**(445,422)**	**(569,204)**	**(637,521)**	**(30,678)**	**(28,803)**	**(394,583)**	**(354,203)**	**(581,345)**	**(535,180)**	**31,021**	**40,195**	**(150,246)**	**(194,130)**	**(55,542)**	**(58,376)**	**(2,163,926)**	**(2,213,440)**
Amounts recognised in the consolidated statement of financial position:																		
Provision for pensions and similar obligations	(413,349)	(445,422)	(569,204)	(637,521)	(30,678)	(28,803)	(394,583)	(354,203)	(581,345)	(535,180)	–	–	(210,432)	(248,537)	(55,542)	(58,376)	(2,255,133)	(2,308,042)
Assets for pensions and similar obligations (Note 13.b)	–	–	–	–	–	–	–	–	–	–	–	–	7,007	3,326	–	–	7,007	3,326
Net asset / (Net provision)	**(413,349)**	**(445,422)**	**(569,204)**	**(637,521)**	**(30,678)**	**(28,803)**	**(394,583)**	**(354,203)**	**(581,345)**	**(535,180)**	**–**	**–**	**(203,425)**	**(245,211)**	**(55,542)**	**(58,376)**	**(2,248,126)**	**(2,304,716)**

(1) These amounts have not been recognised in the consolidated statement of financial position at 31 December 2018 and 2017, respectively, since the requirements set forth in the current legislation for their accounting treatment are not met.

(2) At 31 December 2018 and 2017 a surplus of Euros 53,179 and 51,081 thousand is not recognised in application of the legistation IFRIC14:"IAS 19 - The limit on a defined benefit asset, minimum funding requirements and their interaction".

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The changes in provisions for the commitments detailed in the previous section in 2018 and 2017 is as follows:

	Spain			United States		Brazil [1]				
Thousands of Euros	Electricity tariff	long-service bonus	United Kingdom	ARHI	UIL	AVANGRID NETWORKS	ELEKTRO	NEOENERGÍA	Other	Total
Balance at 01.01.2017	**510,299**	**43,062**	**6,261,592**	**72,785**	**1,126,064**	**2,629,032**	**336,323**	**–**	**67,409**	**11,046,566**
Modification of the consolidation perimeter (Note 6)	–	–	–	–	–	–	–	584,319	–	**584,319**
Normal cost (Note 37)	8,117	3,557	66,610	571	15,967	33,062	2,098	500	2,665	**133,147**
Cost for past services (Note 37)	–	–	35,474	–	254	112	–	–	79	**35,919**
Other costs recognised under "Personnel expenses" (Note 37)	–	–	–	–	–	–	–	–	(33)	**(33)**
Finance cost (Note 43).	7,619	339	171,036	2,431	42,817	96,178	34,086	19,747	2,046	**376,299**
Actuarial gains and losses										
To profit (Note 37)	2,878	551	–	–	–	–	–	–	–	**3,429**
To reserves	(113,255)	–	351,828	2,626	27,943	134,144	(5,791)	(23,912)	(2,080)	**371,503**
Members contributions	–	–	8,558	–	–	–	1,056	282	–	**9,896**
Payments	(12,775)	(4,970)	(458,571)	(3,062)	(54,219)	(168,499)	(18,969)	(15,187)	(7,171)	**(743,423)**
Translation differences	–	–	(246,774)	(9,273)	(143,112)	(334,980)	(45,566)	(23,501)	(4,539)	**(807,745)**
Liabilities held for sale (Note 41)	–	–	–	(2,653)	–	–	–	–	–	**(2,653)**
Balance at 31.12.2017	**402,883**	**42,539**	**6,189,753**	**63,425**	**1,015,714**	**2,389,049**	**303,237**	**542,248**	**58,376**	**11,007,224**
Modification of the consolidation perimeter (Note 6)	–	–	(64,774)	–	–	–	–	–	–	**(64,774)**
Normal cost (Note 37)	5,741	3,627	69,226	581	13,909	30,204	1,434	626	6,247	**131,595**
Cost for past services (Note 37)	–	–	(7,662)	(153)	190	(2,656)	–	(2,531)	(6,047)	**(18,859)**
Finance cost (Note 43).	6,518	330	154,304	2,433	37,648	84,065	27,128	47,702	2,033	**362,161**
Actuarial gains and losses										
To profit (Note 37)	537	366	–	–	–	–	–	–	–	**903**
To reserves	(26,706)	–	(289,375)	(5,197)	(45,482)	(126,314)	21,197	8,045	450	**(463,382)**
Members contributions	–	–	7,574	–	–	–	925	534	–	**9,033**
Payments	(16,420)	(6,066)	(505,101)	(5,268)	(61,657)	(168,407)	(15,966)	(50,718)	(5,553)	**(835,156)**
Translation differences	–	–	(90,331)	5,371	44,026	101,748	(38,281)	(63,989)	36	**(41,420)**
Balance at 31.12.2018	**372,553**	**40,796**	**5,463,614**	**61,192**	**1,004,348**	**2,307,689**	**299,674**	**481,917**	**55,542**	**10,087,325**

(1) As the surplus was not recognised, the actuarial differences recognised in reserves were adjusted upwards in 2018 by Euros 4,120 thousand and in 2017 Euros 5,258 thousand in the application of the current legislation IFRIC 14: "IAS 19 - The limit on a defined benefit asset, minimum funding requirements and their interaction". Moreover, in the years 2018 and 2017, and for the same concept, the finance costs recognised were adjusted upwards by Euros 8,334 and 6,526 thousand, respectively.

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The average length at the end of the year of the liability for the employee benefits described previously is:

	Spain			United States			Brazil		
Years	Electricity tariff	long-service bonus	United Kingdom	ARHI	UIL	AVANGRID NETWORKS	ELEKTRO	NEOENERGÍA	Other
Average length	18	8	19	12	12	10	13	11	–

Changes in fair value of the assets linked to 2018 and 2017 are as follows:

		United States			Brazil		
Thousands of Euros	United Kingdom	ARHI	UIL	AVANGRID NETWORKS	ELEKTRO	NEOENERGÍA	Total
Fair Value at 01.01.2017	**5,741,838**	**37,722**	**695,330**	**1,991,669**	**376,175**	**–**	**8,842,734**
Modification of the consolidation perimeter (Note 6)	–	–	–	–	–	370,102	**370,102**
Revaluation (Note 43)	160,311	1,221	26,101	73,009	38,353	13,839	**312,834**
Actuarial gains and losses to reserves	97,442	3,566	67,827	179,109	(2,734)	(8,293)	**336,917**
Company contributions	230,710	–	9,304	19,406	902	7,886	**268,208**
Members contributions	8,558	–	–	–	1,056	282	**9,896**
Payments	(461,680)	(3,062)	(46,827)	(153,102)	(18,969)	(15,187)	**(698,827)**
Translation differences	(224,947)	(4,825)	(90,224)	(256,222)	(51,351)	(20,511)	**(648,080)**
Fair Value at 31.12.2017	**5,552,232**	**34,622**	**661,511**	**1,853,869**	**343,432**	**348,118**	**8,793,784**
Modification of the consolidation perimeter (Note 6)	(59,348)	–	–	–	–	–	**(59,348)**
Revaluation (Note 43)	140,690	1,254	24,325	65,498	30,922	30,698	**293,387**
Actuarial gains and losses to reserves	(343,877)	(3,070)	(61,367)	(146,210)	13,659	24,529	**(516,336)**
Company contributions	183,149	1,609	19,860	45,018	738	21,972	**272,346**
Members contributions	7,574	–	–	–	925	534	**9,033**
Payments	(505,101)	(5,268)	(61,657)	(168,406)	(15,966)	(50,718)	**(807,116)**
Translation differences	(80,909)	1,367	27,093	76,575	(43,015)	(43,462)	**(62,351)**
Fair Value at 31.12.2018	**4,894,410**	**30,514**	**609,765**	**1,726,344**	**330,695**	**331,671**	**7,923,399**

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The main assumptions applied in the actuarial reports that determined the provisions needed to meet the abovementioned commitments at 31 December 2018 and 2017 are as follows:

2018	Discount rate	Wage increase	Price kWh (euros)	Inflation	Survivorship table	Health insurance cost Pre-Medicare/Medicare
Spain						
Electricity tariff (1)	1.60%	–	2019 0,12722; 2020 0,13072; 2021 0,12215; 2022 0,12185; […]	–	PERMF 2000P	–
Long-service bonus (1)	0.93%	1.00%	–	–	PERMF 2000P	–
United Kingdom	2.80%	3.76%	–	3.26%	Pre-retirement/Post-retirement Men: 85% AMC00 / 90%S2PMA CMI2017 M (1.25% improvement rate) Women_ 85%AFC00 / 100%S2PFA CMI2017 F (1.25% improvement rate)	-
United States						
ARHI	4.09%	N.A.	–	2.00%	RP-2006 fully generational table using scale MP-2018	Function year RX: 7%(pre-65)/7.75% (post-65) (2019); 6.75%/7.50%(2020) ; [...] : 4,50%/4,50% (2029 onwards)
UIL	4.09%	3.50% - 3.80%	–	2.00%	RP-2006 fully generational table using scale MP-2018	Function year RX: 7%(pre-65)/7.75% (post-65) (2019); 6.75%/7.50%(2020) ; [...] : 4,50%/4,50% (2029 onwards)
AVANGRID NETWORKS	3.93%	In accordance with the age and Union/ Non Union	–	2.00%	RP-2006 fully generational table using scale MP-2018	Function year RX: 7%(pre-65)/7.75% (post-65) (2019); 6.75%/7.50%(2020) ; [...] : 4,50%/4,50% (2029 onwards)
Brazil						
ELEKTRO	9.46%	6.33%	–	4.25%	AT - 2000 male - 10%	–
NEOENERGIA			–			–
		–	–	–		–
Celpe BD	9.36%	5.29%	–	4.25%	AT-2000 male	–
Celpe Mixto	8.94%	5.29%	–	4.25%	AT-2000	–
Coelba BD	9.25%	5.29%	–	4.25%	BR-EMS-sb 2015 Masculina -15%	–
Coelba mixto	9.10%	5.29%	–	4.25%	AT-2000 Basic	–
Coelba Plan As. Médica	9.46%	n.a.	–	n.a.	AT-2000 Basic	–
Cosern BD	9.20%	5.29%	–	4.25%	AT - 2000 (40% masculina; 60% femenina) - 10%	–
Cosern Mixto	9.10%	5.29%	–	4.25%	AT-2000 - 10%	–

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2017	Discount rate	Wage increase	CPI increase	Inflation	Survivorship table	Health insurance cost Pre-Medicare/medicare
Spain						
Electricity tariff [1]	1.64%	–	2018 0,120; 2019 0,119; 2020 0,113; 2021 0,112; 2022 0,112; […]	–	PERMF 2000P	–
Long-service bonus [1]	0.80%	1.00%	-	–	PERMF 2000P	–
United Kingdom	2.60%	3.70%	–	3.20%	Pre-retirement/Post-retirement Men: 85% AMC00/Post-retirement:90% S2PMA CMI2016 (1,50% improvement rate) Women_ 85%/Post-retirement:100% S2PFA CMI2016 (1,50% improvement rate)	–
United States						
ARHI	3.8%	n.a.	–	2.00%	RP-2006 fully generational table using MP-2017	Function year RX: 7,50%/8,50% (2018); 7,25%/8,25%(2019) ; [...] : 4,50%/4,50% (2030 onwards)
UIL	3.8%	3.50%-3.80%	–	2.00%	RP-2006 fully generational table using MP-2017	Function year RX: 7,50%/8,50% (2018); 7,25%/8,25%(2019) ; [...] : 4,50%/4,50% (2030 onwards)
AVANGRID NETWORKS	3.63%	In accordance with the age and Union/ Non Union	–	2.00%	RP-2006 fully generational table using MP-2017	Function year RX: 7,50%/8,50% (2018); 7,25%/8,25%(2019) ; [...] : 4,50%/4,50% (2030 onwards)
Brazil						
ELEKTRO	10.1%	n.a.	–		AT – 2000 (1996 US Annuity 2000)	
NEONERGIA	Health plans 10.20%	n.a.	–	–	AT 2000 Basic	
	Saving accruals	5.55%	–	4.50%	Coelba: SUSEP:BR EMSsb v.2015 (male) - 15%; Celpe:AT2000 Male; Cosern:AT2000 (40% male+60%female)-10%	–
	Risk accruals	5.55%	–	4.50%	Coelba: AT 2000 Basic; Celpe:AT2000 Male; Cosern: AT2000 -10%	–
	–	–	–	–	–	–

(1) In both cases, the retirement age has been established pursuant to the Law 27/2011, of 1 August, on the upgrade, adjustment and modernisation of the Social Security system, providing for a gradual increase in the retirement age in accordance with the law.

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The most relevant figures for these commitments over the last years are the following:

Thousands of Euros	2018	2017	2016	2015	2014
Spain					
Present value of the obligation	(413,349)	(445,422)	(553,361)	(501,032)	(639,903)
Net asset / (Net provision)	(413,349)	(445,422)	(553,361)	(501,032)	(639,903)
Experience adjustments	4,914	7,799	4,664	25,355	5,442
United Kingdom					
Present value of the obligation	(5,463,614)	(6,189,753)	(6,261,592)	(6,272,818)	(5,884,621)
Fair value of plan assets	4,894,410	5,552,232	5,741,838	5,915,545	5,491,355
Net asset / (Net provision)	(569,204)	(637,521)	(519,754)	(357,273)	(393,266)
Experience adjustments	81,052	46,097	(17,836)	27,541	59,629
Experience adjustments arising on plan assets	(343,877)	97,442	552,312	(77,098)	329,368
ARHI					
Present value of the obligation	(61,192)	(63,425)	(72,785)	(73,133)	(73,564)
Fair value of plan assets	30,514	34,622	37,722	38,284	38,519
Net asset / (Net provision)	(30,678)	(28,803)	(35,063)	(34,849)	(35,045)
Experience adjustments	(507)	(975)	1,626	7,834	(1,955)
Experience adjustments arising on plan assets	(3,070)	3,810	864	(2,695)	1,805
UIL					
Present value of the obligation	(1,004,348)	(1,015,714)	(1,126,064)	(1,055,586)	–
Fair value of plan assets	609,765	661,511	695,330	647,357	–
Net asset / (Net provision)	(394,583)	(354,202)	(430,734)	(408,229)	–
Experience adjustments	2,995	27,026	(30,075)	182	–
Experience adjustments arising on plan assets	(61,367)	67,787	20,218	(10,620)	–
AVANGRID NETWORKS					
Present value of the obligation	(2,307,689)	(2,389,049)	(2,629,032)	(2,595,775)	(2,460,863)
Fair value of plan assets	1,726,344	1,853,869	1,991,669	1,893,611	1,824,332
Net asset / (Net provision)	(581,345)	(535,180)	(637,363)	(702,164)	(636,531)
Experience adjustments	20,183	(25,591)	37,797	(11,669)	(17,729)
Experience adjustments arising on plan assets	(146,210)	179,082	38,298	(95,019)	40,051
ELEKTRO					
Present value of the obligation	(299,674)	(303,237)	(336,323)	(206,387)	(273,740)
Fair value of plan assets	330,695	343,432	376,175	270,711	336,762
Net asset / (Net provision)	31,021	40,195	39,852	64,324	63,022
Experience adjustments	(1.667)	17,615	(15,966)	(5,980)	(3,507)
Experience adjustments arising on plan assets	13,659	(2,734)	16,502	(10,632)	47
NEOENERGIA					
Present value of the obligation	(481,917)	(542,248)	–	–	–
Fair value of plan assets	331,671	348,118	–	–	–
Net asset / (Net provision)	(150,246)	(194,130)	–	–	–
Experience adjustments	13,637	(7,298)	–	–	–
Experience adjustments arising on plan assets	(24,529)	(8,293)	–	–	–

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The sensitivity at 31 December 2018 of the present value of the obligation of these commitments to changes in the discount rate is as follows:

	Spain			United States			Brazil	
Increase/decrease	Electricity tariff	long-service bonus	United Kingdom	ARHI	UIL	AVANGRID NETWORKS	ELEKTRO	NEOENERGÍA
Discount rate (basic points)								
10	(5,818)	(341)	(95,833)	(582)	(12,760)	(24,160)	(3,481)	(4,446)
(10)	5,969	345	102,806	592	13,026	24,607	3,870	4,851
Inflation (basic points)								
10	–	–	96,255	–	–	–		
(10)	–	–	(93,702)	–	–	–		
Wage increase (basic points)								
10	–	367	–	–	2,037	2,300	–	
(10)	–	(356)	–	–	(2,018)	(2,277)	–	
Survivorship table (years)								
1	–	–	216,491	–	–	–	–	
Health insurance cost (basic points)								
25	–	–	–	132	1,094	1,022	–	–
(25)	–	–	–	(118)	(1,046)	(980)	–	–
Price increase kWh (basic points)								
10	3,7259	–	–	–	–	–	–	–
10	(3,725)	–	–	–	–	–	–	–

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Category of assets

The main categories of plan assets, as a percentage of total plan assets at year end, are shown in the table below:

2018	Equity securities	Fixed income securities	Cash and cash equivalents	Other
United Kingdom	17%	40%	5%	38%
AVANGRID NETWORKS				
Retirement plan	33%	42%	1%	24%
Retiree Benefits Plan	48%	48%	4%	-0%
UIL				
Qualified Pension Plans	51%	43%	-0%	6%
Postretirement Welfare Plans	61%	24%	14%	1%
AVANGRID NETWORKS				
Qualified Pension Plans	36%	41%	3%	20%
Postretirement Welfare Plans	49%	44%	3%	4%
ELEKTRO	12%	84%	-0%	4%
NEOENERGÍA	2%	95%	0%	3%

2017	Equity securities	Fixed income securities	Cash and cash equivalents	Other
United Kingdom	18%	41%	6%	35%
ARHI				
Retirement plan	35%	46%	0%	19%
Retiree Benefits Plan	49%	47%	4%	0%
UIL				
Qualified Pension Plans	53%	42%	0%	5%
Postretirement Welfare Plans	69%	23%	5%	3%
AVANGRID NETWORKS				
Qualified Pension Plans	41%	32%	2%	25%
Postretirement Welfare Plans	49%	38%	2%	11%
ELEKTRO	6%	84%	0%	10%
NEOENERGÍA	3%	82%	10%	6%

The assets associated with these plans include neither financial instruments issued by the IBERDROLA Group nor tangible nor intangible assets.

Moreover, the breakdown of assets of the plans measured at fair value by level is as follows:

Thousands of Euros	Value at 31.12.2018	Level 1	Level 2	Level 3
United Kingdom	4,894,410	711,123	3,027,800	1,155,487
AVANGRID NETWORKS	2,366,623	245,852	1,554,323	566,448
ELEKTRO	330,695	195,700	108,487	26,508
NEONERGIA	331,671	3	311,015	20,653
Total	**7,923,399**	**1,152,678**	**5,001,625**	**1,769,096**

Thousands of Euros	Value at 31.12.2018	Level 1	Level 2	Level 3
United Kingdom	5,552,232	55,522	4,774,918	721,792
AVANGRID	2,550,002	255,001	1,861,501	433,500
ELEKTRO	343,432	247,271	78,989	17,172
NEOENERGÍA	348,118	3,481	302,863	41,774
Total	**8,793,784**	**561,275**	**7,018,271**	**1,214,238**

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The strategic distribution of pension plan investments is supported by recurring Asset Liability Management studies specific to each of the plans, which guarantees matching up the funding policy with the expected time to achieve full financing of the commitment in accordance with the flows arising therefrom, providing such studies with the sensitivity to different expected rates of return of the assets and discount of the obligations. On the other hand, it is guaranteed that the financing of the plans is adequate to the recovery time of the regulated cash flows. There are also prudential investment rules regarding pensions within the scope of the Group.

In relation to asset management at a global level, the Group has progressively migrated to passive management, pension plan death and disability benefits have been covered with insurance policies and the management entities and investment assets have been qualified by an independent third party, with the consequent reduction in investments with less liquidity. In addition, in the United Kingdom the longevity risk has been covered via swaps and work is underway to partially cover inflation risk.

25.b) Defined contribution plans

The active employees of IBERDROLA and employees who have retired after 9 October 1996, are members of the IBERDROLA pension plan with joint promoters, are covered by an occupational, defined-contribution retirement pension system independent of the Social Security system.

In accordance with this system and IBERDROLA's effective Collective Labour Agreement, the periodic contribution to be made is calculated as a percentage of the annual pensionable salary of each employee, except for employees joining the Company after 9 October 1996, who from 1 January 2018 are subject to a contributory system where the Company pays 60% and the employee 40% (from 1 June 2017, the Company paid 56.45% and the employee 43.55%, whereas before this date, the Company paid 55% and the employee 45%). For the ones hired after 20 July 2015 the company pays 1/3 and the employee 2/3, until the date in which the employee takes part in the Base Salary Rating (SBC). At this moment the same criteria will be applied to those employees as the ones who were hired since 9 October 1996. The respective subsidiaries finance these contributions for all their active employees under 65.

IBERDROLA Group's contributions in 2018 and 2017 were Euros 19,006 thousand and Euros 26,205 thousand, respectively, and are recognised under "personnel expenses" heading in the consolidated income statement.

The contribution made on behalf employees out of the scope of the collective bargaining agreement in 2018 and 2017 is recognised under "Personnel expenses" in the consolidated income statements.

Thousands of Euros	2018	2017
SCOTTISH POWER	12,825	10,464
AVANGRID	31,258	31,598
NEOENERGIA	5,883	2,912
Other	646	-
Total	**50,612**	**44,974**

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25.c) Restructuring plans

Given the interest shown by some of the employees in requesting early retirement, IBERDROLA Group offered these employees mutually agreed termination of the employment relationship Spain. IBERDROLA Group has carried out a process of individual termination contracts. At 31 December 2018 and 2017, the existing provisions in this regard correspond to the following restructuring plans:

	31.12.2018		31.12.2017	
Thousands of Euros	**Provisions**	**No. of contracts**	**Provisions**	**No. of contracts**
2012 restructuring plan	981	19	3,396	66
2014 restructuring plan	35,738	237	54,986	309
2015 restructuring plan	10,649	69	15,717	82
2016 restructuring plan	8,238	61	12,531	63
2017 restructuring plan	112,824	409	140,934	413
Total	**168,430**	**796**	**227,564**	**933**

Additionally, the following provisions are maintained at 31 December 2018 and 2017 to back commitments for this concept outside Spain and for the subsidiary IBERDROLA Ingeniería y Construcción, S.A.U. (IIC):

Thousands of Euros	**31.12.2018**	**31.12.2017**
SCOTTISH POWER	5,265	5,057
IIC	14,078	18,106
NEOENERGIA	–	15,300
Total	**19,343**	**38,463**

The discount to present value of the provisions is charged to “Finance cost” heading in the income statement.

The movement in provisions for the commitments detailed in the previous section in 2018 and 2017 is as follows:

Thousands of Euros	**2018**	**2017**
Initial balance	**266,027**	**146,677**
Charge	8,200	172,154
Financial Cost	505	29
Actuarial gain and losses and other	(5,799)	(1,931)
Payments and translation differences(*)	(81,160)	(50,902)
Final balance	**187,773**	**266,027**

(*) Payments made during 2018 and 2017 amount to Euros 79,771 thousand and Euros 49,302 thousand, respectively.

The main assumptions applied in the actuarial reports that determined the provisions needed to meet the above mentioned commitments relating to the restructuring plans at 31 December 2018 and 2017 are as follows:

	2018			2017		
	Discount rate	**Inflation**	**Survivorship table**	**Discount rate**	**Inflation**	**Survivorship table**
Other restructuring plans	0.33% / 0.42%	1.00% / 0.70%	PERMF 2000	0.32% / 0.38% / 0.45%	1% / 0.70%	PERMF 2000

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26. OTHER PROVISIONS

The movement and breakdown of "Other provisions" in the liabilities in the balance sheet in 2018 and 2017 is as follows:

Thousands of Euros	Provisions for litigation, indemnity payments and similar costs	Provision for CO2 emissions (Note 3.r)	Provision for facility closure costs (Notes 3.s and 5.a)	Other provisions	Total
Balance at 01.01.2017	**600,733**	**54,121**	**1,530,061**	**473,242**	**2,658,157**
Charge or reversals for the year with a debit/credit to "Property, Plant and Equipment" (Note 3.d)	–	–	215,234	–	215,234
Charge for discount to present value (Note 43)	31,879	–	28,096	1,817	61,792
Charge for the year to the income statement	206,650	508,885	–	58,760	774,295
Reversal due to excess	(89,489)	–	–	(4,792)	(94,281)
Modification of the consolidation perimeter (Note 6)	302,193	–	9,942	2,610	314,745
Translation differences	(42,261)	(4,944)	(59,398)	(59,606)	(166,209)
Transfers	10,228	296,624	(3,881)	(99)	302,872
Payments made and other	(61,886)	–	(4,356)	(21,991)	(88,233)
Emission allowances and Green certificates	–	(438,780)	–	–	(438,780)
Balance at 31.12.2017	**958,047**	**415,906**	**1,715,698**	**449,941**	**3,539,592**
Charge or reversals for the year with a debit/credit to "Property, Plant and Equipment" (Note 3.d)	14,359	–	72,334	–	86,693
Charge for discount to present value (Note 43)	39,695	–	28,381	(19)	68,057
Charge for the year to the income statement	121,852	593,574	416	12,487	743,329
Reversal due to excess	(81,654)	(2)	(15,400)	(11,151)	(108,207)
Modification of the consolidation perimeter (Note 6)	(532)	(30,489)	(5,565)	–	(36,586)
Translation differences	(33,452)	(5,922)	13,027	15,969	(10,378)
Transfers	17,118	–	(5,027)	(21,745)	(9,654)
Payments made and other	(93,492)	–	(6,090)	(30,069)	(129,651)
Emission allowances and Green certificates	–	(543,530)	–	–	(543,530)
Balance at 31.12.2018	**941,941**	**429,537**	**1,797,774**	**415,413**	**3,584,665**

The IBERDROLA Group has provisions for responsibilities arising from litigation in progress and from indemnity payments, obligations, collateral and other similar guarantees, and those aimed at covering environmental risks. These last ones have been determined on the basis of a case-by-case analysis of the polluted assets status and the cost that will have to be incurred in cleaning them.

The IBERDROLA Group also maintains provisions to meet a series of costs needed for dismantling work at its nuclear and thermal power plants, its wind farms, and at other facilities.

The cost arising from dismantling obligations is recalculated on a regular basis to incorporate to the estimate of future costs our experience of the reasonableness of provisions of dismantling events, or to include new statutory or regulatory requirements.

The detail of provision for plants closure costs is as follows:

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Thousands of Euros	31.12.2018	31.12.2017
Thermal power plants	60,848	80,123
Nuclear power plants	612,174	590,023
Wind-powered farms and other alternative stations	945,344	853,387
Combined cycle power plant	146,194	154,954
Other facilities	33,214	37,211
Total	**1,797,774**	**1,715,698**

The amount related to nuclear plants covers the costs in which the plant operator will incur from the end of its useful life until ENRESA (Note 3.y) takes control of them.

The discount rates (minimum and maximum range) before taxes of the main countries in which the IBERDROLA Group used in the present value of the operating provisions are:

		Discount rate 2018		Discount rate 2017	
Country	Currency	5 years	30 years	5 years	30 years
Spain	Euro	0.33%	2.61%	0.37%	2.84%
United Kingdom	Sterling Pound	0.90%	1.82%	0.72%	1.76%
United States	US dollar	2.51%	3.01%	2.21%	2.74%

The estimated dates on which the IBERDROLA Group considers that it will have to meet the payments relating to the provisions included in this caption of the consolidated statement of financial position at 31 December 2018 are as follows:

Thousands of Euros	
2019	557,110
2020	169,218
2021	102,612
2022 onwards	2,755,725
Total	**3,584,665**

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27. LOANS AND BORROWINGS AND OTHER FINANCIAL LIABILITIES – LOANS AND OTHERS

The detail of the loans and borrowingss pending of amortization, once currency swaps have been taken into account, at 31 December 2018 and 2017 stand at:

	Borrowings at 31 December 2018 and maturing in							
		Short term	Long term					
Thousands of Euros	Balance at 31.12.2018 (*)	2019	2020	2021	2022	2023	2024 onwards	Total long term
Euros								
Financial leases	60,760	2,111	2,106	2,107	2,108	2,109	50,219	58,649
Debentures and bonds	16,277,975	3,450,192	1,839,117	1,107,522	1,994,717	1,128,814	6,757,613	12,827,783
Other financing transactions	5,960,870	1,177,961	852,133	1,703,437	973,630	374,642	879,067	4,782,909
Unpaid accrued interest	232,599	232,546	–	–	–	–	53	53
	22,532,204	**4,862,810**	**2,693,356**	**2,813,066**	**2,970,455**	**1,505,565**	**7,686,952**	**17,669,394**
Foreign currency								
US dollars	6,794,968	868,763	501,323	286,952	317,097	611,221	4,209,612	5,926,205
Sterling Pound	3,139,385	96,589	44,813	376,158	43,474	485,860	2,092,491	3,042,796
Brazilian reals	4,640,747	575,203	1,009,109	738,281	800,592	729,450	788,112	4,065,544
Others	43,932	4,239	3,316	3,553	3,809	4,083	24,932	39,693
Unpaid accrued interest	175,236	167,158	1,928	1,787	1,712	1,594	1,057	8,078
	14,794,268	**1,711,952**	**1,560,489**	**1,406,731**	**1,166,684**	**1,832,208**	**7,116,204**	**13,082,316**
Total	**37,326,472**	**6,574,762**	**4,253,845**	**4,219,797**	**4,137,139**	**3,337,773**	**14,803,156**	**30,751,710**

	Borrowings at 31 December 2017 and maturing in							
		Short term	Long term					
Thousands of Euros	Balance at 31.12.2017 (*)	2018	2019	2020	2021	2022	2023 and following	Total long term
Euros								
Financial leases	62,613	2,044	2,043	2,044	2,045	2,045	52,392	60,569
Debentures and bonds	17,713,790	3,433,833	1,214,088	1,779,269	1,214,524	2,011,035	8,061,041	14,279,957
Other financing transactions	5,486,334	528,585	932,592	2,290,352	474,598	623,023	637,184	4,957,749
Unpaid accrued interest	264,594	264,594	–	–	–	–	–	–
	23,527,331	**4,229,056**	**2,148,723**	**4,071,665**	**1,691,167**	**2,636,103**	**8,750,617**	**19,298,275**
Foreign currency								
US dollars	5,744,380	1,078,307	398,758	578,907	175,897	306,610	3,205,901	4,666,073
Sterling Pound	2,613,166	239,555	46,093	46,095	382,168	44,598	1,854,657	2,373,611
Brazilian reals	4,617,129	1,529,724	639,776	925,103	493,172	432,906	596,448	3,087,405
Others	43,926	3,551	2,953	3,163	3,389	3,633	27,237	40,375
Unpaid accrued interest	144,566	144,566	–	–	–	–	–	–
	13,163,167	**2,995,703**	**1,087,580**	**1,553,268**	**1,054,626**	**787,747**	**5,684,243**	**10,167,464**
Total	**36,690,498**	**7,224,759**	**3,236,303**	**5,624,933**	**2,745,793**	**3,423,850**	**14,434,860**	**29,465,739**

(*) At 31 December 2018, financial debt includes Euros 527,380 thousand from draw downs on credit lines and credit facilities, and Euros 2,460,110 thousand from issues of domestic promissory notes (USCP) and the Euro Commercial Paper (ECP).

At 31 December 2017, financial debt includes Euros 883,417 thousand from drawdowns on credit lines and credit facilities, and Euros 2,206,949 thousand from issues of domestic promissory notes and the Euro Commercial Paper (ECP).

The IBERDROLA Group's financial policy recommends maintaining a constant volume of debt issued under the *Euro Commercial Paper* (ECP) programme, the average balance of which amounted to Euros 1,771,712 thousand and Euros 1,527,762 thousand, respectively, in 2018 and 2017.

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The borrowings previously mentioned refer to the amounts drawn down and outstanding at 31 December 2018 and 2017.

Significant transactions carried out by IBERDROLA during 2018 are as follows:

2018						
Lessor	**Operation**	**Millions**	**Currency**	**Interest rate**	**Extension**	**Maturity**
Main new financing transactions						
IBERDROLA, S.A. (2)	Sustainable Syndicated loan	2,979	EUR	-	option 1+1	Feb-23
	Sustainable Syndicated loan	2,321	EUR	-	option 1+1	Feb-23
IBERDROLA Financiación, S.A.U.	Bilateral loan	100	EUR		-	Nov-25
	Bilateral loan	200	EUR		-	Dec-25
	IEB loan	500	EUR		-	Upon drawing
IBERDROLA Finanzas, S.A.U.	Increase private issue	200	EUR	1.621%	-	Nov-29
	Private issue	200	EUR	Euribor3m +0.35%	-	Feb-20
	Private issue	800	NOK (1)	3.010%	-	May-28
	Private issue	30	EUR	1.128%	-	June-25
	Green bonds	750	EUR	1.250%	-	Oct-26
	Green bonds	50	USD (1)	3.724%	-	Dec-25
	Private issue	75	EUR	1.621%	-	Nov-29
Avangrid Inc (3)	Sustainable Syndicated loan	2,500	USD	-	option 1+1	Jun-23
Berkshire Gas (5)	Private issue	20	USD	4.07%	-	Jan-29
Connecticut Natural Gas (5)	Private issue	50	USD	4.52%	-	Jan-49
Southern Connecticut Gas (5)	"Mortgage" private emission	75	USD	4.42%	-	Jan-49
Central Maine Power	"Mortgage" private emission	60	USD	3.95%	-	Dec-28
	"Mortgage" private emission	80	USD (5)	3.87%	-	June-26
	"Mortgage" private emission	80	USD (5)	4.05%	-	Jan-30
	"Mortgage" private emission	80	USD (5)	4.20%	-	June-34
New York State Electric & Gas Corp.	Tax exempt bonds	174	USD	3.00%	-	Jun-23/Oct-29
Rochester Gas & Electric Corp.	Tax exempt bonds	152	USD	3.00%	-	June-25
United Illuminating	Tax exempt bonds	64.5	USD	2.80%	-	Oct-23
	Private issue	100	USD	4.07%	-	Oct-28
	Private issue	50	USD (5)	4.52%	-	Jan-49
	Private issue	50	USD	3.96%	-	Dec-25
CELPE	Loan 4131	46	USD (1)	Libor3m +1.50%	-	Jan-21
	Debentures	500	BRL	119.6% CDI	-	Feb-23
	Loan 4131	80	Euros (1)	1.679%	-	Jul-22
	Infrastructure debentures	600	BRL	IPCA+6.0352%	-	Jul-25

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2018						
Lessor	**Operation**	**Millions**	**Currency**	**Interest rate**	**Extension**	**Maturity**
	IEB loan	643	BRL	TLP+1.86%	-	Dec-28
	IEB loan	574	BRL	IPCA+3.30%	-	Nov-30
COELBA	Debentures	900	BRL	117% CDI [4]	-	Oct-22/Apr-23
	Infrastructure debentures	300	BRL	IPCA+6.22%	-	Apr-23
	Infrastructure debentures	900	BRL	IPCA+6.2214%	-	Jul-25
	IEB loan	1,043	BRL	TLP+1.69%	-	Dec-25
	IEB loan	800	BRL	IPCA+3.30%	-	Nov-30
COSERN	Infrastructure debentures	130	BRL	IPCA+5.970%	-	Jul-23
	4131 Loan	95	USD [1]	3.689%	-	Nov-23
ELEKTRO	Debentures	1,000	BRL	113.0% CDI [4]	-	May-21/May-23
	Infrastructure debentures	300	BRL	IPCA+5.9%	-	May-25
	4131 Loan	100	USD [1]	3.6937%	-	May-22
	IEB loan	785	BRL	TLP+1.76%	-	Dec-26
IBERDROLA México S.A. de CV	Bilateral green loan	400	USD	-	option 1+1	May-23
Termopernambuco, S.A.	Infrastructure debentures	300	BRL	117,4% CDI	-	Aug-23
	4131 loan	57	USD (1)	4.145%	-	Oct-22
Pier (5)	Project finance	177	USD		-	Aug-33
Ceu Azul	BNDES loan	600	BRL	TJLP+1.78%	-	Jun-35
Sobral III	IEB loan	50	BRL	IPCA+2.57%	-	Dic-38
Main extension transactions for already existing financing						
IBERDROLA S.A.	Syndicated loan	500	EUR	-	+1 year	Jun-23
	Bilateral loan	350	EUR	-	+1 year	Jul-22
IBERDROLA Financiación, S.A.U.	Bilateral green loan	500	EUR	-	+6 months	Aug-19
	Syndicated loan	900	EUR	-	+1 year	Mar-21
	Syndicated loan	75	EUR	-	+1 year	Mar-21
	Bilateral loan	600	EUR	-	+1 year	Jul-21

[1] Currency swap contracts to the company's operating currency

[2] Reconfiguration of Euros 4.4 billion, already existing, and new Euros 900 million, totalling Euros 5.3 billion, with the option of extension for 1+1 years.

[3] Reconfiguration of $1.5 billion, already existing, and new $1 Billion, totalling $2.5 billion, with the option of extension for 1+1 years.

[4] Average cost of different obligations stated in reference to the CDI as of the date of the issue.

[5] Financing signed in 2018 pending of being drawn in 2019.

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The most significant financial transactions performed by the IBERDROLA Group during the year 2017 have been the following:

2017						
Lessor	**Operation**	**Millions of Euros**	**Currency**	**Coupon**	**Extension**	**Maturity**
Main new financing transactions						
IBERDROLA S.A.	Bilateral loan	350	EUR	-	Option +1 year	Jul-21
IBERDROLA Financiación, S.A.U.	Bilateral loan	600	EUR	-	Option +1 year	Jul-20
	Bilateral loan	300	EUR	-	-	Jul-22
	Bilateral loan	100	EUR	-	-	Jul-19
	BEI loan	500	EUR	-	-	Dec-24
	Bilateral green loan	500	EUR	-	option 6 + 6 year	Aug-18
IBERDROLA Finanzas. S.A.U.	Private issue (1)	1,000	NOK	2.70%	-	May-27
	Extension	150	EUR	Euribor 3m+0.67%	-	Feb-24
	Extension	50	EUR	1.67%	-	Feb-29
	Green bonds	1,000	EUR	1.00%	-	Mar-25
	Green bonds	750	EUR	1.25%	-	Sept-27
	Private issue	300	EUR	1.62%	-	Nov-29
	Private issue	60	EUR	1.78%	-	Oct-30
	Private issue	50	EUR	1.67%	-	Feb-29
	Green Private issue	100	EUR	Euribor 3m+0.67%	-	Feb-24
AVANGRID Inc	Green bonds	600	USD	3.15%	-	Dec-24
Rochester Gas and Electric Corp.	Bond market US	300	USD	3.10%	-	June-27
COELBA / CELPE	Loan 4131 (1)	235	USD	-	-	Aug-20
COELBA	Loan 4131 (1)	115	USD	-	-	Aug-20
CELPE	Loan 4131 (1)	90	USD	-	-	Aug-20
COSERN	Infrastructure debentures	370	BRL	IPCA+4.7%	-	Sep-22/Sep-24
ELEKTRO	Promissory notes	350	BRL	105% CDI	-	Aug-18
	Loan 4131 (1)	50	USD	-	-	May-20
ELEKTRO	Loan 4131 (1)	110	USD	-	-	May-20
Itapebí Geraçao de Energia, S.A.	Debentures 476	100	BRL	119.2% CDI	-	Dec-20
Lagoa I, S.A.	BEI loan	330	BRL	-	-	Mar-34
Termopernambuco.S.A.	Debentures 476	200	BRL	118.4% CDI	-	Dec-21
Main transactions for extending existing financing						
IBERDROLA S.A.	Syndicated loan	2,331	EUR	-	+1 year	Feb-22
	Syndicated loan	1,856	EUR	-	+1 year	Feb-22
	Syndicated loan	500	EUR	-	+1 year	Jun-22
IBERDROLA Financiación, S.A.U.	Syndicated loan	900	EUR		+1 year	Mar-20
	Bilateral loan	75	EUR	-	+1 year	Mar-20
	Bilateral green loan	500	EUR	-	+6 months	Feb-19

(1) Currency swaps to company currency.

(2) Reconfiguration, does not involve entry of funds.

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Certain Group investment projects, mainly related to renewable energies, have been financed specifically through loans that include covenants such as the compliance with certain financial ratios or the obligation to pledge in benefit of creditors the shares of the project-companies (Note 46). The fair value of real property investments in operation fully amortised intangible assets at 31 December 2018 and 2017 amounted to Euros 483 and 436 millions, respectively. Moreover, the establishment of a reserved deposit for the fulfilment of the obligations under the loan agreements is required, being the default ratios and/or the security deposit not reaching the agreed amount, the reason to preclude the dividends in the year in which they had not been fulfilled.

In relation to credit ratings covenants, IBERDROLA has arranged funding with the European Investment Bank, amounting to Euros 1,265 million and Euros 1,323 million at 31 December 2018 and 2017, respectively, which may have to be renegotiated or shored up with additional guarantees in the event of a significant rating downgrade.

Also, as of December 31, 2018 and 2017, the IBERDROLA Group maintains drawn loans and borrowings of 2,002 and 1,320 million euros, respectively, the cost of which has been modified as that of its credit rating; However, in both cases, the cost increase would not be significant.

In addition, at 31 December 2018 there are bonds issued, borrowings and other agreements between bank entities and IBERDROLA Group whose maturity dates could be impacted or may require additional guarantees to those already existing should there be a control change to be implemented in the manner and times set. The most significant changes are those described in the following paragraphs:

- Bond issues in the amount of Euros 13,314,229 thousand in the European market and USD 1.150.000 thousand (equivalent to Euros 1,010,811 thousand) in the US market.

- EIB loans totalling Euros 2,479,111 thousand.

- Borrowings amounting to Euros 617,308 thousand and USD 400,000 thousand (equivalent to Euros 351,587 thousand).

- Last, BRL 8,595,053 (equivalent to Euros 1,920,867 thousand) for issues and 11,994,129 thousand Brazilian reals (equivalent to Euros 2,680,510 thousand) from borrowings to the Brazilian subsidiary NEOENERGY and its subsidiaries.

At 31 December 2018 and 2017, IBERDROLA was fully up to date on all its financial debt payments. None of the amounts in the table above matured prior to 31 December 2017 and there had been no circumstances affecting the change of control or adverse changes in the credit quality, and consequently it had not been necessary to meet the early maturity of the debt or modify the cost related to the loans of which it is the holder.

The average cost of debt of the IBERDROLA Group in 2018 and 2017 was 2.97% and 2.91%, respectively.

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28. DERIVATIVE FINANCIAL INSTRUMENTS

The breakdown of items contributing to derivatives at 31 December 2018 and 2017, is as follows:

	2018				2017			
	Assets		Liabilities		Assets		Liabilities	
Thousands of Euros	Short term	Long term	Short term	Long term	Short term	Long term	Short term	Long term
INTEREST RATE HEDGES	**29,462**	**110,135**	**3,905**	**(109,077)**	**42,810**	**104,531**	**31,367**	**(69,300)**
Cash flow hedges	**(86)**	**689**	**(25,958)**	**(108,381)**	**7,264**	**1,436**	**(11,169)**	**(62,034)**
Interest rate swaps	(86)	689	(25,958)	(108,381)	7,264	1,436	(11,169)	(62,034)
fair value hedges	**29,548**	**109,446**	**29,863**	**(696)**	**35,546**	**103,095**	**42,536**	**(7,266)**
Interest rate swaps	29,002	103,959	30,211	–	34,354	96,959	42,536	–
Currency forwards	9	–	(1,041)	–	–	–	–	–
Others	537	5,487	693	(696)	1,192	6,136	–	(7,266)
EXCHANGE RATE HEDGES	**346,919**	**404,239**	**(242,663)**	**(121,484)**	**502,059**	**301,682**	**(168,028)**	**(141,488)**
Cash flow hedges	**93,454**	**139,873**	**(81,072)**	**(49,215)**	**180,447**	**56,721**	**(84,465)**	**(28,504)**
Interest rate swaps	(3,487)	117,178	(13,100)	(45,398)	(4,051)	43,627	(58,008)	(23,053)
Currency forwards	96,704	22,352	(67,972)	(3,812)	184,498	13,094	(26,457)	(5,451)
Collar	237	343	–	(5)	–	–	–	–
fair value hedges	**162,739**	**263,062**	**(18,185)**	**(73,464)**	**178,666**	**244,961**	**25,435**	**(112,984)**
Interest rate swaps	162,739	263,062	(18,185)	(73,464)	178,651	244,439	25,435	(112,984)
Others	–	–	–	–	15	522	–	–
Fair net investment abroad	**90,726**	**1,304**	**(143,406)**	**1,195**	**142,946**	**–**	**(108,998)**	**–**
Interest rate swaps	(1,295)	1,304	(1,399)	1,195	(3,346)	–	(28,156)	–
Currency forwards	92,021	–	(142,007)	–	146,292	–	(80,842)	–
RAW MATERIALS HEDGES	**173,244**	**123,957**	**(166,029)**	**(132,670)**	**120,806**	**35,111**	**(65,261)**	**(11,654)**
Cash flow hedges	**173,244**	**123,957**	**(166,029)**	**(132,670)**	**120,806**	**35,111**	**(65,261)**	**(11,654)**
Futures	173,244	120,685	(166,029)	(132,670)	120,806	35,111	(65,261)	(11,654)
Others	–	3,272	–	–	–	–	–	–
NO HEDGE DERIVATIVES	**414,178**	**105,191**	**(401,144)**	**(40,048)**	**356,773**	**107,418**	**(382,979)**	**(100,565)**
Treasury shares derivatives	**–**	**16,048**	**–**	**(16,048)**	**–**	**12,678**	**(2)**	**(12,678)**
Derivatives over treasury shares	–	16,048	–	(16,048)	–	12,678	(2)	(12,678)
Interest rate derivatives	**4,980**	**–**	**(100)**	**(34)**	**3,017**	**–**	**(12,255)**	**–**
Exchange insurances	4,980	–	(100)	(34)	3,017	–	(12,255)	–
Derivatives on commodities	**409,198**	**88,960**	**(400,667)**	**(23,391)**	**353,756**	**92,119**	**(370,126)**	**(83,467)**
Futures	409,188	88,960	(400,657)	(23,391)	353,751	90,050	(370,114)	(83,467)
Others	10	–	(10)	–	5	2,069	(12)	–
Interest rate derivatives	**–**	**183**	**(377)**	**(575)**	**–**	**2,621**	**(596)**	**(4,420)**
Interest rate swaps	–	183	1,275	–	–	1,831	1,525	–
Others	–	–	(1,652)	(575)	–	790	(2,121)	(4,420)
NETTED OPERATIONS (Note 15)	**(357,550)**	**(16,126)**	**357,550**	**16,126**	**(299,851)**	**(4,041)**	**299,851**	**4,041**
Total	**606,253**	**727,396**	**(448,381)**	**(387,153)**	**722,597**	**544,701**	**(285,050)**	**(318,966)**

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The maturity schedule of the notional underlyings of derivative instruments contracted by IBERDROLA Group and outstanding at 31 December 2018, is as follows:

Thousands of Euros	2019	2020	2021	2022	2023 and following	Total
INTEREST RATE HEDGES	**1,723,735**	**1,850,088**	**713,324**	**859,901**	**5,218,341**	**10,365,389**
Cash flow hedges	**1,447,040**	**265,956**	**84,773**	**6,077**	**4,619,509**	**6,423,355**
Interest rate swaps	1,447,040	265,956	84,773	6,077	4,619,509	6,423,355
fair value hedges	**276,695**	**1,584,132**	**628,551**	**853,824**	**598,832**	**3,942,034**
Interest rate swaps	195,881	1,584,132	618,051	845,824	569,332	3,813,220
Currency forwards	24,764	–	–	–	–	24,764
Others	56,050	–	10,500	8,000	29,500	104,050
EXCHANGE RATE HEDGES	**10,786,854**	**1,587,345**	**1,188,394**	**623,215**	**1,897,598**	**16,083,406**
Cash flow hedges	**4,826,506**	**837,163**	**213,660**	**588,988**	**1,485,889**	**7,952,206**
Interest rate swaps	216,453	587,683	166,635	541,688	1,457,765	2,970,224
Currency forwards	4,608,313	246,994	47,025	47,300	28,124	4,977,756
Collar	1,740	2,486	–	–	–	4,226
fair value hedges	**1,413,036**	**750,182**	**974,734**	**34,227**	**244,950**	**3,417,129**
Interest rate swaps	1,413,036	750,182	974,734	34,227	244,950	3,417,129
Fair net investment abroad	**4,547,312**	**–**	**–**	**–**	**166,759**	**4,714,071**
Interest rate swaps	–	–	–	–	166,759	166,759
Currency forwards	4,547,312	–	–	–	–	4,547,312
RAW MATERIALS HEDGES	**9,039,189**	**1,202,004**	**395,293**	**180,564**	**305,025**	**11,122,075**
Cash flow hedges	**9,039,189**	**1,202,004**	**395,293**	**180,564**	**305,025**	**11,122,075**
Futures	9,039,189	1,185,186	395,293	180,564	305,025	11,105,257
Others	–	16,818	–	–	–	16,818
NO HEDGE DERIVATIVES	**3,804,159**	**625,247**	**210,111**	**1,043,336**	**28,016**	**5,710,869**
Treasury shares derivatives	**35**	**–**	**–**	**1,000,000**	**–**	**1,000,035**
Treasury shares derivatives	35	–	–	1,000,000	–	1,000,035
Interest rate derivatives	**166,957**	**27,280**	**–**	**–**	**–**	**194,237**
Currency forwards	166,957	27,280	–	–	–	194,237
Derivatives on commodities	**3,587,167**	**597,967**	**135,111**	**43,336**	**28,016**	**4,391,597**
Futures	3,553,532	597,967	135,111	43,336	28,016	4,357,962
Others	33,635	–	–	–	–	33,635
Interest rate derivatives	**50,000**	**–**	**75,000**	**–**	**–**	**125,000**
Interest rate swaps	50,000	–	–	–	–	50,000
Others	–	–	75,000	–	–	75,000
Total	**25,353,937**	**5,264,684**	**2,507,122**	**2,707,016**	**7,448,980**	**43,281,739**

The information presented in the table above includes notional amounts of derivative financial instruments arranged in absolute terms (without offsetting assets and liabilities or purchase and sale positions) and, therefore, do not constitute the risk assumed by IBERDROLA Group since this amount only records the basis on which the calculations to settle the derivative are made.

“Finance cost” in the 2018 and 2017 consolidated income statements includes Euros 161,174 thousand and Euros 127,358 thousand, respectively, in connection with derivatives linked to financial indices that fail to meet the conditions to qualify as hedging instruments or, having met the conditions, but as explained in Notes 3.l and 43 are partially ineffective. The “Finance income” heading in the consolidated income statements for the same years also includes Euros 114,736 thousand and Euros 122,244 thousand, respectively, for the abovementioned items (Note 42).

The nominal value of the liabilities for which foreign exchange hedges (Note 4) have been arranged is as follows:

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	2018						
Hedge rate	Thousand US dollars	Thousand Japanese Yens	Thousand Norwegian Kroner	Thousand Mexican Pesos	Thousand Swiss Francs	Thousand Sterling Pound	Thousands of Euros
Cash flow	1,227,533	–	2,250,000	–	–	–	79,250
Fair value	2,995,082	13,000,000	–	–	–	700,000	173

	2017						
Hedge rate	Thousand US dollars	Thousand Japanese Yens	Thousand Norwegian Kroner	Thousand Mexican Pesos	Thousand Swiss Francs	Thousand Sterling Pound	Thousands of Euros
Cash flow	500,000	–	1,450,000	1,500,000	–	–	–
Fair value	3,851,604	28,000,000	–	–	–	700,000	76,306

The nominal value of the most significant financial liabilities for which interest rate hedges (Note 4) have been arranged is as follows:

	2018			
Hedge rate	Thousands of Euros	Thousand US dollars	Thousand Sterling Pound	Thousand Brazilian reals
Cash flow	2,610,258	–	225,000	–
Fair value	3,808,844	–	–	784,959

	2017			
Hedge rate	Thousands of Euros	Thousand US dollars	Thousand Sterling Pound	Thousand Brazilian reals
Cash flow	338,611	–	225,000	–
Fair value	4,891,844	–	–	348,574

Additionally, as of 31 December 2018, the IBERDROLA Group has used derivatives to cover the interest rate risk of future financing for a nominal amount of Euros 4,642 million, helping to offset the interest rate risk (Euros 3,620 million as of 31 December 2017).

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29. STATEMENT OF CASH FLOWS

The 2018 and 2017 transactions of the financial liabilities classified as financing activities in the Cash flow statement excluded from the equity sub-headings, is the following:

			Cash flow			Other non-cash changes						
Thousands of Euros	Balance at 01.01.2018	First application of IFRS 9 (Note 2.a.)	Issues and disposals (1)	Redemption s/charge instalments paid	Interest paid	Accrual of interest	Foreign currency exchange (2)	Change in fair value and others	Accrual expenses subject to amortisation	Modification of the consolidatio n perimeter (Note 6)	New leases, transfers and other	Balance at 31.12.2018
Financial leases	127,430	–	–	(4,924)	(5,536)	2,310	2,946	–	–	–	20,082	142,308
Debentures and bonds	26,252,859	(150,674)	4,998,038	(3,979,452)	–	–	101,856	(19,380)	95,353	–	11,011	27,309,611
Other financing transactions	9,818,844	(5,760)	8,078,830	(8,593,582)	–	–	7,329	(27,015)	1,189	–	57,676	9,337,511
Unpaid accrued interest	409,160	–	–	–	(1,188,823)	1,189,802	(2,343)	–	–	–	39	407,835
Derivatives on the company's own shares with a physical settlement (Note 20)	82,205	–	–	(732,293)	–	–	–	–	–	–	779,295	129,207
Total Loans and borrowingss and other financial liabilities - Loans and others (Note 27)	**36,690,498**	**(156,434)**	**13,076,868**	**(13,310,251)**	**(1,194,359)**	**1,192,112**	**109,788**	**(46,395)**	**96,542**	**–**	**868,103**	**37,326,472**
Derivative financial instruments associated with financing	(557,688)	–	71,531	150,295	121,547	(111,255)	(294,749)	182,975	–	–	403	(436,941)
Total	**36,132,810**	**(156,434)**	**13,148,399**	**(13,159,956)**	**(1,072,812)**	**1,080,857**	**(184,961)**	**136,580**	**96,542**	**–**	**868,506**	**36,889,531**

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			Cash flow			Other non-cash changes							
Thousands of Euros	Balance at 01.01.2017	First application of IFRS 9 (Note 2.a.)	Issues and disposals (1)	Redemptions/charge instalments paid	Interest paid	Accrual of interest	Foreign currency exchange (2)	Change in fair value and others	Accrual of expenses subject to amortisations	Modification of the consolidation perimeter (Note 7)	Liabilities held for sale (Note 34)	Transfers and other	Balance at 31.12.2017
Financial leases	167,467	–	–	(26,853)	(4,100)	2,506	(11,590)	–	–	–	–	–	127,430
Debentures and bonds	24,216,780	–	5,656,673	(3,336,573)	–	–	(1,149,075)	(95,415)	53,762	1,070,943	(30,617)	(133,619)	26,252,869
Other financing transactions	6,213,210	–	7,930,778	(7,064,800)	–	–	(389,275)	30,534	10,690	2,788,035	–	299,672	9,818,844
Unpaid accrued	418,374	–	–	–	(1,093,571)	1,072,649	6,682	–	–	–	–	5,026	409,160
Derivatives on the company's	204,851	–	688,499	(539,400)	–	–	–	–	–	–	–	(271,745)	82,205
Total Loans and borrowingss	**31,220,682**	**–**	**14,275,950**	**(10,967,626)**	**(1,097,671)**	**1,075,155**	**(1,543,258)**	**(64,881)**	**64,452**	**3,858,978**	**(30,617)**	**(100,666)**	**36,690,498**
Derivative financial instruments	(706,674)	–	49,722	85,059	120,364	(144,320)	224,434	(37,912)	–	37,224	–	(185,585)	(557,688)
Total	**30,514,008**	**–**	**14,325,672**	**(10,882,567)**	**(977,307)**	**930,835**	**(1,318,824)**	**(102,793)**	**64,452**	**3,896,202**	**(30,617)**	**(286,251)**	**36,132,810**

(1) Net emissions of expenses.

(2) Includes differences in exchange rates.

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30. OTHER CURRENT AND NON-CURRENT LIABILITIES

Details of "Other non-current liabilities" in the consolidated financial statement are as follows:

Thousands of Euros	31.12.2018	31.12.2017
Long term deposits and guarantees (Note 13.b.)	166,772	157,912
Concessional guarantee of the sufficiency tariff in Brazil (Note 11)	41,394	–
Other investments in equity-accounted investees	–	356
Contract liabilities (Note 2.a.)	373,258	408,193
Others	292,582	574,177
Total	**874,006**	**1,140,638**

The detail of "Other current liabilities" in the consolidated statements of financial position is as follows:

Thousands of Euros	31.12.2018	31.12.2017
Short-term deposits and guarantees (Note 13.b.)	147,927	167,507
Other investments in equity-accounted investees	93,681	111,994
Short-term intangible trade	573,820	869,597
Staff pending remuneration	232,291	231,044
Others	610,690	485,805
Total	**1,658,409**	**1,865,947**

31. DEFERRED TAXES AND CORPORATE INCOME TAX

Due to the multinational nature of the IBERDROLA Group, it is subject to the regulations in force in other tax jurisdictions.

Taxation in Spain

IBERDROLA S.A. is the parent company of two consolidated tax groups in Spain: the 2/86 group, in the so-called common tax system territory, and the 02415BSC group, in the Biscay tax system territory. IBERDROLA S.A. is currently fiscally incorporated into the former.

The 2/86 group is made up of 74 companies, while the 02415BSC group comprises 21.

The other entities that are fiscal residents in Spain and which are not incorporated into these two groups pay corporate income tax on an individual basis.

Companies taxed under the common tax system are subject to a 25% rate in 2018, while in the fiscally autonomous foral regions of Biscay, Gipuzkoa, Álava and Navarra it is 26%.

Taxation in other countries

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Other Group companies whose fiscal residence is outside Spain are taxed based on their resident jurisdiction. In the United States, company taxation is based on a consolidated fiscal system, with the existence of a federal tax group, with a tax group also operating in other countries. In the United Kingdom, the group relief mechanism is used. In other tax jurisdictions, Group companies are taxed on an individual basis.

The nominal tax rates applicable in the main jurisdictions in which the IBERDROLA Group operates are as follows (OECD figures, including central and federal governments):

Country	2018	2017
Australia	30	30
Brazil	34	34
Bulgaria	10	10
Canada	26.8	26.7
Cyprus	12.5	12.5
France	34.4	34.4
Germany	29.8	29.8
Greece	29	29
Hungary	9	9
Ireland	12.5	12.5
Italy	27.8	27.8
Luxembourg	26	27.1
Mexico	30	30
Netherlands	25	25
Portugal	31.5	29.5
Qatar	10	10
Romania	16	16
South Africa	28	28
Spain	25-26	25-28
United Kingdom	19	19
United States	25.8	38.9

Income tax expenses proceeds

The accrued corporate income tax expense for 2018 and 2017 is as follows:

Thousands of Euros	31.12.2018	31.12.2017
Profit for the year from continuing activities before tax	**4,348,034**	**2,025,850**
Profit for the year from discontinued operations before tax	**(64,660)**	**(321,490)**
Consolidated profit of the year before tax	**4,283,374**	**1,704,360**
Non-deductible expenses and non-computable income:	–	–
- from individual companies	(40,425)	(145,236)
- from consolidation adjustments	(140,079)	417,238
Profit of companies accounted for using the equity method	(55,904)	28,405
Adjusted accounting profit	**4,046,966**	**2,004,767**
Gross tax calculated at the tax rate in force in each country (a)	**987,888**	**645,715**
Tax credits deductions due to reinvestment of extraordinary profits and other tax credits	(84,118)	(48,888)
Adjustment of prior years' income tax expense (b)	(22,865)	(47,757)
Net movement in provisions for litigation, compensation payments, similar costs and other provisions (c)	12,400	71,065
Adjustment of deferred tax assets and liabilities (d)	38,022	(2,065,500)
Taxes related to non-distributed earnings	15,519	(12,206)
Others	(841)	(8,034)
Income/Expense Tax from continuing operations	959,499	(1,397,126)
Income /Expense Tax from discontinuing operations	(13,494)	(68,479)
Income Tax	**946,005**	**(1,465,605)**

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The breakdown between current and deferred Income tax is as follows:

Thousands of Euros	31.12.2018	31.12.2017
Current taxes	663,373	799,441
Deferred taxes	282,632	(2,265,046)
Expense/(income) from continuing and discontinued activities	**946,005**	**(1,465,605)**

Deferred taxes

The detail of “Deferred tax assets” and “Deferred tax liabilities” in the consolidated statement of financial position is as follows:

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Thousands of Euros	Balance at 01.01.2017	Modification of the consolidation perimeter (Note 6)	Translation differences	Credit (charge) to the income statement	Credit (charge) to Unrealised gains/(losses) reserve	Credit (charge) to "Other reserves"	Balance at 31.12.2017	Modification of the consolidation perimeter	IFRS 9 and IFRS 15 first application (Note 2.a)	Translation differences	Credit (charge) to the income statement	Credit (charge) to Unrealised gains/(losses) reserve	Credit (charge) to "Other reserves"	Other	Balance at 31.12.2018
Deferred tax assets:															
Measurement of financial instruments Derivatives	546,647	384	(43,754)	31,866	(231,531)	–	303,612	(1,356)	121	1,308	(49)	(30,468)	-	-	273,168
Balance sheet revaluation 16/2012	1,560,204	–	–	(120,181)	–	–	1,440,023	–	–	–	(106,560)	–	–	–	1,333,463
Pensions and similar commitments	747,380	102,884	(178,588)	(35,283)	–	(121,449)	514,944	–	–	(2,453)	68,974	–	8,605	–	590,070
Allocation of non-deductible negative goodwill arising on consolidation	66,881	–	–	(1,856)	–	–	65,025	–	–	–	(1,143)	–	–	–	63,882
Provision for facility closure costs	56,857	–	(1,767)	19,347	–	–	74,437	–	–	1,269	7,926	–	–	–	83,632
Tax credits for losses and deductions	2,499,398	–	(242,949)	(587,448)	–	–	1,669,001	926	–	41,971	181,752	–	–	58,449	1,952,099
Other deferred tax assets	1,480,787	73,217	13,970	(252,643)	–	–	1,315,331	(756)	82,267	15,625	(120,977)	–	–	(101,805)	1,189,685
Total	**6,958,154**	**176,485**	**(453,088)**	**(946,198)**	**(231,631)**	**(121,449)**	**5,382,273**	**(1,186)**	**82,388**	**57,720**	**29,923**	**(30,468)**	**8,605**	**(43,356)**	**5,485,999**

Thousands of Euros	Balance at 01.01.2017	Modification of the consolidation perimeter (Note 6)	Translation differences	Credit (charge) to the income statement	Credit (charge) to Unrealised gains/(losses) reserve	Balance at 31.12.2017	IFRS 9 and IFRS 15 first application (Note 2.a)	Modification of the consolidation perimeter	Translation differences	Credit (charge) to the income statement	Credit (charge) to Unrealised gains/(losses) reserve	Balance at 31.12.2018
Deferred tax liabilities												
Available for sale assets	–	–	–	–	306	306	–	–	–	(154)		152
Measurement of financial instruments Derivatives	555,549	–	(20,165)	(2,821)	(188,315)	344,248	–	(1,357)	1,449	(38,424)	(19,207)	286,709
Accelerated amortisation	6,728,748	–	(744,049)	(1,595,784)	–	4,388,915	10,468	(49,772)	139,698	29,608	–	4,518,917
Overprice in business combinations	4,829,544	432,330	(437,438)	(1,558,693)	–	3,265,743	–	(163)	21,119	3,708	–	3,290,407
Other deferred tax liabilities	626,820	20,586	(34,253)	(53,946)	–	559,207	52,623	(956)	17,691	317,817	–	946,382
Total	**12,740,661**	**452,916**	**(1,235,905)**	**(3,211,244)**	**(188,009)**	**8,558,419**	**63,091**	**(52,248)**	**179,957**	**312,555**	**(19,207)**	**9,042,567**

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Administrative action

The inspections undertaken at the close of 2018 varied depending on the tax legislation in place in each country, although it is not expected that any of these will highlight significant impact that has not already been considered in financial statements.

In the case of Spain, there was no general inspection ongoing at the close of the year, although throughout the year a number of partial checks were carried out, with the reports duly signed off as accepted or contested. The accepted reports represent insubstantial payment sums for the Group, while the contested reports are zero rated.

In those other countries in which the Group has a significant presence, the main ongoing inspections are as follows:

- In America, the most important ongoing inspection relates to income tax in the New York State. Additionally, given its status as a major contributor at both a federal and state level, the AVANGRID Group has around 34 inspections ongoing, examining other tax figures.

- In the UK, Scottish Power the HRMC tax authority has classified the company as a low-risk contributor. The only relevant question for discussion relates to the deductibility of certain payments under the guidance of OFGEM, the electricity and gas market regulator.

- Finally, Brazil can be characterised as a jurisdiction that frequently resorts to litigation, with countless inspections ongoing. This is due to the country's fiscal and administrative structures and the habitual actions of its tax authorities. Nevertheless, NEOENERGIA's directors do not expect any significant impact. Generally speaking, these procedures are resolved in favour of the tax administration in a very limited number of cases.

Tax litigation

The IBERDROLA Group includes among its principles the strengthening of the relationship with the tax authorities, based on el respect for the law, loyalty, trust, professionalism, cooperation, la reciprocity and good faith, regardless of the legitimate discrepancies that may arise in relation to the interpretation fiscal law. Therefore, whenever such discrepancies occur, the Group works with the authorities in a spirit of cooperation, in line with its principles of transparency and mutual trust.

As in previous years, all the Group's work this year is analysed by its internal and external advisors, determining whether its activities comply with the law and are based on reasonable interpretations of tax regulations. The existence of contingent liabilities is also analysed – here the Group's general criterion consists of setting aside provisions for tax litigation when there is high risk that the outcome is unfavourable to the Group's interests, while this set-aside does not occur where the risk level is lower or remote.

The IBERDROLA Group's directors and, where appropriate, their tax consultants consider that the current inspection process will not give rise to additional liabilities of significance for the IBERDROLA Group at 31 December 2017.

Tax litigation in Spain

In the case of Spain, the Group is currently awaiting ruling by the Central Economic Administrative Court on the appeals arising from the contested reports from 2008 to 2011.

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The main adjustments that feature in the settlement agreements stemming from these contested reports refer to the assessment of the goodwill, susceptible to tax depreciation through the SCOTTISH POWER take-over, the elimination of SCOTTISH POWER's tax exemption for dividends based on the inspection's understanding that it is incompatible with an adjustment of the value of the portfolio due to net investment hedges, differences in fiscal consolidation criteria and a possible concurrence of a debtor change and certain bond issues, pursuant to Article 15.1 of the General Taxation Act.

Tax litigation in other countries

In general, there is no significant tax litigation in the other jurisdictions under which the group operates, except in the case of Brazil, where there are numerous administrative and judicial litigation and other processes, in which the Group expects to obtain a favourable final ruling.

32. TAX RECEIVABLES AND PAYABLES

The breakdown of the headings “Income tax receivables/payables” and “Public entities, other/payables” on the asset and liability sides, respectively, in the consolidated statements of financial position is as follows:

Thousands of Euros	31.12.2018	31.12.2017
Public Administrations receivables		
Public Treasury, Corporate income tax receivables	252,907	546,304
Public Treasury, VAT refundable	229,975	193,359
Tax withholdings and prepayments	158,319	76,136
Public Treasury, other Receivables	115,150	49,087
Total	**756,351**	**864,886**
Public Administrations Payables		
Public Treasury, Corporate income tax Payables	349,314	259,633
Public Treasury, VAT payable	105,942	182,294
Public Treasury, withholdings payable	69,980	60,698
Public Treasury, other payables	837,010	717,298
Social Security Agencies, payables	26,517	28,636
Total	**1,388,763**	**1,248,559**

33. TRADE PAYABLES

The breakdown of this heading in the consolidated statements of financial position is as follows:

Thousands of Euros	31.12.2018	31.12.2017
Suppliers	3,313,610	3,244,267
Service payables	1,945,804	1,874,977
Contract liabilities (Note 2.a)	169,519	188,307
Total	**5,428,933**	**5,307,551**

The majority of these accounts payable do not accrue interest.

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34. INFORMATION ON AVERAGE PAYMENT PERIOD TO SUPPLIERS. THIRD ADDITIONAL PROVISION. "REPORTING REQUIREMENT" OF LAW 15/2010, OF 5 JULY

The breakdown of the required information at 31 December 2018 and 2017 is the following:

	Number of days	
	2018	2017
Average payment period to suppliers.	15	16
Paid transactions ratio	14	16
Outstanding payment transactions ratio	26	29

Thousands of Euros	2018	2017
Total payments made	13,413,355	13,754,653
Total payments due	301,766	269,561

The information in the table above has been prepared in accordance with Law 15/2010 of 5 July, amending Law 3/2004 of 29 December, establishing measures to combat late payments in commercial operations and in accordance with the Resolution of 29 January 2016, from the Instituto de Contabilidad y Auditoría de Cuentas, on the information to be included in the notes to the annual accounts in relation to deferred payments to suppliers in commercial transactions operations. The specifications with which such information has been prepared are the following:

- Ratio of paid operations: amount in days of the ratio between the sum of the amount of each of the operations paid and the number of paydays and the total amount of payments made during the year.

- Ratio of outstanding payment operations: amount in days of the ratio between the sum of the amount of the outstanding payment transaction and the number of unpaid days, and the total amount of outstanding payments.

- Suppliers: trade payables generated from debts of goods or services with suppliers included in the current liabilities heading of the balance sheet.

- Property, plant and equipment and other financial lease suppliers are not considered in the information scope.

- Taxes, levies, indemnifications and some other headings are not considered in the information scope since they are not commercial transactions.

- The table shows information corresponding to Spanish companies included in the consolidated group once the credits and debits between the subsidiary companies are eliminated.

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35. REVENUE

The breakdown of this heading in the consolidated statements of financial position is as follows:

Year 2018	Liberalised						Renewables							Networks							
Thousands of Euros	Spain and continental Europe	United Kingdom	Mexico	Brazil	Eliminations	Total	Spain	United Kingdom	United States	Mexico	Brazil	RoW	Total	Spain	United Kingdom	United States	Brazil	Total	Other business, Corporation and adjustments	Total
Supplies in regulated markets																				
Electricity	1,460,126	–	1,491,876	–	–	**2,952,002**	691,452	–	–	–	–	–	**691,452**	2,021,992	1,258,451	3,022,356	5,150,745	**11,453,544**	(164,393)	**14,932,605**
Gas	–	–	–	–	–	**–**	–	–	–	–	–	–	**–**	–	–	1,234,545	–	**1,234,545**	–	**1,234,545**
Supplies and other income in non-regulated markets																				
Electricity	9,417,384	3,491,537	752,128	792,889	(19,881)	**14,434,057**	1,004,662	366,590	926,285	90,326	243,801	289,685	**2,921,349**	–	–	15,978	–	**15,978**	(2,347,283)	**15,024,101**
Gas	1,650,534	1,510,850	–	–	(131,950)	**3,029,434**	–	–	–	–	–	–	**–**	–	–	–	–	**–**	30,723	**3,060,157**
Others	450,180	19,114	–	–	–	**469,294**	–	330,883	129,341	415	–	–	**460,639**	36,320	17,097	1,898	–	**55,315**	(369,208)	**616,040**
Income from construction agreements	–	–	–	–	–	**–**	–	–	–	–	–	–	**–**	66,732	–	–	34,634	**101,366**	–	**101,366**
Income for lease agreements	–	–	–	–	–	**–**	–	–	–	–	–	–	**–**	490	–	–	–	**490**	26,764	**27,254**
Derivatives on commodities	106,546	1,174	2,245	–	(2,575)	**107,390**	–	–	(28,701)	254	–	–	**(28,447)**	–	–	–	–	**–**	862	**79,805**
Total	**13,084,770**	**5,022,675**	**2,246,249**	**792,889**	**(154,406)**	**20,992,177**	**1,696,114**	**697,473**	**1,026.925**	**90,995**	**243,801**	**289,685**	**4,044,993**	**2,125,534**	**1,275,548**	**4,274,777**	**5,185,379**	**12,861,238**	**(2,822,535)**	**35,075,873**

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Year 2017	Liberalised						Renewables							Networks							
Thousands of Euros	Spain and continental Europe	United Kingdom	Mexico	Brazil	Eliminations	Total	Spain	United Kingdom	United States	Mexico	Brazil	RoW	Total	Spain	United Kingdom	United States	Brazil	Total	Other business, Corporation and adjustments	Total
Supplies in regulated markets	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**–**
Electricity	1,590,553	–	1,384,937	–	–	**2,975,490**	655,769	–	–	–	–	–	**655,769**	1,894,253	1,201,373	2,883,994	3,371,691	**9,351,311**	(477,899)	**12,504,671**
Gas	–	–	–	–	–	**–**	–	–	–	–	–	–	**–**	–	–	1,184,831	–	**1,184,831**	–	**1,184,831**
Supplies and other income in non-regulated markets	–	–	–	–	–	**–**	–	–	–	–	–	–	**–**	–	–	–	–	**–**	–	**–**
Electricity	8,791,296	3,571,298	930,080	399,615	(72,604)	**13,619,685**	637,529	316,340	862,802	73,590	90,895	125,962	**2,107,118**	–	–	13,829	–	**13,829**	(1,467,809)	**14,272,823**
Gas	1,260,597	1,257,415	–	–	(85,528)	**2,432,484**	–	–	–	–	–	–	**–**	–	–	–	–	**–**	18,275	**2,450,759**
Others	436,679	14,360	–	–	(255)	**450,784**	–	285,468	113,737	–	–	–	**399,205**	38,725	20,655	525	–	**59,905**	(254,466)	**655,428**
Income from construction agreements	–	–	–	–	–	**–**	–	–	–	–	–	–	**–**	83,713	–	–	–	**83,713**	–	**83,713**
Income from lease agreements	–	–	–	–	–	**–**	–	–	–	–	–	–	**–**	542	–	–	–	**542**	25,178	**25,720**
Derivatives on commodities	98,261	3,435	(50)	(81)	(11,810)	**89,755**	–	–	(5,433)	178	2,663	–	**(2,592)**	–	–	–	–	**–**	(1,846)	**85,317**
Total	**12,177,386**	**4,846,508**	**2,314,967**	**399,534**	**(170,197)**	**19,568,198**	**1,293,298**	**601,808**	**971,106**	**73,768**	**93,558**	**125,962**	**3,159,500**	**2,017,233**	**1,222,028**	**4,083,179**	**3,371,691**	**10,694,131**	**(2,158,567)**	**31,263,262**

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36. PROVISIONS

The breakdown of this heading in the consolidated statements of financial position is as follows:

Thousands of Euros	31.12.2018	31.12.2017 Restated (Note 2.d)
Liberalised business	**16,824,304**	**15,811,674**
Spain and Continental Europe	10,670,202	9,884,521
United Kingdom	4,159,851	4,103,766
Mexico	1,489,687	1,668,931
Brazil	658,960	324,363
Eliminations	(154,396)	(169,907)
Renewables business	**434,058**	**368,014**
Spain	116,342	119,119
United Kingdom	53,753	54,858
United States	191,828	188,263
Mexico	3,108	2,576
Brazil	65,606	1,818
RoW	3,421	1,380
Networks business	**5,219,469**	**3,907,433**
Spain	15,991	14,354
United Kingdom	53,101	48.385
United States	1,494,913	1,329,213
Brazil	3,655,464	2.515,481
Other business, Corporation and adjustments	**(2,837,095)**	**(2,187,667)**
Total	**19,640,736**	**17,899,454**

37. PERSONNEL EXPENSES

The breakdown of this heading in the consolidated statements of financial position is as follows:

Thousands of Euros	31.12.2018	31.12.2017
Wages and salaries	1,973,562	1,926,519
Company social security costs	292,731	262,223
Additional provisions for pensions and similar obligations and defined contributions to the external pension plan (Notes 3.p and 25)	195,706	413,463
Remuneration stipulated in by-law 48.1 (Note 47)	17,000	17,000
Token payments Art. 48.4	5,588	3,398
Other social expenses	194,138	153,391
	2,678,725	**2,775,994**
Capitalised personnel expenses		
Intangible assets (Note 8)	(73,899)	(42,299)
Property, plant and equipment (Note 3.d)	(581,672)	(558,874)
Nuclear fuel	(3,148)	(3,225)
	(658,719)	**(604,398)**
Total	**2,020,006**	**2,171,596**

The average number of IBERDROLA Group employees in 2018 and 2017 has increased to 33,415 and 28,750 employees, of which 7,729 and 6,711 are women, respectively.

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The average number of employees in the consolidated group corresponds to all the employees in those consolidated companies that have been integrated using the global integration method, as well as the employees of the joint ventures determined in accordance with the participation share in those ones.

38. OPERATING LEASES

The "External services" heading on the income statements includes operating lease payments of Euros 148,607 thousand and Euros 148,810 thousand for 2018 and 2017, respectively. Details of future minimum payments under non-cancellable operating leases outstanding at 31 December 2018 are as follows:

Thousands of Euros	
2019	126,656
2020	129,403
2021	124,231
2022	116,221
2023	104,473
From 2024 onwards	1,498,675
Total	**2,099,659**
Financial Cost	637,505
Present value of the payments	1,462,154
Total	**2,099,659**

The IBERDROLA Group's enters into lease agreements acting as lessee mainly for land, buildings and vehicles located at wind farms.

The amount differs from the effect of the application of IFRS 16 "Leases" for the first time as explained in Note 2.a.

On the other hand, the IBERDROLA Group acts as lessor in certain operating leases consisting basically on the rental of investment property (Note 9) and the lease of fibre optics. The heading "Net revenue" in the consolidated income statements in 2018 and 2017, includes Euros 50,607 thousand and Euros 47,885 thousand, respectively, related to this concept and the detail of the estimated future minimum proceeds under non-cancellable leases at 31 December 2018 is as follows:

Thousands of Euros	
2019	54,879
2020	35,307
2021	32,000
2022	29,706
2023	27,954
From 2024 onwards	124,084
Total	**303,930**
Financial Cost	54,842
Present value of the payments	249,088
Total	**303,930**

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39. TAXES

The breakdown of this heading in the consolidated statements of financial position is as follows:

Thousands of Euros	31.12.2018	31.12.2017 Restated (Note 2.d)
Liberalised business	**802,050**	**861,408**
Spain and continental Europe	693,509	726,622
United Kingdom	106,971	131,536
Brazil	44	39
Mexico	1,526	3,211
Renewable business	**468,006**	**351,676**
Spain	396,418	284,266
United Kingdom	23,624	21,817
United States	43,650	39,655
Mexico	357	319
Brazil	539	2,016
ROW	3,418	3,603
Networks business	**647,683**	**636,772**
Spain	90,106	89,384
United Kingdom	105,368	101,948
United States	448,421	444,319
Brazil	3,788	1,121
Other business, Corporation and adjustments	**13,264**	**24,647**
Total	**1,931,003**	**1,874,503**

Law 15/2012 was published on 28 December 2012, regarding tax measures to ensure sustainability of the energy sector. The law introduced the following tax figures registered under “Taxes” of the consolidated income statements of 2018 and 2017:

- A tax on the value of electricity output, entailing payment of 7% of the total amount to be received by the taxpayer for the production of electricity and incorporation thereof in the Spanish electricity system, measured at power station busbars, during the tax period. This tax gave rise to an expense of Euros 194,038 thousand and Euros 225,225 thousand in 2018 and 2017 respectively.

- A tax on spent nuclear fuel, the cost of which amounted to Euros 131,509 thousand and Euros 129.315 thousand in 2018 and 2017, respectively.

- A royalty on the use of inland water affecting production of electricity which, as a general rule, means the payment of a percentage of the economic value of the hydroelectric power produced. The corresponding expense in 2018 and 2017, amounting to Euros 165,135 thousand and Euros 82,365 thousand, respectively.

- A green cent tax levied against energy products used in electricity production, entailing a cost for the IBERDROLA Group of Euros 35,575 thousand and Euros 46,648 in 2018 and 2017, respectively. This payment was recognised under "Procurements" in the consolidated income statement.

Additionally, the sub-heading 'Taxes' of the 2018 and 2017 consolidated income statement includes Euros 168,310 and 165,264 thousands of Euros, respectively, as the best estimate available of the accrued expenses originated by Royal Decree-Law 6/2009 (Note 3.y).

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40. AMORTISATIONS AND PROVISIONS

The breakdown of this heading in the consolidated statements of financial position is as follows:

Thousands of Euros	31.12.2018	31.12.2017 (re-stated Note 2.d)
Tangible assets depreciation allowances:		
Property, plant and equipment (Note 10)	2,842,430	2,636,990
Acquisition of real property (note 9)	7,533	6,965
Intangible assets depreciation allowances (Note 8):	737,136	542,093
Allowances for impairments and write-offs of non-financial assets:		
Goodwill write off of Renewables in USA (Notes 8 and 12)	–	449,480
Reversal of impairment of intangible assets in Renewables in USA (Notes 8 and 12)	(52,688)	(42,959)
impairment of intangible assets in Gas in USA and Canada (Note 8)	–	68,715
impairment of PPE in Gas in USA and Canada (Note 10)	–	633,003
Other impairments in Gas in USA	–	41,853
Charge Reversal of impairment in PPE (Note 10)	13,565	(24,357)
Other impairment in PPE (Note 10)	81,049	37,499
Changes in provisions	26,849	59,388
Total	**3,655,874**	**4,408,670**

Prior to the sale of the gas business in the United States and Canada in 2018 (Note 41), the IBERDROLA Group received binding offers for the sale of the above for a value below the book value of the assets and liabilities for sale. Therefore, a loss for impairment of intangible assets, property, plant and equipment and inventories has been recognised in the amount of Euros 743,571 thousand. Before the decision to sell and the reception of the binding offers, the impairment of the assets was not required as long as its value in use was above its book value.

41. GAINS AND LOSSES ON DISPOSAL OF NON-CURRENT ASSETS

Details of “Gains and losses on disposal of non-current assets” in the consolidated statements of financial position is as follows:

Thousands of Euros	31.12.2018	31.12.2017
Gain on the disposal of intangible assets and PPE	10,419	3,420
Gain on the disposal of equity investments	38,049	295,673
Total	**48,468**	**299,093**

Details of “Losses due to disposal of non-current assets” in the consolidated statements of financial position is as follows:

Thousands of Euros	31.12.2018	31.12.2017
Loss on the disposal of intangible assets and PPE	2,331	2,611
Loss on the disposal of equity investments	37,286	17,428
Total	**39,617**	**20,039**

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Year 2018

The gross losses recognised under "Losses on Disposal of Non-Current Assets" in the consolidated statement of income for 2018 relate mainly to the sale of the gas business in the United States for Euros 13,881 thousand and the 80% stake in the company Coyote Ridge Wind LLC to WEC Infrastructure for Euros 23,116 thousand (Notes 6 and13.a).

Gross capital gains recognised in “Earnings from sales of non-current assets” on the consolidated financial statement for 2018 corresponds to the sale of IBERDROLA Energía Solar de Puertollano, S.A. for Euros 12,470 thousand and of Scottish Power Generation Limited for Euros 25,579 thousand (Note 6).

Year 2017

- As a consequence of the merger of the wind energy businesses SIEMENS and GAMESA (Note 13), there was a dilution in the percentage of shares held by the IBERDROLA Group, from 19.69% to 8.07%. The result obtained as a result of the aforementioned dilution of the operation reached 250,695 thousand, which were registered under sub-heading 'Gains on disposal of non-current assets' in the 2017 consolidated income statement.

- In April 2017, the IBERDROLA Group sold its shareholding in Amara, S.A.U. for an amount of Euros 8,000 thousand, which implied a gross capital loss of 14,502 thousand and was registered under the sub-heading 'Losses on disposal of non-current assets' in the 2017 consolidated income statement.

- In August 2017 the incorporation of ELEKTRO HOLDING in NEONERGIA was completed (Note 6). The result obtained as a result of the aforementioned dilution of the operation reached 44,012 thousands of Euros, which were registered under sub-heading 'Gains on disposal of non-current assets' in the 2017 consolidated income statement.

42. FINANCIAL INCOME

Details of “Finance Income” in the consolidated statements of financial position is as follows:

Thousands of Euros	31.12.2018	31.12.2017
Income from equity investments	2,284	2,082
Finance income related to assets at amortised cost:		
Other financial interests and income	194,261	223,238
Other interest and finance income due to credits to associated companies	58	96
Non-hedge derivatives and inefficiencies(Note 28)	114,736	122,244
Exchange losses in foreign currency for financing activities	191,789	273,000
Other Exchange losses in foreign currency	143,360	164,808
Capitalised finance costs		
Intangible assets (Note 8)	35,735	21,506
Property, plant and equipment (Note 10)	156,896	112,536
Nuclear fuel (Note 16)	633	2,193
Inventories in real property (Note 17)	159	87
Total	**839,911**	**921,790**

The average capitalisation rates used in 2018 and 2017 for external financing of property, plant and equipment was 3.68% and 2.63%, respectively (Note 3.d).

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43. FINANCIAL COSTS

Details of "Financial costs" in the consolidated statements of financial position is as follows:

Thousands of Euros	31.12.2018	31.12.2017
Finance cost related to liabilities at amortised cost:		
Finance cost and financing expenses	1,234,475	1,055,901
Other finance cost and similar expenses	94,503	71,171
Securities portfolio having the substance of a financial liability (Note 22)	12,026	6,230
Non-hedge derivatives and inefficiencies (Note 28)	161,174	127,358
Valuation adjustment to financial assets	2,798	9,015
Exchange losses in foreign currency for financing activities	198,604	279,193
Other Exchange losses in foreign currency	146,415	178,212
Financial update of other provisions (Note 26)	68,057	61,792
Financial update of provisions for pensions and similar obligations (Note 25)	77,953	70,020
Total	**1,996,005**	**1,858,892**

44. CONTINGENT ASSETS AND LIABILITIES

The IBERDROLA Group companies are part of some legal and out-of-court disputes arising as part of their ordinary course of business (ranging from conflicts with suppliers, clients, administrative or tax authorities, individuals, environmental activists and employees). The IBERDROLA Group's legal advisors believe that these proceedings will not have a material impact on its financial and equity position.

Regarding such disputes, the main contingent assets and liabilities of the IBERDROLA Group not recognised in these consolidated financial statements as the criteria established in accounting regulations is not met, are as follows:

Contingent liabilities

- On 16 June 2014, the CNMC began sanction proceedings against IBERDROLA GENERACIÓN ESPAÑA for alleged fraudulent procedures to alter the price of electricity at the Duero, Tajo and Sil hydroelectric power generation units in December 2013. The fine was announced on 30 November 2015, in the amount of Euros 25 million. IBERDROLA GENERACIÓN ESPAÑA submitted an appeal to the National Court's Contentious-Administrative Section, and this was admitted to proceedings, being also granted the suspension of the execution of the sanction. The IBERDROLA Group believes its action was proper and legal, and did not therefore make any provision for this during the year. The procedure is currently suspended due to prejudication issues.

- Claims filed with the Central Economic Administrative Court, arising from the disagreement statement signed by the Group in 2016, corresponding to the years 2008 to 2011. The main adjustments under dispute arise from the elimination of the exemption regime for dividends received, as the tax inspection considers that it is incompatible with an adjustment in the value of the portfolio for net investment coverage, differences in tax consolidation criteria and the possible concurrence in a debtor exchange transaction regarding some bond issues, due to the circumstances established in article 15.1 of the General Tax Law.

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- Arbitration filed by Offshore Windforce (OWF) against IBERDROLA RENOVABLES OFFSHORE DEUTSCHLAND GmbH, due to the contracting of OWF (among others) for the installation of the wind turbine jackets for the Wikinger wind farm. During the construction process differences arose between the parties which resulted in a mutual contractual claim as regards deadline and cost, in the case of OWD, and delay penalties, in the case of IBERDROLA RENOVABLES OFFSHORE DEUTSCHLAND.

  On 14 July 2018 IBERDROLA RENOVABLES OFFSHORE DEUTSCHLAND GmbH received an arbitration claim amounting to Euros 71,548 thousand, which have been accrued in the probable. On 23 November 2018 IBERDROLA replied to the arbitration request and in turn filed a counter-claim.

  - The subcontractor for one of BOP Eléctrico's contractors from IBERDROLA Energy Projects (IEP, a subsidiary of IBERDROLA INGENIERÍA) on a US project has taken court action against IEP and the BOP Eléctrico contractor, claiming payment for work undertake and unpaid wages. The case has been suspended pending the result of arbitration proceedings involving IEP and the BOP Eléctrico contractor before the American Arbitration Association's International Centre for Dispute Resolution.

  On 2 February 2019 the project's client expressed his intention of executing 100% of the guarantee value (USD 141 million)

- There are several labour, civil and tax complaints filed in Brazil against several NEOENERGIA Group companies. The IBERDROLA Group considers that the risk assessment of the possible losses is made by the companies, in accordance with the opinions of the administration and external legal advisors, making the corresponding provisions in accordance with the likelihood of loss depending on the available evidence, legal hierarchy and most recent case-law.

  Labour complaints were filed by former NEONERGIA Group companies or by former subcontractor as regards additional working hours, equitable salaries and other employment rights. Civil proceedings refer to actions of a commercial and indemnifying nature brought in claims for material or moral damages, arbitrations discussing matters related to engineering and energy contracts, and environmental actions.

  Among these, the following infractions in place are due to:

  - The lack of income tax withholding and the incidence of PIS / COFINS corresponding to the payment of interest on own capital.

  - Tax assessment notice issued by the federal tax body (Receita Federal do Brasil) for the collection of capital gains tax originating from the acquisition of Neonergia Group companies (Celpe, Coelba, Cosern, Elektro, Itapebi and Termopernambuco).

  They are administrative and court proceedings involving the distribution companies and the retail company NC Energia and the state tax body as regards movement of goods.

  As regards regulatory actions, the distribution companies Coelba, Celpe, Cosern and Elektro are involved in similar proceedings, among which the following should be highlighted: (i) the procedures for calculating individual and collective technical continuity indicators of the service ; (ii) commercial issues; (iii) the implementation of the corresponding financial compensations and the recovery of global indicators; (iv) issues relating to the collection or legality of rate elements or items; and (v) issues regarding the legality of the administrative actions imposed by ANEEL.

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- Claim by the California Public Utilities Commission: In 2002, the California Public Utilities Commission and the California Electricity Oversight Board ("CPUC" and "CEOB", respectively) submitted a claim to the FERC against a number of electricity producers, alleging that these companies had manipulated the market and that the prices set in energy purchase contracts were "unfair and unreasonable", and demanded modifications to the contracts.

  FERC dismissed the claim and, following a review by the Californian courts, the Supreme Court ordered FERC to review the case, which had remained dormant since 2008. In April 2016, following the reopening of the 2014 case, an initial ruling was issued that dismissed any market manipulation by Avangrid Renewables, but considered that the prices in its energy purchase contract were excessive and to the detriment of end consumers. Damages were set at USD 259 million plus interest.

  FERC recommended filing the case without sanction. Following these proceedings, FERC is expected to issue a final ruling in the last quarter of 2019 and its decision may be appealed in the courts. The IBERDROLA Group expects that the proceedings will eventually be suspended without any sanction.

Contingent assets

- AVANGRID initiated legal proceedings against the former owners of certain sites in order to recover the costs of environmental restoration work it was forced to pay.

- The subsidiary of IBERDROLA INGENIERÍA in Canada initiated two arbitrations before the International Chamber of Commerce, at its headquarters in Paris, against the boiler supplier of the two biomass projects in Canada: (i) One arbitration is or non-compliance with the supply contracts, issuing a complaint for damages and (ii) the other to issue a claim against the return of amounts paid to the supplier on the price of the supply contracts. The arbitrations are currently suspended given that the supplier is involved in insolvency proceedings in the United States.

The IBERDROLA Group's appeals on regulatory issues were submitted in opposition to general dispositions of an indefinite amount, affecting the regulatory and remuneration framework of the companies. Therefore, they concern regulatory dispositions that were in force at the time of appeal.

IBERDROLA Group's assets are not at risk with respect to the appeals submitted against general energy stipulations because the economic effects of the stipulations challenged apply when they come into force. An estimate of the appeals submitted by third parties has a limited economic scope, as this would force amendments to the regulatory framework and possible refunds.

Among the regulatory litigation brought by third parties that may affect the remuneration and equity of the IBERDROLA Group there are no outstanding resources for its importance.

In addition, within the ordinary business of IBERDROLA Group, the following contingent liabilities have arisen:

- The American gas companies are either the owners or former owners of the land on which they operate gas manufacturing plants. This land has been contaminated as a result of this activity. In some cases, the land has been decontaminated while in others it has been assessed and classified, although not cleaned. In a number of other cases, the level of contamination has yet to be determined. This latter group has not set aside any provision as of 31 December 2018, given that the cost cannot be reasonably estimated as it requires the participation and approval of the regulators. In the past, gas companies were given approval to recover the cost of decontamination from customers through tariffs, as well as hoping to similarly recuperate the cost of cleaning other land.

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The contingent assets and liabilities at 31 December 2017 are described in the 2017 consolidated annual accounts of IBERDROLA.

45. INTERESTS IN JOINT VENTURES

The detail (at 100%) of the most significant economic aggregates in 2018 and 2017 relating to the main joint ventures involving the IBERDROLA Group is as follows:

Thousands of Euros	Joint property of nuclear and thermal plants									
Year 2018	**Almaraz**	**Trillo**	**Vandellós**	**Ascó**	**Aceca**	**A.I.E. Almaraz-Trillo**	**A.I.E. Ascó-Valdellós**	**West of Duddon Sands**	**Wikinger OSS**	**Torre IBERDROLA**
Segment	Liberalised							Renewables		Other businesses
Intangible assets.	–	–	–	–	–	5,290	–	–	–	21
Property, plant and equipment										
Technical installations	692,494	952,610	948,438	594,792	–	–	–	1,456,429	147,727	–
Other fixed assets	340	4,133	14,271	–	1,811	2,029	–	–	–	184,896
Non-Current financial Assets	22,533	11,291	43,090	9,864	2,430	1,919	144,532	–	–	–
Current assets	707,494	382,790	369,356	376,302	739	50,923	139,181	9,946	–	2,184
Total assets	**1,422,861**	**1,350,824**	**1,375,155**	**980,958**	**4,980**	**60,161**	**283,713**	**1,466,375**	**147,727**	**187,101**
Non-Current Liabilities	**365,529**	**463,666**	**515,544**	**245,947**	**–**	**39,799**	**156,007**	**–**	**–**	**1,515**
Current Liabilities	**893,204**	**856,820**	**960,220**	**613,141**	**5,746**	**20,362**	**108,473**	**39,096**	**–**	**1,699**
Income	**908,702**	**444,292**	**304,278**	**484,922**	**7**	**163,076**	**323,508**	**1,372**	**–**	**13,602**
Expenses	**744,267**	**413,950**	**402,382**	**363,052**	**772**	**163,076**	**302,518**	**30,132**	**–**	**11,032**

Year 2017	**Almaraz**	**Trillo**	**Vandellós**	**Ascó**	**Aceca**	**A.I.E. Almaraz-Trillo**	**A.I.E. Ascó-Valdellós**	**West of Duddon Sands**	**Wikinger OSS**	**Torre IBERDROLA**
Segment	Liberalised							Renewables		Other businesses
Intangible assets.	–	–	–	–	–	4,437	–	–	–	27
Property, plant and equipment										
Technical installations	751,698	1,042,424	1,038,075	674,207	–	–	–	1,478,192	155,274	–
Other fixed assets	377	4,511	14,435	–	1,811	2,283	–	–	–	192,514
Non-Current financial Assets	22,507	11,290	43,090	9,864	2,430	1,945	118,902	–	–	–
Current assets	703,117	386,376	410,124	359,494	732	53,103	159,062	5,476	–	1,581
Total assets	**1,477,699**	**1,444,601**	**1,505,724**	**1,043,565**	**4,973**	**61,768**	**277,964**	**1,483,668**	**155,274**	**194,122**
Non-Current Liabilities	**331,443**	**462,493**	**499,855**	**225,358**	**–**	**40,277**	**128,831**	**–**	**–**	**1,437**
Current Liabilities	**1,021,982**	**957,884**	**916,211**	**756,556**	**4,289**	**21,491**	**129,901**	**37,264**	**–**	**1,209**
Income	**867,501**	**427,055**	**477,885**	**409,159**	**328**	**156,918**	**270,279**	**1,293**	**–**	**13,034**
Expenses	**765,143**	**412,696**	**422,650**	**360,119**	**559**	**156,918**	**287,994**	**33,732**	**–**	**10,571**

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46. GUARANTEE COMMITMENTS TO THIRD PARTIES AND OTHER CONTINGENT LIABILITIES

IBERDROLA and its subsidiaries are required to provide the bank or corporate guarantees associated with the normal management of the Group's activities.

In this regard, the IBERDROLA Group guarantees the obligations undertaken in energy purchase agreements and grid access transactions in different energy markets and against the operators of different electricity systems (MEFF, OMIE, National Grid, CFE, REE and EDP Distribución).

With regard to generation from renewable sources, the IBERDROLA Group has provided guarantees to third parties to cover the construction, bringing into service and dismantling of facilities, in addition to its responsibilities in long-term energy sales.

In 2016, the signing of nonconformity has taken place regarding the corporate income tax for the years 2008 to 2011 and regarding the Value Added Tax, for years 2010 and 2011. IBERDROLA has filed the corresponding claims to the Economic Administrative Court against the liquidation agreements, which confirm the acts of nonconformity, requesting the automatic suspension of the execution of the settlements by means of the necessary bank guarantees (Note 31).

In addition, at 31 December 2018 and 2017, there were outstanding obligations resulting from bond issues in the United States amounting to Euros 1,787,818 and Euros 1,701,555 thousand that were secured by the items in the property, plant and equipment of the subgroup AVANGRID.

IBERDROLA considers that any additional liability other than those provisioned at 31 December 2018 and 2017, arising from the guarantees provided at that date, if any, would not be significant.

Moreover, the IBERDROLA Group in compliance with the contractual obligations associated with loans received from banks, had fully or partially pledged some of its subsidiaries shares at 31 December 2018 and 2017. The detail, by company, of the shares pledged is as follows:

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Thousands of Euros	2018			2017		
Company	Carrying amount	Percentage of ownership IBERDROLA Group	Carrying amount by percentage of IBERDROLA Group's ownership (thousands of Euros	Carrying amount	Percentage of ownership IBERDROLA Group	Carrying amount by percentage of IBERDROLA Group's ownership (thousands of Euros
Renewables business - Spain						
Eólica 2000, S.L.	5,764	51.00%	2,940	5,268	51,00%	2,687
Eólica de Campollano, S.A. (1)	27,031	25,00%	6,758	27,090	25,00%	6,773
Molinos de La Rioja, S.A. (1)	14,887	42,37%	6,308	13,372	42,37%	5,666
Molinos del Cidacos, S.A. (1)	37,336	31,78%	11,865	38,305	31,78%	12,173
Renewables business - Brazil						
Arizona 1 Energia Renovável, S.A.	10,993	52,45%	5,766	12,795	52,45%	6,711
Caetité 1 Energia Renovável, S.A.	16,499	52,45%	8,654	21,512	52,45%	11,283
Caetité 2 Energia Renovável, S.A.	18,895	52,45%	9,910	26,374	52,45%	13,833
Caetité 3 Energia Renovável, S.A.	16,083	52,45%	8,436	20,015	52,45%	10,498
Calango 1 Energia Renovável, S.A.	13,166	52,45%	6,906	16,882	52,45%	8,855
Calango 2 Energia Renovável, S.A.	11,192	52,45%	5,870	13,611	52,45%	7,139
Calango 3 Energia Renovável, S.A.	11,884	52,45%	6,233	13,787	52,45%	7,231
Calango 4 Energia Renovável, S.A.	10,891	52,45%	5,712	14,878	52,45%	7,804
Calango 5 Energia Renovável, S.A.	11,419	52,45%	5,989	15,565	52,45%	8,164
Calango 6 Energia Renovável, S.A.	51,491	52,45%	27,007	43,590	52,45%	22,863
Canoas Energia Renovável, S.A.	43,767	52,45%	22,956	42,184	52,45%	22,126
Energias Renováveis do Brasil, S.A.	–	–	–	133,891	52,45%	70,226
Força Eolica Participaçoes, S.A.	58,563	52,45%	30,716	59,857	52,45%	31,395
Lagoa I, S.A.	52,827	52,45%	27,708	50,428	52,45%	26,449
Lagoa II, S.A.	42,521	52,45%	22,302	42,626	52,45%	22,357
Mel 2 Energia Renovável, S.A.	7,310	52,45%	3,834	7,536	52,45%	3,953
Santana 1, Energia Renovável, S.A.	40,791	52,45%	21,395	47,585	52,45%	24,958
Santana 2, Energia Renovável, S.A.	32,365	52,45%	16,975	37,796	52,45%	19,824
Liberalised business - Spain						
Tirme, S.A. (1) (Note 13.a)	–	–	–	24,860	20,00%	4,972
Liberalised business - Brazil						
Baguari Geraçao de Energia Elétrica, S.A.	37,571	52,45%	19,706	37,240	52,45%	19,532
Belo Monte Participaçoes, S.A.	306,082	52,45%	160,540	317,238	52,45%	166,391
Companhia Hidrelétrica Teles Pires, S.A. (1)	424,280	26,75%	113,504	511,804	26,75%	136,908
Energetica Aguas da Pedra, S.A. (1)	97,405	26,75%	26,055	112,378	26,75%	30,061
Energetica Corumba III (1)	37,391	13,11%	4,903	40,117	13,11%	5,259
Geraçao CIII, S.A.	57,589	52,45%	30,205	55,890	52,45%	29,314
Norte Energía, S.A. (1)	2,971,872	5,25%	155,875	2,939,875	5,25%	154,343
Teles Pires Participaçoes, S.A. (1)	326,387	26,52%	86,554	488,323	26,52%	129,503
Geraçao Ceu Azul, S.A.	255,988	52,45%	134,266	–	–	–
Liberalised business - Mexico						
Parque Industrial de Energías Renovables II Quecholac Felipe Angeles, S.A. de C.V.	15,556	51,00%	7,934	20,083	51,00%	10,242
Parque Industrial de Energia Renovable SA de CV	62,647	51,00%	31,950	–	–	–
Parque Industrial de Energías Renovables IV , S.A. de C.V.	403	51,00%	206	–	–	–
Networks business - Brazil						
Potiguar Sul Transmissao de Energia, S.A.	55,282	52,45%	28,995	67,966	52,45%	35,648
Total	**5,184,128**		**1,064,933**	**5,320,721**		**1,075,141**

(1) Companies recognised as equity-accounted investee.

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47. REMUNERATION OF THE BOARD OF DIRECTORS

47.1 2018 by-law stipulated remuneration

Article 48 of IBERDROLA's by-laws provides that the Company shall assign, as a statutory expense, an amount equal to a maximum of 2% of the profit obtained in the year by the consolidated group for the following purposes:

On the proposal of the Appointments and Remuneration Committee, the board of directors has decided to propose to shareholders at their General Meeting to assign by-law stipulated remuneration of Euros 17,000 thousand in 2018 and the same amount as in the previous three years, this is in 2015, 2016 and 2017.

These amounts have been registered under the "Personnel expenses" heading in the consolidated income statements (Note 37).

a) Fixed remuneration and attendance premium

The fixed annual remuneration and attendance premium received by board and committee members depends on the duties assigned to them in the board of directors and its commissions in 2018 and 2017. The details are as follows:

	Fixed remuneration		Attendance premium	
Thousands of Euros	2018	2017	2018	2017
Chairman of the Board	567	567	4	4
Vice-chairman of the board of directors and committees chairmen	440	440	4	4
Committee members	253	253	2	2
Board members	165	165	2	2

b) Remuneration of the executive directors for their executive duties

The board of directors has resolved to maintain the fixed remuneration for the chairman and chief executive officer in 2018 at Euros 2,250 thousand. It also decided to maintain the limit of variable annual remuneration, which may not exceed Euros 3,250 thousand and which will be paid as far as been agreed in 2019.

The board of directors decided on a fix remuneration in 2018 of Euros 1,000 thousand for the member of the board and Business CEO and set a limit of variable annual remuneration of Euros 1,000, to be paid, as may be agreed, in 2019.

c) Board member remunerations paid and accrued

The detailed fixed remuneration accrued by the members of the board of directors, individually, during 2018 and 2017, respectively, is detailed as follows:

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Thousands of Euros	Salaries	Fixed remuneration (1)	Remuneration for sitting on Committees (1)	Attendance fee	Short-term variable remuneration (9)	Compensations	Retribution in kind	Total 2018	Total 2017
Chairman of the Board									
Mr José Ignacio Sánchez Galán	2,250	567	–	92	3,088	–	65	6,062	6,149
Vice-chairman of the board of directors and committees chairmen	–	–	–	–	–	–	–	–	–
Inés Macho Stadler (2)	–	165	275	68	–	–	3	511	517
Samantha Barber	–	165	275	74	–	–	2	516	514
María Helena Antolín Raybaud	–	165	275	40	–	–	6	486	487
Georgina Kessel Martínez	–	165	275	64	–	–	1	505	499
Juan Manuel González Serna(3)	–	165	187	34	–	–	1	387	210
Committee members	–	–	–	–	–	–	–	–	–
Iñigo Víctor de Oriol Ibarra	–	165	88	38	–	–	5	296	299
Angel Jesús Acebes Paniagua	–	165	88	58	–	–	3	314	313
Denise Mary Holt	–	165	88	40	–	–	1	294	292
José Walfredo Fernández	–	165	88	40	–	–	1	294	292
Manuel Moreu Munaiz	–	165	88	62	–	–	2	317	315
Xabier Sagredo Ormaza	–	165	88	40	–	–	2	295	293
Francisco Martínez Córcoles(4)	1,000	165	–	16	710	–	27	1,918	905
Anthony Luzzatto Gardner (5)	–	118	63	16	–	–	1	198	–
Ceased members	–	–	–	–	–	–	–	–	–
Santiago Martínez Lage (6)	–	–	–	–	–	–	–	–	77
José Luis San Pedro Guerenabarrena (7)	–	–	–	–	–	–	–	–	76
Braulio Medel Cámara (8)	–	47	25	14	–	–	3	89	288
Total	**3,250**	**2,712**	**1,903**	**696**	**3,798**	**–**	**123**	**12,482**	**11,526**

(1) Remuneration accrued in 2018. These amounts not satisfied until the approval of 2018 by-law stipulated remuneration by the General Shareholders Meeting 2019.

(2) Appointed vice-chairperson of the board of directors on 21 June 2018.

(3) Appointed member on 31 March 2017. On 21 June 2018 the board of directors approved the appointment as a member of the Audit and Risk Supervision Committee.

(4) Appointed member-Business CEO on 31 March 2017.

(5) Appointed member on 13 April 2018. On that same date the board of directors approved the appointment as a member of the Corporate Social Responsibility Committee.

(6) Ceased as vice-chairman of Boards of Directors at their meeting on 31 March 2017.

(7) Ceased as vice-chairman of Boards of Directors at their meeting on 31 March 2017.

(8) Ceased as vice-chairman of Boards of Directors at their meeting on 13 April 2018.

(9) Amount relates to variable remuneration received in the year 2018, in accordance with attainment of targets and personal performance in 2017.

Currently, all members of the board of directors of IBERDROLA assume responsibility for any of the five committees of the board, except Francisco Martinez Córcoles.

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d) Civil liability insurance

The premium paid to cover directors' Civil Liability Insurance amounts to Euros 72 thousand and Euros 71 thousand in 2018 and 2017, respectively.

e) Others

The expenses of the board of directors related to external services and other items during 2018 and 2017 amounted to Euros 2,131 thousand and Euros 1,855 thousand, respectively.

In 2018 and 2017 rebates were received amounting to Euros 106 thousand and Euros 53 thousand, respectively, with respect to the adjustment of the pension insurance policies relating to former Members of the board of directors.

The undistributed by-law stipulated remuneration for 2018 amounting to Euros 2,421 thousand can be externalized to cover the obligations incurred by the Company to ensure them, in the event they should be materialized.

47.2 Remuneration through the delivery of Company shares

The shareholders at their General Meeting held on 28 March 2014 approved the *2014-2016 Strategic Bonus* as a long-term incentive tied to the performance of the Company in accordance to certain parameters.

In the first half of 2018 the second of the three annual payments was made. The Chairman and CEO received 510,596 IBERDROLA shares. The member-Business CEO was granted 120,931 shared corresponding to his performance prior to his appointment as board member.

47.3 Remuneration for sitting on other committees

Remuneration received by executive directors who in 2018 performed director duties in companies controlled by IBERDROLA amounts to Euros 261 thousand

47.4 Law 11/2018: Non-financial information and diversity

Below the average remuneration received by members per type and sex in 2018 and 2017 is detailed as follows:

	2018		2017	
Thousands of Euros	Men	Women	Men	Women
Executive	4,121	–	4,023	–
Independent and other external	313	462	298	462

The fixed and variable compensation of the member-business CEO up to his appointment, on 31 March 2017 are described in Note 49.

Additionally, executive members have received 631,527 company shares in 2018 and 2017 (Note 47.2).

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47.5 Indemnity clauses

The indemnity clauses for the directors are described in section C.1.39 of the Annual Corporate Governance Report included in the Directors' Report.

48. INFORMATION REGARDING COMPLIANCE WITH ARTICLE 229 OF THE SPANISH COMPANIES ACT

As established in article 229 of the Spanish Companies Act (Ley de Sociedades de Capital) introduced by the Royal Decree-Law 1/2010 of 2 July 2010 and in the Law 31/2014, of 3 December 2014, modifying the Spanish Companies Act for the improvement of corporate governance, the conflicts of interest.

The president and CEO and the member-Business CEO were absent during the deliberation of all the agreements related to his system of remuneration and assurance.

Finally, Mr. Sagredo Ormaza was absent during the deliberation of that agreements involving Kutxabank, S.A.

49. REMUNERATION OF SENIOR EXECUTIVES

Senior executives are those who answer directly to the Company's board of directors, chairman and chief executive officer and, in all cases, the internal audit director, apart from any other director recognised as senior executive.

At 31 December 2018 and 2017, the Company had 5 and 5 senior executives respectively.

The personnel expenses relating to senior executives amounting to Euros 6,598 thousand and Euros 10,373 thousand in 2018 and 2017, respectively, are recognised under the "personnel expenses" heading in the income statements of the mentioned years.

The remuneration and other compensation received by senior executives in 2018 and 2017 are detailed below:

Thousands of Euros	31.12.2018	31.12.2017 (1)
Retribution in cash	3,050	4,227
Performance-based compensation	2,214	2,909
Retribution in kind	98	421
Payments to account not charged	33	36
Social Security	69	70
Promoter contribution pension plan	30	40
Complementary policy accrual	613	2,171
Complementary policy risk	491	499
Total	**6.598**	**10,373**

Number of shares	31.12.2018	31.12.2017
Share-based payment plan, strategic bonus	261,106	261,106
Charged taxes and payments in cash Strategic Bonus (thousands of Euros)	1,206	2,503

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(1) Includes the proportional part of remuneration and other payments the Business CEO until 31 March 2017, then appointed member-Business CEO.

Includes the proportional part of remuneration and other payments, as well as the settlement of the 2014-2016 Strategic Bonus for the Director of Internal Audit, until the date of retirement.

Includes the proportional part of the Internal Audit Officer until the date of appointment, on 21 February 2017.

During the first semester of 2017, 261,106 shares corresponding to the 2014-2016 Strategic Bonus, were delivered to senior management, as described in Note 20; thus, the members of senior management received IBERDROLA shares in equal amounts in 2017, 2018 and 2019.

For comparative purposes, the total remuneration received by the Business CEO in 2018 amounted to Euros 1,710 thousand. The total top management remuneration amount in 2017 does not include the Euros 750 million the Business CEO was paid for his position as member of the board in 2018 (Note 47).

In the first half of 2018 the second of three annual payments has been made corresponding to the Strategic bonus 2014-2016 (Note 21), once the valid period of the grounds supporting this remuneration have been confirmed. Senior management members have received 261,106 shares for the second payment. At 31 December 2018, a provision of Euros 3,384 thousand had been recorded to guarantee the third and final payment.

A maximum of 1,000,000 shares in aggregate are to be delivered to senior executives under the *2017-2019 Strategic Bonus* (Note 21), tied to their success in achievement of objectives. As of 31 December 2017, Euros 5,090 thousand have been provided for these commitments.

Under the same conditions as the other directors of companies that are not wholly owned directly or indirectly by the Company and in accordance with the directors' Remuneration Policy approved by the General Shareholders' Meeting held on 13 April 2018, the members of senior management who have held the office of director have received from these companies the remuneration corresponding to the office in accordance with their corporate governance rules. In the year 2018the remuneration received amounted to Euros 970 thousand.

The indemnity clauses for senior management are described in section C.1.39 of the Annual Corporate Governance Report included in the Directors' Report.

On the other hand, during 2018 and 2017 there were no other transactions with the executives outside the normal course of the business.

The amount of fixed and variable remuneration to executives not included in IBERDROLA's top management (150 people) totalled Euros 47,310 thousand in 2018. In 2017, the amount was Euros 44,610 thousand (145 people). These amounts do not include shares delivered as part of the 2014-2016 Strategic bonus.

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50. RELATED PARTY TRANSACTIONS AND BALANCES

The transactions detailed below are specific to the ordinary business activity and have been carried out on an arm's-length basis:

Transactions carried out by IBERDROLA with significant shareholders

The most noteworthy transactions in 2018 and 2017 are as follows:

	Significant shareholders(1)	
	2018	2017
Thousands of Euros	Qatar Investment Authority	Qatar Investment Authority
Dividends and other distributed profit (2)	2,766	18,948

(1) IBERDROLA treats as a major shareholder any shareholder who exerts a significant influence on the company's financial and operating decisions. Significant influence is defined as having at least one director on the Board.
This also applies to those significant shareholders whose ownership interest in the company enables them to exercise the proportional representation system.
At 31 December 2018 only Qatar Investments Authority meets this condition.

(2) Amounts recognised as dividends and other benefits distributed in the first half of 2018 and 2017 correspond to the scrip dividend scheme and the attendance fee received if applicable.

Transactions carried out by other companies with significant shareholders

The most noteworthy transactions in 2018 and 2017 are as follows:

	Significant shareholders [1]	
	2018	2017
Thousands of Euros	Qatar Investment Authority	Qatar Investment Authority
Finance income [2]	344	

2) Correspond to income for cash placing in Qatar National Bank by Scottish Power, Ltd. At 31 December there were no outstanding balances.

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Other investments in equity-accounted investees

The breakdown of transactions with equity-accounted investees which are related parties that were not eliminated in consolidation (Note 2.b) is as follows:

	2018						2017					
Thousands of Euros	Asset acquisition	Trade payables	Trade receivables	Sales and services provide	Provisions	Received services	Asset acquisition	Trade payables	Trade receivables	Sales and services provide	Provisions	Received services
SIEMENS-GAMESA (1)	218,602	83,510	765	1,376	1,702	37,602	365,038	126,339	2,678	2,898	1,836	55,445
East Anglia Offshore Wind, Ltd.	4,418	3,905	706	–	–	–	–	–	–	226	–	–
NGET/SPT Upgrades Ltd. (2)	85,033	874	2,839	1,731	–	741	117,397	–	891	2,848	–	–
Morecambe Wind, Ltd.	–	1,207	–	2,022	13,469	–	–	–	–	1,041	13,284	–
Companhia Hidrelétrica Teles Pires, S.A. (3)	–	7,300	1,189	14,575	84,571	–	–	9,598	19	530	101,526	–
Norte Energia, S.A. (3)	–	21,854	–	–	188,769	–	–	15,809	–	–	125,112	–
Energetica Aguas da Pedra, S.A. (3)	–	1,683	2,683	1,906	14,474	–	–	1,853	1	–	–	–
Fudepor, S.L. (4)	–	–	38	4,233	–	–	–	0	2	5,623	–	–
Cogeneración Gequisa, S.A. (4)	–	1,709	1	6,607	–	–	–	337	1	2,691	–	–
Intermalta Energía, S.A. (4)	–	-	3	7,143	–	–	–	–	4	227	–	–
Vineyard Wind LLC (Note 13.a)	–	–	–	2,608	–	–	–	–	–	–	–	–
Other companies	1,762	76,902	15,100	6,128	4,195	2,121	338	86,333	16,808	11.053	8,389	5,214
Total	**309,815**	**198,944**	**23,324**	**48,329**	**307,180**	**40,464**	**482,773**	**240,269**	**20,404**	**27,137**	**250,147**	**60,659**

(1) The purchase of assets mainly correspond to sales to SIEMENS-GAMESA of repair equipment, wind turbines and towers for the wind farms: Kilgallioch, (United Kingdom), Pier y Bajío (Mexico), Twin Butt II (United States) and Chimiche II (Tenerife-Spain)

On 21 December 2011, IBERDROLA and Gamesa Eólica, S.L.U (a company belonging to the GAMESA Group) entered into a framework agreement for the supply and maintenance of wind turbines whereby IBERDROLA undertakes to acquire from GAMESA a minimum amount of megawatts equal to 50% of the total fleet of onshore wind turbines acquired by IBERDROLA for its renewables business unit during the term of the framework agreement. This commitment will remain in effect from 1 January 2013 until 31 December 2022 or until the number of megawatts acquired by IBERDROLA from GAMESA under the framework agreement reaches 3,800, whichever occurs first.

(2) The purchase of assets mainly corresponds to investments made by Scottish Power Transmission, Ltd. to build the submarine interconnection line in the Irish Sea to increase the power transmission capacity between England and Scotland. For this purpose, Scottish Power Transmission, Ltd. participates together with the British operator National Grid in the joint venture NGET/SPT Upgrades, Ltd.

(3) Supplies relate mainly to purchases of electricity.

(4) The sales and services rendered mainly correspond to gas sales to co-generation companies.

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Transactions with directors and senior executives

	Significant shareholders [1]			
	2018		2017	
Thousands of Euros	Directors	Executives	Directors	Executives
Dividends and other distributed profit (1)	482	11	765	179

(1) Recognised dividends and other benefits distributed in the first half of 2018 and 2017 corresponded to the scrip dividend and the attendance fee to the General Shareholder's Meeting, if applicable.

51. EVENTS AFTER 31 DECEMBER 2018

After 31 December 2017 the main events have been as follows:

IBERDROLA scrip dividend

On 04 January 2019, the facts in relation to the implementation of the second paid-up capital increase (*IBERDROLA* flexible dividend) approved at the IBERDROLA General Shareholders' Meeting on 13 April 2018, under item 13 of the agenda, were determined and were as follows:

- The maximum number of shares to be issued under the capital increase is 142,169,533.
- The number of free allocation rights required to receive one new share is 45.
- The maximum nominal value of the capital increase amounts to Euros 106,627,150
- The acquisition price of the free allocation rights under the purchase commitment made by IBERDROLA is Euros 0.151.
- Gross interim dividend amount per share was Euros 0.151.

At the end of the trading period for free allocation rights:

- During the period established for this purpose, the holders of 870,368,973 shares of the Company decided to receive interim dividends. Thus, the gross total of distributed interim dividends was Euros 131.426 thousand. As a result, these shareholders have expressly forgone 870,368,973 free allotment rights and therefore 19,341,533 new shares.
- The final number of new ordinary shares with a nominal value of Euros 0.75 to be issued will be 122,828,000, giving a nominal capital increase from this implementation of Euros 92,121 thousand. This will add 1.920% to IBERDROLA's pre-issue share capital.
- As a result, the share capital of IBERDROLA following the capital increase amounts to Euros 4,890,342,750, represented by 6,520,457,000 ordinary shares of Euros 0.75 par value each, fully subscribed and paid.
- Following compliance with on legal requirements (and verification of compliance by the Spanish National Security Market Commission), the new shares have been admitted for trading on the continuous market of the Madrid, Barcelona, Bilbao and Valencia stock exchanges on 05 February 2019. The ordinary trading of new shares has started on 06 February 2019.

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Transactions with treasury shares

At the reporting date of these annual accounts, accumulators have been liquidated on treasury shares (Note 20) and the result of its liquidation has resulted in the acquisition of 4,016,049 treasury shares for Euros 26,493 thousand (3,806,688 shares have been accumulated of a maximum potential shares of 7,613,376 at 31 December 2018).

Additionally, from the 2018 year-end until the date of formulation of these consolidated annual accounts 7,568,868 treasury shares have been acquired (of which 1,260,317 have been acquired through accumulators signed since the reporting date) amounting to Euros 51,411 thousand and 1,148,555 shares have been transferred for Euros 7,218 thousand. At the date of authorization for issue of these annual accounts, IBERDROLA, S.A. had 145,427,390 treasury shares.

Banking Market and issue of Euromarket bonds

Significant financing transactions carried out by IBERDROLA after 31 December 2018 are as follows:

2019						
Lessor	**Operation**	**Millions of euros**	**Currency**	**Coupon**	**Extension**	**Maturity**
Main new financing transactions						
IBERDROLA Financiación, S.A.U.	Bilateral loan	125	EUR	-	option to extend it for 1 +1 year	Feb-24
IBERDROLA Financiación, S.A.U.	EIB loan	150	EUR	-	-	Upon disposal
IBERDROLA Finanzas	Private issue	50	EUR	1.782%	-	Oct-30
IBERDROLA International B.V.	Hybrid green bonds	800	EUR	3.25%	-	Perpetual
Main transaction for extending existing financing						
IBERDROLA S.A. (1)	Syndicated loan	2,979	EUR	-	+1 year	Feb-24
	Syndicated loan	2,321	EUR	-	+1 year	Feb-24

(1) Extension of novated syndicated loans for 1 additional year in January 2018 in the amount of Euros 5,300 million.

52. FEES FOR SERVICES PROVIDED BY AUDITORS

The fees resulted from the services provided in 2018 and 2017 by the statutory auditor are detailed in the chart below:

Thousands of Euros	TO IBERDROLA			To the rest of the Group Companies			Total		
Year 2018	**Main Auditor**	**Other auditors**	**Total**	**Main Auditor**	**Other auditors**	**Total**	**Main Auditor**	**Other auditors**	**Total**
Audit services	3,223	–	**3,223**	22,116	–	**22,116**	25,339	–	**25,339**
Other audit related services	1,459	–	**1,459**	1,592	–	**1,592**	3,051	–	**3,051**
Total	**4,682**	**–**	**4,682**	**23,708**	**–**	**23,708**	**28,390**	**–**	**28,390**

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Thousands of Euros	TO IBERDROLA			To the rest of the Group Companies			Total		
Year 2017	**Main Auditor**	**Other auditors**	**Total**	**Main Auditor**	**Primary auditor**	**Total**	**Main Auditor**	**Other auditors**	**Total**
Auditing services	3,744	–	**3,744**	21,266	371	**21,637**	25,010	371	**25,381**
Other provided services related to auditing	1,386	–	**1,386**	2,336	1,633	**3,969**	3,722	1,633	**5,355**
Total	**5,130**	**–**	**5,130**	**23,602**	**2,004**	**25,606**	**28,732**	**2,004**	**30,736**
Other professional services	–	–	**–**	–	481	**481**	–	481	**481**
Total	**5,130**	**–**	**5,130**	**23,602**	**2,485**	**26,087**	**28,732**	**2,485**	**31,217**

The details of "Other services related to auditing" are as follows:

	2018		2017	
Thousands of Euros	**TO IBERDROLA**	**To the rest of the Group Companies**	**TO IBERDROLA**	**To the rest of the Group Companies**
Limited revision interim information	1,194	144	1,162	443
Comfort letters debt issue	205	474	224	1,042
Agreed procedure reports (*)	60	974		101
Historical information and proforma verification services	-	-	-	750
Total	**1,459**	**1,592**	**1,386**	**2,336**

(*) Mainly agreed procedure reports required by the regulator in each country, as well as reports additional to the audit report required by current legislation in certain countries where the Group operates.

53. EARNINGS PER SHARE

The weighted average number of ordinary shares used in the calculation of the basic and diluted earnings per share at 31 December 2018 and 2017 (Note 3.z) is as follows:

	2018	2017 Restated (Note 2.d)
Average number of shares during the year	6,613,937.351	6,806,224,288
Average number of treasury shares held	(156,370,387)	(125,969,679)
Number of shares outstanding	**6,457,566,964**	**6,680,254,609**

The breakdown of the required information at 31 December 2018 and 2017 is the following:

	2018	2017 Restated (Note 2.d)
Net profit from the parent Company's continuing operations (*) (thousands of Euros)	3,065,220	3,057,005
Net profit from discontinuing operations (thousands of Euros)	(51,168)	(253,011)
Number of shares outstanding	6,457,566,964	6,680,254,609
Basic and diluted earnings per share (euros) from discontinued operations	**0.475**	**0.458**
Basic and diluted earnings per share (euros) from discontinued operations	**(0.008)**	**(0.038)**

(*) Net profit for the year from net continuing operations of subsidiary companies

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In the consolidated annual accounts of the IBERDROLA Group for the years ended 31 December 2018 y 2017, basic earnings per share coincide with diluted earnings per share, since there were no potential shares outstanding during these years that could be converted into ordinary shares.

As described in Note 20 and 51 of these consolidated annual accounts, in July 2017 and January 2018 two free capital increases took place in the context of the "IBERDROLA flexible dividend" programme. According to IAS 33: "Earning per share" these scrip issues meant that earnings per share for 2017 included in the consolidated annual accounts for that year had to be corrected, and have been taken into account when calculating basic and diluted earnings per share for 2018.

54. PREPARATION OF THE CONSOLIDATED ANNUAL ACCOUNTS

The consolidated annual accounts for the year ended on 31 December 2018 have been formally prepared by the directors of IBERDROLA on 19 February 2019.

55. EXPLANATION ADDED FOR TRANSLATION TO ENGLISH

These Consolidated financial statements are presented on the basis of IFRS, as adopted by the European Union. Certain accounting practices applied by the Group that conform to IFRS may not conform to other generally accepted accounting principles in other countries.

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APPENDIX I

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YEAR 2018 ADDITIONAL INFORMATION RELATED TO GROUP COMPANIES, JOINTLY-CONTROLLED COMPANIES AND ASSOCIATES OF THE IBERDROLA GROUP

Below is the detail of the proportion of direct or indirect ownership that IBERDROLA, S.A. holds in its subsidiaries in its different businesses. The proportion of decision-making votes in the bodies of these companies controlled by IBERDROLA basically corresponds with the proportion of ownership.

(*) The consolidation method by company is detailed as follows:
G: Full consolidation
E: Equity-accounted investee

Company	Registered office	Activity	Percentage of direct or indirect interest 31.12.2018	31.12.2017	Method (*)
Liberalised business					
Spain					
Cogeneración Gequisa, S.A.	Spain	Energy	50.00	50.00	E
Enercrisa, S.A.	Spain	Energy	50.00	50.00	E
Energía Portátil Cogeneración, S.A.	Spain	Energy	50.00	50.00	E
Energyworks Aranda, S.L.	Spain	Energy	99.00	99.00	G
Energyworks Carballo, S.L.	Spain	Energy	99.00	99.00	G
Energyworks Cartagena, S.L.	Spain	Energy	99.00	99.00	G
Energyworks Fonz, S.L.	Spain	Energy	100.00	100.00	G
Energyworks Milagros, S.L.	Spain	Energy	100.00	100.00	G
Energyworks Monzón, S.L.	Spain	Energy	100.00	100.00	G
Energyworks San Millán, S.L.	Spain	Energy	100.00	100.00	G
Energyworks Villarrobledo, S.L.	Spain	Energy	99.00	99.00	G
Energyworks Vit-Vall, S.L.	Spain	Energy	99.00	99.00	G
Fudepor, S.L.	Spain	Energy	50.00	50.00	E
IBERDROLA Clientes, S.A.U.	Spain	Retailer	100.00	100.00	G
IBERDROLA Clientes Internacional, S.L.	Spain	Holding	100.00	-	G
IBERDROLA Cogeneración, S.L.U.	Spain	Holding	100.00	100.00	G
IBERDROLA Comercialización de Último Recurso, S.A.U.	Spain	Retailer	100.00	100.00	G
IBERDROLA Generación España, S.A.U.	Spain	Energy	100.00	100.00	G
IBERDROLA Generación Nuclear, S.A.U.	Spain	Energy	100.00	100.00	G
IBERDROLA Generación Térmica, S.L.U.	Spain	Energy	100.00	-	G
IBERDROLA Operación y Mantenimiento, S.A.U.	Spain	Services	100.00	100.00	G
IBERDROLA Servicios Energéticos, S.A.U.	Spain	Services	100.00	100.00	G
Iberduero, S.L.U.	Spain	Energy	100.00	100.00	G
Intermalta Energía, S.A.	Spain	Energy	50.00	50.00	E
Nuclenor, S.A.	Spain	Energy	50.00	50.00	E
Peninsular Cogeneración, S.A.	Spain	Energy	50.00	50.00	E
Productos y Servicios de Confort, S.A.	Spain	Services	100.00	100.00	G
Tarragona Power, S.L.U.	Spain	Energy	100.00	100.00	G
Tecnatom, S.A. (5)	Spain	Other	30.00	30.00	-
IBERDROLA Clientes Portugal, Unipessoal Ltda.	Portugal	Retailer	100.00	100.00	G
United Kingdom					
Scottish Power Generation Holdings Ltd.	United Kingdom	Holding	100.00	100.00	G
ScottishPower (DCL), Ltd.	United Kingdom	Energy	100.00	100.00	G
ScottishPower (SCPL), Ltd.	United Kingdom	Energy	100.00	100.00	G
ScottishPower Energy Management (Agency), Ltd.	United Kingdom	Services	100.00	100.00	G
ScottishPower Energy Management, Ltd.	United Kingdom	Energy	100.00	100.00	G
ScottishPower Energy Retail, Ltd.	United Kingdom	Energy	100.00	100.00	G

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Company	Registered office	Activity	Percentage of direct or indirect interest 31.12.2018	31.12.2017	Method (*)
ScottishPower Generation (Assets), Ltd	United Kingdom	Energy	100.00	-	G
SP Dataserve, Ltd.	United Kingdom	Debt management	100.00	100.00	G
SP Gas Transportation Cockenzie, Ltd.	United Kingdom	Inactive	100.00	100.00	G
SP Gas Transportation Hatfield, Ltd.	United Kingdom	Inactive	100.00	100.00	G
SP Smart Meter Assets, Ltd.	United Kingdom	Energy	100.00	100.00	G
Rest of Europe					
IBERDROLA Energy Deutschland, GmbH.	Germany	Services	100.00	100.00	G
IBERDROLA Energie France, S.A.S.	France	Services	100.00	100.00	G
IBERDROLA Clienti Italia, S.R.L.	Italy	Services	100.00	100.00	G
IBERDROLA Ireland, Ltd	Ireland	Services	100.00	-	G
Mexico					
Hidrola I, S.L.U.	Spain	Holding	100.00	100.00	G
Cinergy, S.R.L. de C.V.	Mexico	Services	100.00	100.00	G
IBERDROLA Soporte a Proyectos Liberalizados, S.A. de C.V. (Before, Electricidad de Veracruz, S.A. de C.V.)	Mexico	Services	100.00	100.00	G
Enertek, S.A. de C.V.	Mexico	Energy	99.99	99.99	G
IBERDROLA Clientes, S.A. de C.V.	Mexico	Retailer	100.00	100.00	G
IBERDROLA Cogeneración Altamira, S.A. de C.V.	Mexico	Energy	100.00	100.00	G
IBERDROLA Cogeneración Bajío, S.A. de C.V.	Mexico	Energy	100.00	100.00	G
IBERDROLA Cogeneración Ramos, S.A. de C.V.	Mexico	Energy	100.00	100.00	G
IBERDROLA Energía Altamira de Servicios, S.A. de C.V.	Mexico	Services	100.00	100.00	G
IBERDROLA Energía Altamira, S.A. de C.V.	Mexico	Energy	100.00	100.00	G
IBERDROLA Energía Baja California, S.A. de C.V.	Mexico	Energy	100.00	100.00	G
IBERDROLA Energía del Golfo, S.A. de C.V.	Mexico	Energy	100.00	100.00	G
IBERDROLA Energía Escobedo, S.A. de C.V.	Mexico	Energy	100.00	100.00	G
IBERDROLA Energía La Laguna, S.A. de C.V.	Mexico	Energy	99.99	99.99	G
IBERDROLA Energía Monterrey, S.A. de C.V.	Mexico	Energy	99.99	99.99	G
IBERDROLA Energía Noroeste, S.A. de C.V.	Mexico	Energy	100.00	100.00	G
IBERDROLA Energía Tamazunchale, S.A. de C.V.	Mexico	Energy	99.99	99.99	G
IBERDROLA Energía Topolobampo, S.A. de C.V.	Mexico	Energy	100.00	100.00	G
IBERDROLA Generación, S.A. de C.V.	Mexico	Services	100.00	100.00	G
IBERDROLA Generación México, S.A. de C.V.	Mexico	Holding	100.00	100.00	G
IBERDROLA México, S.A. de C.V.	Mexico	Holding	100.00	100.00	G
IBERDROLA Servicios Corporativos, S.A. de C.V.	Mexico	Services	100.00	100.00	G
Administrative services Tamazunchale, S.A. de C.V.	Mexico	Services	100.00	100.00	G
Servicios de Operación La Laguna, S.A. de C.V.	Mexico	Services	100.00	100.00	G
Industrial and administrative services del Noreste, S.R.L. de C.V.	Mexico	Services	51.12	51.12	G
Brazil					
Baguari Geraçao de Energia Elétrica, S.A.	Brazil	Energy	52.45	52.45	G
Bahia PCH II, S.A. Bahía Pequeña C. Hidroeléctrica	Brazil	Energy	52.45	52.45	G
Bahia PCH III, S.A. Bahía Geraçao de Energia	Brazil	Energy	52.45	52.45	-
Belo Monte Participaçoes, S.A.	Brazil	Holding	52.45	52.45	G
Companhia Hidrelétrica Teles Pires, S.A.	Brazil	Energy	26.75	26.75	E
Elektro Comercializadora de Energia Ltda.	Brazil	Retailer	52.45	52.45	G
Energetica Aguas da Pedra, S.A.	Brazil	Energy	26.75	26.75	E
Energética Corumba III, S.A. (4)	Brazil	Energy	13.11	13.11	E

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Company	Registered office	Activity	Percentage of direct or indirect interest 31.12.2018	31.12.2017	Method (*)
Geraçao Ceu Azul, S.A.	Brazil	Energy	52.45	52.45	G
Geraçao CIII, S.A.	Brazil	Holding	52.45	52.45	G
Itapebí Geraçao de Energia, S.A.	Brazil	Energy	52.45	52.45	G
NC Energia, S.A.	Brazil	Retailer	52.45	52.45	G
Neoenergia Operaçao e Manuitençao, S.A.	Brazil	Services	52.45	52.45	G
Norte Energia, S.A. (4)	Brazil	Energy	5.25	5.25	E
PCH Alto do Rio Grande, S.A.	Brazil	Energy	52.45	52.45	G
Sever RJ Participacoes S.A. (5)	Brazil	Energy	52.45	52.45	-
Teles Pires Participaçoes, S.A.	Brazil	Holding	26.52	26.52	E
Termopernambuco, S.A.	Brazil	Energy	52.45	52.45	G
Canada					
IBERDROLA Canadá Energy Services, Ltd.	Canada	Gas	100.00	100.00	G
Renewable Business					
Spain					
Anselmo León Hidráulica, S.L. (1)	Spain	Energy	100.00	100.00	E
Biocantaber, S.L.	Spain	Energy	50.00	50.00	E
Bionor Eólica, S.A.	Spain	Energy	57.00	57.00	G
Biovent Energía, S.A.	Spain	Energy	95.00	95.00	G
Cantaber Generación Eólica, S.L.	Spain	Energy	69.01	69.01	G
Ciener, S.A.U.	Spain	Energy	100.00	100.00	G
Desarrollo de Energías Renovables de La Rioja, S.A. (2)	Spain	Energy	40.51	40.51	E
Ecobarcial, S.A. (2)	Spain	Energy	43.78	43.78	E
Electra de Malvana, S.A. (2)	Spain	Energy	48.00	48.00	E
Electra Sierra de los Castillos, S.L.	Spain	Energy	97.00	97.00	G
Electra Sierra de San Pedro, S.A.	Spain	Energy	80.00	80.00	G
Eléctricas de la Alcarria, S.L.	Spain	Energy	90.00	90.00	G
Eme Hueneja Cuatro, S.L.	Spain	Energy	100.00	100.00	G
Energía de Castilla y León, S.A.	Spain	Energy	85.50	85.50	G
Energías Ecológicas de Tenerife, S.A. (3)	Spain	Energy	50.00	50.00	G
Energías Eólicas de Cuenca, S.A.U.	Spain	Energy	100.00	100.00	G
Energías Renovables de la Región de Murcia, S.A.U.	Spain	Energy	100.00	100.00	G
Eólica Campollano, S.A. (2)	Spain	Energy	25.00	25.00	E
Eólica 2000, S.L.	Spain	Energy	51.00	51.00	G
Eólicas de Euskadi, S.A.U.	Spain	Energy	100.00	100.00	G
IBERDROLA Eólica Marina, S.A.U.	Spain	Energy	100.00	100.00	G
IBERDROLA Generación, S.A.U.	Spain	Energy	100.00	100.00	G
Fincalia Agropecuaria, S.L. (before, IBERDROLA Renewables Solutions, S.A.)	Spain	Energy	100.00	100.00	G
Fincalia Agropecuaria siglo XXI, S.A.	Spain	Energy	100.00	-	G
IBERDROLA Renovables Galicia, S.A.U.	Spain	Energy	100.00	100.00	G
IBERDROLA Renovables Andalucía, S.A.U.	Spain	Energy	100.00	100.00	G
IBERDROLA Renovables Aragón, S.A.U.	Spain	Energy	100.00	100.00	G
IBERDROLA Renovables Canarias, S.A.U.	Spain	Energy	100.00	100.00	G
IBERDROLA Renovables Castilla – La Mancha, S.A.U.	Spain	Energy	100.00	100.00	G
IBERDROLA Renovables Castilla y León, S.A.	Spain	Energy	95.00	95.00	G
IBERDROLA Renovables Energía, S.A.U.	Spain	Holding	100.00	100.00	G
IBERDROLA Renovables Internacional, S.L.	Spain	Holding	100.00	-	G
IBERDROLA Renovables La Rioja, S.A. (2)	Spain	Energy	63.55	63.55	E
Iberenova Promociones, S.A.U.	Spain	Energy	100.00	100.00	G
Iberjalón, S.A.	Spain	Energy	80.00	80.00	G
Minicentrales del Tajo, S.A.	Spain	Energy	66.58	66.58	G
Molinos de La Rioja, S.A. (2)	Spain	Energy	42.37	42.37	E
Molinos del Cidacos, S.A. (2)	Spain	Energy	31.78	31.78	E
Parque Eólico Cruz del Carrutero, S.L.	Spain	Energy	76.00	76.00	G
Peache Energías Renovables, S.A.	Spain	Energy	95.00	95.00	G
Producciones Energéticas Asturianas, S.L.	Spain	Energy	80.00	80.00	G
Producciones Energéticas de Castilla y León, S.A. (2)	Spain	Energy	85.50	85.50	E

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Company	Registered office	Activity	Percentage of direct or indirect interest 31.12.2018	31.12.2017	Method (*)
Proyecto Nuñez de Balboa, S.L.	Spain	Energy	100.00	-	G
Renovables de la Ribera, S.L. [5]	Spain	Energy	50.00	50.00	-
Sistemas Energéticos Altamira, S.A.U.	Spain	Energy	100.00	100.00	G
Sistemas Energéticos Chandrexa, S.A.	Spain	Energy	96.07	96.07	G
Sistemas Energéticos del Moncayo, S.A.	Spain	Energy	75.00	75.00	G
Sistemas Energéticos La Gomera, S.A.U.	Spain	Energy	100.00	100.00	G
Sistemas Energéticos La Higuera, S.A.	Spain	Energy	55.00	55.00	G
Sistemas Energéticos de la Linera, S.A.U.	Spain	Energy	100.00	100.00	G
Sistemas Energéticos La Muela, S.A.	Spain	Energy	80.00	80.00	G
Sistemas Energéticos Mas Garullo, S.A.	Spain	Energy	78.00	78.00	G
Sistemas Energéticos Nacimiento, S.A.U.	Spain	Energy	100.00	100.00	G
Sistemas Energéticos Tacica de Plata, S.A.U.	Spain	Energy	100.00	100.00	G
Sistemas Energéticos Torralba, S.A.	Spain	Energy	60.00	60.00	G
Sistemes Energetics Savalla del Comtat, S.A.U.	Spain	Energy	100.00	100.00	G
Sociedad Gestora de Parques Eólicos de Andalucía, S.A.	Spain	Energy	63.91	63.91	G
Sotavento Galicia, S.A. [4]	Spain	Energy	8.00	8.00	E
Ibertâmega – Sistema Electroprodutor Do Tâmega, S.A.	Portugal	Energy	100.00	100.00	G
IBERDROLA Suporte Projecto Tâmega, Unipessoal Lda.	Portugal	Energy	100.00	100.00	G
United Kingdom					
Celtpower, Ltd.	United Kingdom	Energy	50.00	50.00	E
Coldham Windfarm, Ltd.	United Kingdom	Energy	80.00	80.00	G
East Anglia Offshore Wind, Ltd.	United Kingdom	Energy	50.00	50.00	E
East Anglia One, Ltd.	United Kingdom	Energy	100.00	100.00	G
East Anglia Three, Ltd.	United Kingdom	Energy	100.00	100.00	G
East Anglia One North Ltd.	United Kingdom	Energy	100.00	100.00	G
East Anglia Two Ltd.	United Kingdom	Energy	100.00	100.00	G
Morecambe Wind, Ltd.	United Kingdom	Energy	50.00	50.00	E
ScottishPower Renewable Energy, Ltd.	United Kingdom	Holding	100.00	100.00	G
ScottishPower Renewables (WODS), Ltd.	United Kingdom	Energy	100.00	100.00	G
ScottishPower Renewables UK, Ltd.	United Kingdom	Energy	100.00	100.00	G
ScottishPower Renewables (UK Assets), Ltd	United Kingdom	Energy	100.00	-	G
United States					
Aeolus Wind Power II, LLC	USA	Holding	81.50	81.50	G
Aeolus Wind Power III, LLC	USA	Holding	81.50	81.50	G
Aeolus Wind Power IV, LLC	USA	Holding	81.50	81.50	G
Atlantic Renewable Energy Corporation	USA	Holding	81.50	81.50	G
Atlantic Renewable Projects II, LLC	USA	Holding	81.50	81.50	G
Atlantic Renewable Projects, LLC	USA	Energy	81.50	81.50	G
Atlantic Wind, LLC	USA	Holding	81.50	81.50	G
Aurora Solar, LLC	USA	Holding	81.50	81.50	G
Avangrid Arizona Renewables, LLC	USA	Energy	81.50	81.50	G
Avangrid Logistic Services, LLC	USA	Energy	81.50	81.50	G
Avangrid Renewables Holdings, Inc.	USA	Holding	81.50	81.50	G
Avangrid Renewables, LLC	USA	Holding	81.50	81.50	G
Avangrid Texas Renewables, LLC	USA	Energy	81.50	81.50	G
Avangrid Vineyard Wind, LLC	USA	Holding	81.50	81.50	G

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Company	Registered office	Activity	Percentage of direct or indirect interest 31.12.2018	31.12.2017	Method (*)
Bakeoven Solar, LLC	USA	Energy	81.50	-	G
Barton Windpower, LLC	USA	Energy	81.50	81.50	G
Big Horn II Wind Project, LLC	USA	Energy	81.50	81.50	G
Big Horn Wind Project, LLC	USA	Energy	81.50	81.50	G
Blue Creek Wind Farm, LLC	USA	Energy	81.50	81.50	G
Buffalo Ridge I, LLC	USA	Energy	81.50	81.50	G
Buffalo Ridge II, LLC	USA	Energy	81.50	81.50	G
Casselman Wind Power, LLC	USA	Energy	81.50	81.50	G
Colorado Green Holdings, LLC	USA	Holding	81.50	40.75	G
Colorado Wind Ventures, LLC	USA	Holding	81.50	40.75	G
Coyote Ridge Wind, LLC	USA	Energy	16.30	81.50	E
Deerfield Wind, LLC	USA	Energy	81.50	81.50	G
Desert Wind Farm, LLC	USA	Energy	81.50	81.50	G
Dillon Wind, LLC	USA	Energy	81.50	81.50	G
El Cabo Wind, LLC	USA	Energy	81.50	80.69	G
El Cabo Wind Holdings	USA	Holding	81.50	80.69	G
El Cabo Partners, LLC	USA	Energy	81.50	81.50	G
Elk River Wind Farm, LLC	USA	Energy	81.50	81.50	G
Elm Creek Wind II, LLC	USA	Energy	81.50	81.50	G
Elm Creek Wind, LLC	USA	Energy	81.50	81.50	G
Farmers City Wind, LLC	USA	Energy	81.50	81.50	G
Flat Rock Windpower II, LLC	USA	Energy	40.75	40.75	E
Flat Rock Windpower, LLC	USA	Energy	40.75	40.75	E
Flying Cloud Power Partners, LLC	USA	Energy	81.50	81.50	G
Golden Hills Wind Farm, LLC	USA	Energy	81.50	81.50	G
Goodland Wind, LLC	USA	Energy	81.50	81.50	G
Groton Wind, LLC	USA	Energy	81.50	81.50	G
Hardscrabble Wind Power, LLC	USA	Energy	81.50	81.50	G
Hay Canyon Wind, LLC	USA	Energy	81.50	81.50	G
Heartland Wind, LLC	USA	Energy	81.50	81.50	G
Helix Wind Power Facility, LLC	USA	Energy	81.50	81.50	G
Imperial Wind, LLC (Antes Bakeoven Wind, LLC)	USA	Energy	81.50	81.50	G
Juniper Canyon Wind Power II, LLC	USA	Energy	81.50	81.50	G
Juniper Canyon Wind Power, LLC	USA	Energy	81.50	81.50	G
Karankawa Wind, LLC	USA	Energy	81.50	-	G
Kitty Hawk Wind, LLC	USA	Energy	81.50	81.50	G
Klamath Energy, LLC	USA	Energy	81.50	81.50	G
Klamath Generation, LLC	USA	Energy	81.50	81.50	G
Klondike Wind Power II, LLC	USA	Energy	81.50	81.50	G
Klondike Wind Power III, LLC	USA	Energy	81.50	81.50	G
Klondike Wind Power, LLC	USA	Energy	81.50	81.50	G
La Joya Wind, LLC	USA	Energy	81.50	-	G
Lakeview Cogeneration, LLC	USA	Energy	81.50	81.50	G
Leaning Juniper Wind Power II, LLC	USA	Energy	81.50	81.50	G
Leipsic Wind, LLC	USA	Energy	81.50	81.50	G
Lempster Wind, LLC	USA	Energy	81.50	81.50	G
Locust Ridge II, LLC	USA	Energy	81.50	81.50	G
Locust Ridge Wind Farms, LLC (3)	USA	Energy	37.74	37.74	G
Loma Vista, LLC	USA	Energy	81.50	81.50	G
Lund Hill Solar, LLC	USA	Energy	81.50	-	G
Manzana Power Services, Inc.	USA	Services	81.50	81.50	G
Manzana Wind, LLC	USA	Energy	81.50	81.50	G
Midland Wind, LLC	USA	Energy	81.50	81.50	G
Minndakota Wind, LLC	USA	Energy	81.50	81.50	G
Mohawk Solar, LLC	USA	Energy	81.50	81.50	G
Montague Wind Power Facility, LLC	USA	Energy	81.50	81.50	G
Moraine Wind II, LLC	USA	Energy	81.50	81.50	G
Moraine Wind, LLC	USA	Energy	81.50	81.50	G
Mount Pleasant Wind, LLC	USA	Energy	81.50	81.50	G
Mountain View Power Partners III, LLC	USA	Energy	81.50	81.50	G
New England Wind, LLC	USA	Energy	81.50	81.50	G
New Harvest Wind Project, LLC	USA	Energy	81.50	81.50	G
Northern Iowa WindPower II, LLC	USA	Energy	81.50	81.50	G

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Company	Registered office	Activity	Percentage of direct or indirect interest 31.12.2018	31.12.2017	Method (*)
Otter Creek Wind Farm, LLC	USA	Energy	81.50	81.50	G
Pacific Harbor Capital, Inc.	USA	Other	81.50	81.50	G
Pacific Wind Development, LLC	USA	Holding	81.50	81.50	G
Pebble Springs Wind, LLC	USA	Energy	81.50	81.50	G
Phoenix Wind Power, LLC	USA	Energy	81.50	81.50	G
PPM Colorado Wind Ventures, Inc.	USA	Holding	81.50	81.50	G
PPM Roaring Brook, LLC	USA	Energy	81.50	81.50	G
PPM Technical Services, Inc.	USA	Services	81.50	81.50	G
PPM Wind Energy, LLC	USA	Holding	81.50	81.50	G
Providence Heights Wind, LLC	USA	Energy	81.50	81.50	G
Rugby Wind, LLC	USA	Energy	81.50	81.50	G
San Luis Solar, LLC	USA	Energy	81.50	81.50	G
ScottishPower Financial Services, Inc.	USA	Other activities	81.50	81.50	G
ScottishPower Group Holdings Company	USA	Holding	81.50	81.50	G
Shiloh I Wind Project, LLC	USA	Energy	81.50	81.50	G
Solar Star Oregon II, LLC	USA	Energy	81.50	81.50	G
South Chestnut, LLC	USA	Energy	81.50	81.50	G
Start Point Wind Project, LLC	USA	Energy	81.50	81.50	G
Streator Cayuga Ridge Wind Power, LLC	USA	Energy	81.50	81.50	G
Tatanka Ridge Wind. LLC (antes Buffalo Ridge III, LLC)	USA	Energy	81.50	81.50	G
Trimont Wind I, LLC	USA	Energy	81.50	81.50	G
Tule Wind, LLC	USA	Energy	81.50	81.50	G
Twin Buttes Wind, LLC	USA	Energy	81.50	81.50	G
Twin Buttes Wind II, LLC	USA	Energy	81.50	81.50	G
Vineyard Wind, LLC	USA	Energy	40.75	40.75	E
West Valley Leasing Company, LLC	USA	Gas	81.50	81.50	-
Winnebago Windpower II, LLC	USA	Energy	81.50	81.50	G
Winnebago Windpower, LLC	USA	Energy	81.50	81.50	G
Wyeast Solar, LLC	USA	Energy	81.50	81.50	G
Mexico					
BII NEE Stipa Energía Eólica, S.A. de C.V.	Mexico	Energy	99.99	99.99	G
Corporativo IBERDROLA Renovables México, S.A. de C.V.	Mexico	Services	100.00	100.00	G
Energías Renovables Venta III, S.A. de C.V.	Mexico	Energy	100.00	100.00	G
Eólica Dos Arbolitos S.A.P.I. de C.V.	Mexico	Energy	100.00	100.00	G
IBERDROLA Soporte a Proyectos Renewables, S.A. DE C.V. (Before, IBERDROLA Energía Norte, S.A. de C.V.)	Mexico	Services	100.00	100.00	G
IBERDROLA Renovables Centro, S.A. de C.V.	Mexico	Energy	100.00	100.00	G
IBERDROLA Renovables del Bajío, S.A. de C.V.	Mexico	Energy	100.00	100.00	G
Impulsora de Generación Fotovoltaica de México, S.A. de C.V. (antes IBERDROLA Renovables del Irapuato, S.A. de C.V.)	Mexico	Energy	100.00	100.00	G
Infraestructuras de Generación Eléctrica, S.A. de C.V. (antes IBERDROLA Renovables del Zacatecas, S.A. de C.V.)	Mexico	Energy	100.00	100.00	G
IBERDROLA Renovables México, S.A. de C.V.	Mexico	Holding	100.00	100.00	G
IBERDROLA Renovables Noroeste, S.A. de C.V.	Mexico	Energy	100.00	100.00	G
Parque de Generación Renovable, S.A. de C.V.	Mexico	Energy	100.00	100.00	G
Parque energías Renovables de México, S.A. de C.V.	Mexico	Energy	100.00	100.00	G
Parque Industrial de Energía Renovables, S.A. de C.V.	Mexico	Energy	51.00	51.00	G
Parques Ecológicos de México, S.A. de C.V.	Mexico	Energy	99.99	99.99	G
Pier II Quecholac Felipe Ángeles, S.A. de C.V.	Mexico	Energy	51.00	51.00	G
Pier IV, S.A. de C.V.	Mexico	Energy	51.00	51.00	G
Proyecto Alternativa Energética de México, S.A. de C.V.	Mexico	Energy	100.00	100.00	G
Servicios de Operación Eoloeléctrica de México, S.A. de C.V.	Mexico	Services	100.00	100.00	G

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Brazil					
Arizona 1 Energia Renovável, S.A.	Brazil	Energy	52.45	52.45	G
Caetité 1 Energia Renovável, S.A.	Brazil	Energy	52.45	52.45	G
Caetité 2 Energia Renovável, S.A.	Brazil	Energy	52.45	52.45	G
Caetité 3 Energia Renovável, S.A.	Brazil	Energy	52.45	52.45	G
Calango 1 Energia Renovável, S.A.	Brazil	Energy	52.45	52.45	G
Calango 2 Energia Renovável, S.A.	Brazil	Energy	52.45	52.45	G
Calango 3 Energia Renovável, S.A.	Brazil	Energy	52.45	52.45	G
Calango 4 Energia Renovável, S.A.	Brazil	Energy	52.45	52.45	G
Calango 5 Energia Renovável, S.A.	Brazil	Energy	52.45	52.45	G
Calango 6 Energia Renovável, S.A.	Brazil	Energy	52.45	52.45	G
Canoas Energia Renovável, S.A.	Brazil	Energy	52.45	52.45	G
Canoas 2 Energia renovavel, S.A. (before, Tacca RJ Participacoes S.A.)	Brazil	Energy	52.45	52.45	G
Canoas 3 Energia renovavel, S.A.	Brazil	Energy	52.45	-	G
Canoas 4 Energia renovavel, S.A. (Before, Titanum RJ Participacoes S.A.)	Brazil	Energy	52.45	52.45	G
Chafariz 1 Energia renovavel, S.A. (before, Meridiano 1 Energia renovavel, S.A.)	Brazil	Energy	52.45	52.45	G
Chafariz 2 Energia renovavel, S.A. (before, Meridiano 2 Energia renovavel, S.A.)	Brazil	Energy	52.45	52.45	G
Chafariz 3 Energia renovavel, S.A. (before, Meridiano 3 Energia renovavel, S.A.)	Brazil	Energy	52.45	52.45	G
Chafariz 4 Energia renovavel, S.A.	Brazil	Energy	52.45	-	G
Chafariz 5 Energia renovavel, S.A.	Brazil	Energy	52.45	-	G
Chafariz 6 Energia renovavel, S.A. (before, Meridiano 4 Energia renovavel, S.A.)	Brazil	Energy	52.45	52.45	G
Chafariz 7 Energia renovavel, S.A. (before, Meridiano 5 Energia renovavel, S.A.)	Brazil	Energy	52.45	52.45	G
Elektro Renováveis do Brasil, S.A.	Brazil	Energy	52.45	52.45	G
Energias Renováveis do Brasil, S.A.	Brazil	Energy	52.45	52.45	G
FE Participaçoes, S.A.	Brazil	Energy	52.45	52.45	G
Força Eolica do Brasil 1, S.A.	Brazil	Energy	52.45	52.45	G
Força Eolica do Brasil 2, S.A.	Brazil	Energy	52.45	52.45	G
Força Eolica do Brasil, S.A.	Brazil	Energy	52.45	52.45	G
Lagoa 1 Energia renovavel , S.A.	Brazil	Energy	52.45	52.45	G
Lagoa 2 Energia renovavel , S.A.	Brazil	Energy	52.45	52.45	G
Lagoa 3 Energia renovavel, S.A. (before, Meridiano 6 Energia renovavel, S.A.)	Brazil	Energy	52.45	52.45	G
Lagoa 4 Energia renovavel, S.A. (before, Soumaya RJ Participacoes S.A.)	Brazil	Energy	52.45	52.45	G
Mel 2 Energia Renovável, S.A.	Brazil	Energy	52.45	52.45	G
Santana 1, Energia Renovável, S.A.	Brazil	Energy	52.45	52.45	G
Santana 2, Energia Renovável, S.A.	Brazil	Energy	52.45	52.45	G
Ventos de Arapuá 1 Energia renovavel, S.A.	Brazil	Energy	52.45	-	G
Ventos de Arapuá 2 Energia renovavel, S.A.	Brazil	Energy	52.45	-	G
Ventos de Arapuá 3 Energia renovavel, S.A.	Brazil	Energy	52.45	-	G
ROW					
Baltic Eagle, GmbH.	Germany	Energy	100.00	100.00	G
IBERDROLA Renovables Offshore Deutschland, GmbH.	Germany	Energy	100.00	100.00	G
IBERDROLA Renovables Deutschland, GmbH.	Germany	Energy	100.00	100.00	G
IBERDROLA Renewables Australia PTY, Ltd.	Australia	Energy	100.00	-	G
IBERDROLA Renewables Bulgaria, EOOD.	Bulgaria	Energy	100.00	100.00	G
IBERDROLA Renewables Canadá, Ltd.	Canada	Holding	100.00	100.00	G
Rokas Aeoliki Cyprus, Ltd.	Cyprus	Energy	74.82	74.82	G
Ailes Marine, S.A.S.	France	Energy	70.00	70.00	G
IBERDROLA Renovables France, S.A.S.	France	Energy	100.00	100.00	G
C. Rokas Industrial Commercial Company, S.A.	Greece	Holding	99.76	99.76	G
PPC Renewables Rokas, S.A.	Greece	Energy	50.88	50.88	G
Rokas Aeoliki Thraki III, S.A.	Greece	Energy	99.61	99.61	G
Rokas Construction, S.A.	Greece	Energy	99.76	99.76	G
Rokas Hydroelectric, S.A.	Greece	Energy	99.76	99.76	G

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IBERDROLA Renovables Magyarorszag, KFT.	Hungary	Energy	100.00	100.00	G
IBERDROLA Renovables Italia, S.p.A.	Italy	Holding	100.00	100.00	G
Societa Energie Rinnovabili 2, S.p.A. (2)	Italy	Energy	50.00	50.00	E
Eonergi Energia Eolica, S.A.	Portugal	Energy	100.00	100.00	G
IBERDROLA Renewables Portugal, S.A.	Portugal	Holding	100.00	100.00	G
Parque Eólico da Serra do Alvao, S.A.	Portugal	Energy	100.00	100.00	G
Eolica Dobrogea One, S.R.L.	Romania	Energy	100.00	100.00	G
IBERDROLA Renewables Romania, S.R.L.	Romania	Holding	100.00	100.00	G
IBERDROLA Renewables South Africa (PTY), Ltd.	South Africa	Energy	100.00	100.00	G
Innovation					
Algaenergy, S.A. (5)	Spain	Services	14.84	17.81	-
Arborea Intellbird, S.L. (2) (4)	Spain	Other activities	18.89	18.89	E
Atten2 Advanced Monitoring Technologies, S.L. (2)	Spain	Other activities	23.27	21.22	E
GDES Tecnology for services, S.L. (2)	Spain	Other activities	40.00	40.00	E
IBERDROLA Servicios de Innovación, S.L.	Spain	Other activities	100.00	100.00	G
Inversiones Financieras Perseo, S.L.	Spain	Holding	100.00	100.00	G
IBERDROLA QSTP, LLC	Qatar	Services	100.00	100.00	G
Network Business					
Spain					
Anselmo León Distribución, S.L. (1)	Spain	Energy	100.00	100.00	E
Anselmo León, S.A.U. (1)	Spain	Holding	100.00	100.00	E
Distribuidora de Energía Eléctrica Enrique García Serrano, S.L. (1)	Spain	Energy	100.00	100.00	E
Distribuidora Eléctrica Navasfrías, S.L. (1)	Spain	Energy	100.00	100.00	E
Eléctrica Conquense Distribución, S.A.	Spain	Energy	53.59	53.59	G
Eléctrica Conquense, S.A.	Spain	Holding	53.59	53.59	G
Electro-Distribuidora Castellano-Leonesa, S.A. (1)	Spain	Energy	100.00	100.00	E
Empresa Eléctrica del Cabriel, S.L. (1)	Spain	Energy	100.00	100.00	E
Herederos María Alonso Calzada – Venta de Baños, S.L. (1)	Spain	Energy	100.00	100.00	E
San Cipriano de Rueda Distribución, S.L. (1)	Spain	Energy	100.00	100.00	E
IBERDROLA Distribución Eléctrica, S.A.U.	Spain	Energy	100.00	100.00	G
IBERDROLA Infraestructuras y Servicios de Redes, S.A.	Spain	Services	100.00	100.00	G
IBERDROLA Redes España, S.A.U.	Spain	Holding	100.00	100.00	G
Sociedad Distribuidora de Electricidad de Elorrio, S.A. (1)	Spain	Energy	97.95	97.95	E
United Kingdom					
Manweb Services, Ltd.	United Kingdom	Energy	100.00	100.00	G
NGET/SPT Upgrades, Ltd.	United Kingdom	Energy	50.00	50.00	E
Scottish Power Energy Networks Holdings, Ltd.	United Kingdom	Holding	100.00	100.00	G
SP Distribution, Plc.	United Kingdom	Energy	100.00	100.00	G
SP Gas, Ltd.	United Kingdom	Inactive	100.00	100.00	G
SP Manweb, Plc.	United Kingdom	Energy	100.00	100.00	G
SP Network Connections, Ltd.	United Kingdom	General use connections	100.00	100.00	G
SP Power Systems, Ltd.	United Kingdom	Asset management services	100.00	100.00	G
SP Manweb, Plc.	United Kingdom	Energy	100.00	100.00	G

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United States					
Avangrid, Inc.	USA	Holding	81.50	81.50	G
Avangrid Enterprises, Inc.	USA	Holding	81.50	81.50	G
Avangrid Management Company, LLC	USA	Holding	81.50	81.50	G
Avangrid Service Company	USA	Services	81.50	81.50	G
Avangrid New York TransCo, LLC	USA	Holding	81.50	81.50	G
Avangrid Networks. Inc.	USA	Holding	81.50	81.50	G
Avangrid Solutions, Inc.	USA	Other activities	81.50	81.50	G
Berkshire Energy Resources	USA	Holding	81.50	81.50	G
Cayuga Energy, Inc.	USA	Holding	81.50	81.50	G
Central Maine Power Company	USA	Electricity	81.50	81.50	G
Chester SVC Partnership (3)	USA	Electricity	40.75	40.75	G
CMP Group, Inc.	USA	Holding	81.50	81.50	G
CNE Energy Services Group, LLC	USA	Services	81.50	81.50	G
CNE Peaking, LLC	USA	Services	81.50	81.50	G
Connecticut Energy Corporation	USA	Holding	81.50	81.50	G
Connecticut Natural Gas Corporation	USA	Gas	81.50	81.50	G
CTG Resources, Inc.	USA	Holding	81.50	81.50	G
GCE Holding, LLC	USA	Holding	40.75	40.75	-
GenConn Devon, LLC	USA	Generation	40.75	40.75	-
GenConn Energy, LLC	USA	Generation	40.75	40.75	-
GenConn Middletown, LLC	USA	Generation	40.75	40.75	-
Maine Electric Power Company, Inc.	USA	Energy	63.80	63.80	G
Maine Natural Gas Corporation	USA	Gas	81.50	81.50	G
Maine Yankee Atomic Power Company (5)	USA	Other activities	30.97	30.97	-
MaineCom Services	USA	Telecommunications	81.50	81.50	G
New York State Electric & Gas Corporation	USA	Electricity and Gas	81.50	81.50	G
NORVARCO	USA	Holding	81.50	81.50	G
Nth Power Technologies Fund I, LP. (5)	USA	Other	21.92	21.92	-
RGS Energy Group, Inc.	USA	Holding	81.50	81.50	G
Rochester Gas and Electric Corporation	USA	Electricity and Gas	81.50	81.50	G
South Glens Falls Energy, LLC (5)	USA	Energy	69.28	69.28	-
TEN Transmission Company	USA	Gas	81.50	81.50	G
The Berkshire Gas Company	USA	Gas	81.50	81.50	G
The Southern Connecticut Gas Company (SCG)	USA	Gas	81.50	81.50	G
The Union Water Power Company	USA	Services	81.50	81.50	G
The United Illuminating Company	USA	Energy	81.50	81.50	G
Thermal Energies, Inc. (5)	USA	Inactive	81.50	81.50	-
Total Peaking Services, LLC	USA	Services	81.50	81.50	G
UIL Distributed Resources	USA	Services	81.50	81.50	G
UIL Group, LLC	USA	Holding	81.50	81.50	G
UIL Holdings Corporation	USA	Holding	81.50	81.50	G
United Capital Investments	USA	Inactive	81.50	81.50	G
United Resources, Inc.	USA	Holding	81.50	81.50	G
WGP Acquisition, LLC (5)	USA	Inactive	81.50	81.50	-
Xcelcom Inc.	USA	Inactive	81.50	81.50	G
Xcel Services, Inc. (5)	USA	Inactive	81.50	81.50	-
Brazil					
Afluente Geraçao de Energia Elétrica, S.A.	Brazil	Energy	54.57	54.57	G
Companhia de Eletricidade do Estado do Bahia, S.A.	Brazil	Energy	50.69	50.53	G
Companhia Energética de Pernambuco, S.A.	Brazil	Energy	47.02	47.02	G
Companhia Energetica do Rio Grande do Norte, S.A.	Brazil	Energy	47.98	47.98	G
EKTT 1-A Serviços de Transmissão de Energia Elétrica SPE S/A	Brazil	Energy	52.45	-	G
EKTT 2-A Serviços de Transmissão de Energia Elétrica SPE S/A	Brazil	Energy	52.45	-	G
EKTT 12-A Serviços de Transmissão de Energia Elétrica SPE S/A	Brazil	Energy	52.45	52.45	G
EKTT 13-A Serviços de Transmissão de Energia Elétrica SPE S/A	Brazil	Energy	52.45	52.45	G

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EKTT 14-A Serviços de Transmissão de Energia Elétrica SPE S/A	Brazil	Energy	52.45	52.45	G
EKTT 15-A Serviços de Transmissão de Energia Elétrica SPE S/A	Brazil	Energy	52.45	52.45	G
Elektro Operaçao e Manutençao, Ltda.	Brazil	Services	52.45	52.45	G
Elektro Redes, S.A.	Brazil	Energy	52.28	52.28	G
Lanmóvil Amara Celular da Bahia Ltd. (Lanmara) (1)	Brazil	Other activities	65.00	65.00	-
Neoenergia Investimentos, S.A.	Brazil	Holding	52.45	52.45	G
Neoenergia Servicios, Ltd.	Brazil	Services	52.45	52.45	G
Neoenergia, S.A.	Brazil	Holding	52.45	52.45	G
Potiguar Sul Transmissao de Energia, S.A.	Brazil	Energy	52.45	52.45	G
S.E. Narandiba, S.A.	Brazil	Energy	52.45	52.45	G
Other businesses					
Engineering					
Adicora Servicios de Intermediación de Ingeniería, S.L.U. (Before, Adícora Servicios de Ingeniería, S.L.U.)	Spain	Engineering	100.00	100.00	G
Empresarios Agrupados Internacional, S.A. (2)	Spain	Engineering	25.46	25.46	E
Empresarios Agrupados, A.I.E. (2)	Spain	Engineering	25.46	25.46	E
Ghesa Ingeniería y Tecnología, S.A. (2)	Spain	Engineering	42.15	42.15	E
IBERDROLA Ingeniería de Explotación, S.A.U.	Spain	Engineering	100.00	100.00	G
IBERDROLA Ingenieria y Construccion, S.A.U.	Spain	Engineering	100.00	100.00	G
Ingeniería, Estudios y Construcciones, S.A.	Spain	Engineering	100.00	100.00	G
IBERDROLA Construçao e Serviços, Ltd.	Brazil	Engineering	100.00	100.00	G
IBERDROLA Energy Proyects Canada Corporation	Canada	Engineering	100.00	100.00	G
IBERDROLA Ingenieria y Construcción Costa Rica, S.A.	Costa Rica	Engineering	100.00	100.00	G
IBERDROLA Energy Project, Inc.	USA	Engineering	100.00	100.00	G
Enermón S.A. de C.V.	Mexico	Engineering	100.00	100.00	G
IBERDROLA Ingeniería y Construcción México, S.A. de C.V.	Mexico	Engineering	100.00	100.00	G
Iberservicios, S.A. de C.V.	Mexico	Engineering	100.00	100.00	G
IBERDROLA Engineering and Construction Poland, SP. Z.O.O.	Poland	Engineering	100.00	100.00	G
IBERDROLA Engineering and Construction Networks, Ltd.	United Kingdom	Engineering	100.00	100.00	G
IBERDROLA Engineering and Construction UK, Ltd.	United Kingdom	Engineering	100.00	100.00	G
IBERDROLA Engineering and Construction Ro, SRL.	Romania	Engineering	100.00	100.00	G
IBERDROLA Engineering and Construction South Africa	South Africa	Engineering	100.00	100.00	G
Real Property					
Arrendamiento de Viviendas Protegidas Siglo XXI, S.L.	Spain	Real Property	100.00	100.00	G
Camarate Golf, S.A. (2)	Spain	Real Property	26.00	26.00	E
IBERDROLA Inmobiliaria Patrimonio, S.A.U.	Spain	Real Property	100.00	100.00	G
IBERDROLA Inmobiliaria, S.A.	Spain	Real Property	100.00	100.00	G
IBERDROLA Inmobiliaria Real State Investment, EOOD	Bulgaria	Real Property	100.00	100.00	G
Desarrollos Inmobiliarias Laguna del Mar, S.A. de C.V.	Mexico	Real Property	100.00	100.00	G
Promociones La Malinche, S.A. de C.V.	Mexico	Real Property	50.00	50.00	E
Other businesses					

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Company	Registered office	Activity	Percentage of direct or indirect interest 31.12.2018	31.12.2017	Method (*)
Subgrupo Corporación IBV Participaciones Empresariales	Spain	Holding	50.00	50.00	E
Siemens Gamesa Renewable Energy, S.A. (antes Gamesa Corporación Tecnológica, S.A.) (4)	Spain	Holding	8.07	8.07	E
IBERDROLA Inversiones 2010, S.A.U.	Spain	Holding	100.00	100.00	G
IBERDROLA Participaciones, S.A.U.	Spain	Holding	100.00	100.00	G
Investigación y Desarrollo de Equipos Avanzados, S.A.U. (1)	Spain	Other activities	100.00	100.00	E
Corporation					
CarteraPark, S.A.U. (5)	Spain	Inactive	100.00	100.00	-
IBERDROLA Corporación, S.A. (5)	Spain	Inactive	100.00	100.00	-
IBERDROLA España, S.A.U.	Spain	Holding	100.00	100.00	G
IBERDROLA Energía, S.A.U.	Spain	Holding	100.00	100.00	G
IBERDROLA Financiación, S.A.U.	Spain	Financial	100.00	100.00	G
IBERDROLA Finanzas, S.A.U.	Spain	Financial	100.00	100.00	G
IBERDROLA International, B.V.	Holland	Financial	100.00	100.00	G
IBERDROLA Finance Ireland, DAC	Ireland	Financial	100.00	100.00	G
IBERDROLA Re, S.A.	Luxembourg	Insurance	100.00	100.00	G
IBERDROLA Energía Internacional, S.L.	Spain	Holding	100.00	-	G
Scottish Power UK, Plc	United Kingdom	Holding	100.00	100.00	G
Scottish Power, Ltd.	United Kingdom	Holding	100.00	100.00	G
ScottishPower Investments, Ltd.	United Kingdom	Holding	100.00	100.00	G
ScottishPower Overseas Holdings, Ltd.	United Kingdom	Holding	100.00	100.00	G
SPW Investments Ltd.	United Kingdom	Holding	100.00	100.00	G

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JOINT OPERATIONS OF THE GROUP STRUCTURED THROUGH AN INDEPENDENT VEHICLE FOR THE YEARS 2017 AND 2018

Company	Registered office	Activity	Percentage of direct or indirect stake	
			31.12.2018	31.12.2017
Liberalised business				
Asociación Nuclear Ascó – Vandellós, A.I.E.	Spain	Energy	14.59	14.59
Centrales Nucleares Almaraz – Trillo, A.I.E.	Spain	Energy	51.44	51.44
Renewable business				
Infraestructuras de Medinaceli, S.L.	Spain	Energy	39.69	39.69
Sistema Eléctrico de Conexión Hueneja, S.L.	Spain	Energy	47.36	47.36
Other businesses				
Torre IBERDROLA, A.I.E.	Spain	Real Property	68.10	68.10

Additionally, the IBERDROLA Group takes part in joint operations through joint ownership and other joint agreements described in Note 45.

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GROUP COMPANIES AT 31 DECEMBER 2017 WHICH HAVE LEFT THE PERIMETER IN 2018 AS A RESULT OF DISPOSAL, MERGER OR LIQUIDATION

Company	Registered office	Activity	Percentage of direct or indirect stake	
			31.12.2018	31.12.2017
Liberalised Business				
Cobane, A.I.E.	Spain	Energy	-	100.00
Fuerzas Eléctricas de Navarra, S.A.	Spain	Energy	-	100.00
Hidroeléctrica Ibérica, S.L.U.	Spain	Energy	-	100.00
Tirme subgroup	Spain	Energy	-	20.00
Caledonia Energy Partners, LLC	USA	Energy	-	81.50
E.O. Resources, LLC	USA	Energy	-	81.50
Enstor Energy Services, LLC	USA	Energy	-	81.50
Enstor Gas, LLC	USA	Holding	-	81.50
Enstor Grama Ridge Storage and Transportation, LLC	USA	Energy	-	81.50
Enstor Houston Hub Storage and Transportation, Ltd.	USA	Energy	-	81.50
Enstor Inc.	USA	Holding	-	81.50
Enstor Katy Storage and Transportation, LLC	USA	Energy	-	81.50
Enstor Louisiana, LLC	USA	Energy	-	81.50
Enstor Operating Company, LLC	USA	Holding	-	81.50
Enstor Sundance Storage and Transportation, LLC	USA	Energy	-	81.50
Enstor Waha Storage and Transportation, LLC	USA	Energy	-	81.50
Freebird Assets Inc.	USA	Holding	-	81.50
Freebird Gas Storage, LLC	USA	Energy	-	81.50
Gemini Capital, LLC	USA	Energy	-	81.50
Manweb Energy Consultants, Ltd.	United Kingdom	Energy	-	100.00
ScottishPower Generation, Ltd.	United Kingdom	Energy	-	100.00
SMW, Ltd.	United Kingdom	Other	-	100.00
Renewable Business				
IBERDROLA Energía Solar de Puertollano, S.A.	Spain	Energy	-	90.00
Oceantec Energías Marinas, S.L.	Spain	Services	-	40.39
ScottishPower Hazelwood, Pty. Ltd.	Australia	Holding	-	100.00
Hazelwood Australia, Inc.	USA	Holding	-	81.50
Hazelwood Ventures, Inc.	USA	Holding	-	81.50
Pacific Solar Investments, Inc.	USA	Energy	-	81.50
ScottishPower International Group Holdings Company	USA	Holding		81.50
Streator Deer Run Wind Farmer, LLC	USA	Energy	-	81.50
Rokas Aeoliki Peloponnisos II, S.A.	Greece	Energy	-	99.76
IBERDROLA Renovables Norte, S.A. de C.V.	Mexico	Energy	-	100.00
Network Business				
Garter Properties, Inc.	Islas Vírg.Britan.	Inactive	-	52.45
Other businesses				
IBERDROLA Engineering and Construction Saudi Arabia, LLC	Saudi Arabia	Engineering	-	100.00
Iberinco Hellas Techniki kai Kataskevastiki EPE	Greece	Engineering	-	100.00
IBERDROLA Ingegnieria e Costruzioni Italia, SRL.	Italy	Engineering	-	100.00
IBERDROLA Inzhiniring I Stroiteistvo, LLC	Russia	Engineering	-	100.00
IBERDROLA Ingenieria y Construccion. Venezuela, S.A.	Venezuela	Engineering	-	99.81
Fiuna, S.A.	Spain	Real Property	-	100.00
Promotora la Castellana de Burgos, S.A.	Spain	Real Property	-	100.00
Urbanizadora Marina de Cope, S.L.	Spain	Real Property	-	80.00

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Company	Registered office	Activity	Percentage of direct or indirect stake	
			31.12.2018	31.12.2017
Corporation				
Demon Internet, Ltd.	United Kingdom	Inactive	-	100.00
Manweb Nominees, Ltd.	United Kingdom	Inactive	-	100.00
Manweb Share Scheme Trustees, Ltd.	United Kingdom	Inactive	-	100.00
Scottish Power UK Holdings, Ltd.	United Kingdom	Holding	-	100.00

(1) Companies that are controlled by the Group but due to their immateriality have been integrated using the equity method. At 31 December 2018, the total aggregate assets value and the profit for the year corresponding to these companies amounts to Euros 40,537 thousand and Euros 5,301 thousand, respectively. On 31 December 2017, the aggregate total assets and results of the corresponding period of such companies amounted to Euros 35,953 thousand and Euros 4,443 thousand, respectively.

(2) Companies considered joint ventures, accounted for the equity method, where shareholders agreements just grant the right to the net assets of the business.

(3) Companies, where despite holding a percentage of voting rights less than 51%, the Group holds the control through shareholders agreements.

(4) Companies where the Group has significant influence despite holding a percentage of voting rights less than 20%, since it is represented these companies' board of directors.

(5) Companies where the Group holds the control, joint control or significant influence, but given its limited relevance, they have not been included in the consolidation scope.

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APPENDIX II

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INDUSTRY REGULATION AND FUNCTIONING OF THE ELECTRICITY AND GAS SYSTEM

The IBERDROLA Group companies engage in electricity business activities in Spain and abroad (see Appendix I) and are heavily affected by the respective regulatory frameworks. A description of the main regulations affecting the IBERDROLA Group is provided below.

1. European Union

Member states of the European Union in which IBERDROLA is present, should comply with EU regulations.

The aim of the European legislation is the implementations of the single gas and electricity markets in order to facilitate the exchange of energy flows and allow any consumer in the European Union to deal freely with any supplier in the EU. In this regard, there are two types of legislation: directives, which set out common criteria to be observed in domestic markets and which the member states should transpose into national legislation; and regulations, which establish standards for supranational issues, especially those related to the transit of gas and electricity, and are applicable directly.

Other legislation that indirectly affects the energy sector is that arising from the energy and climate policy. In 2007 the triple objective of reducing greenhouse gas emissions (GHGs) by 20%, setting a quota of renewable energy of 20% and a target for reducing consumption by 20%, all by 2020, was agreed. To meet these objectives by 2020, four documents have been drafted to complement the legislation: the reform of the EU Emissions Trading System (EU-ETS), the national targets for emissions from non-EU ETS, the national objectives on renewable energy and the capture and storage of carbon.

Paris Agreement: On 11 April, Decision (EU) 2016/590 of the Council was published, regarding the signing, on behalf of the European Union, of the Paris Agreement approved by virtue of the United Nations Framework Convention on Climate Change. The signing by 174 countries and the European Union took place in New York on 22 April 2016. This agreement came into force on 4 November 2016.

The legislation on infrastructures is also relevant. The European Union has powers with regards to trans-European networks, specifically those relating to energy. During the last few years and months, various regulations and programmes have been created to promote a greater connectivity between the Member States, such as the Trans-European Energy Networks (TEN-E), the European Energy Programme for Recovery (EEPR) and the Connecting Europe Facility (CEF). In December 2014, the European Council approved the creation of a Strategic Investment Plan for the European Union, to mobilize Euros 315,000 million in 2015 – 2017.

On 25 February 2015, the European Commission launched a framework strategy for a resilient Energy Union with a Forward-Looking Climate Change Policy, that includes fifteen action points to be implemented during the mandate of the current European Commission (2014-2019), including, among others, setting out the goals of an energy union and the steps the European Commission will take to achieve it, a new legislation to redesign and reform the electricity market, ensure the supply for electricity and gas, EU funding for energy efficiency, a new energy renewables package and a structural reform of EU-ETS, facilitating the compliance of 2030 Targets set by the European Council in October 2014.

The European Commission presents on annual basis the advances achieved and the steps to be undertaken in the following years

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Directive 2003/87/EC on CO2 emission allowances makes it obligatory for the industry and the electricity sector to deliver an emission allowance for each ton of CO2 emitted by a plant. The goal for 2020 is that emissions from sectors covered by the EU ETS will be 21% lower than in 2005.

Emission allowances may be acquired by companies through:

- Issuances in capital markets: European Energy Exchange-EEX and Futures Europe – ICE

- In some cases, free temporary allocation where the amount of allowances is determined on the European Union level

Since 2013 IBERDROLA has no longer been entitled to receive any allocation free of charge.

With reference to emissions trading, on 14 March 2018 the Official Journal of the European Union (OJEU) published Directive 410/2018, with the objective of intensifying emission reductions. The reform's most significant features are:

- An increase in the reduction applied each year to the stock of auctioned allowances (known as the “linear factor”) from 1.74% to 2.2% starting in 2021. This parameter is associated with the mechanism's "aim", upon expecting that a gradual reduction of allowances auctioned implies lower total emissions from the sectors involved in emissions trading.

- If the total number of allowances in circulation (TNAC) exceeds 833 million, 24% of the excess allowances will be withdrawn from the auctions each year and added to the Market Stability Reserve (MSR), from 2019 to 2023. The rate of withdrawal of allowances at 12% is maintained for the following years. If the total number of allowances in the market is less than 400 million, then the MSR releases 100 million into the market. Those allowances remaining in the reserve in 2023 shall be cancelled to prevent them from being returned to the market.

  This mechanism is intended to stabilize the EU ETS (EU Emissions Trading System) and strengthen the carbon price signal reducing gradually the surplus allowances.

- Conversely, the procedures for allocation of allowances to sectors subject to the risk of carbon leakage are amended.

- Lastly, support for modernizing the electricity sector in countries with lower GDP is planned, but exclude coal (a point of contention in the negotiations).

As regards non-ETS sectors, the following rules and standards have been published:

- Regulation (EU) 2018/841 on the inclusion of greenhouse gas emissions and removals from land use, land use change and forestry (LULUCF sector): It establishes accounting rules for measuring carbon emissions and removals from cropland, grassland, managed forests and wetlands in 2021-2030. Carbon removals in the LULUCF sector have to be at least equal to emissions.

- Regulation 2018/842, the “Effort Sharing Regulation” With a view to meeting the commitments made in the context of the Paris Agreement, it regulates the binding annual greenhouse gas emission reductions of Member States from 2021 to 2030. It establishes measures for non-ETS sectors to reduce their emissions by 30% by 2030 compared with 2005 by means of national objectives linked to GDP per capita, an emissions reduction path for Member States and a safety

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reserve of 105 million metric tons of CO_2 equivalent to help less-favoured Member States with difficulties in achieving the 2030 objectives.

On 30 November 2016 the EC published the package Clean Energy for all Europeans, consisting of 70 documents, of which 8 are legislative proposals and sets the framework to complete the implementation of the energy internal market and to achieve the environmental 2030 targets. November 2016 package involves the wholesale and retail markets and the frameworks for renewable energy sources and energy efficiency.

Practical implementation to market operation is expected to take in place by 2020. At 31 December 2018 the OJEU has published 4 rules:

- Directive (EU) 2018/844 on the energy performance of buildings obliges Member States to establish long-term strategies for renovating buildings so as to shift investment in renovation into highly energy-efficient and decarbonised buildings by 2050. It also establishes minimum requirements for installing recharging points for electric vehicles in buildings with more than ten parking spaces.

- Directive 2018/2001 on the promotion of the use of energy from renewable sources establishes an overall EU target of 32% of energy from renewable sources by 2030, as well as a target of 14% in the transport sector (in each Member State) and an indicative average annual increase of 1.3 percentage points in the heating and cooling sector. It establishes stable (non-retroactive) support schemes for renewables with visibility over five years. It allows individual and group self-consumption, guaranteeing the contribution to the costs of using the grid. It prohibits charges to renewable energy self-consumers in general, but allows them for installations with a capacity of more than 30kW and where otherwise necessary to ensure the financial sustainability of the electricity system.

- Directive 2018/2002 on energy efficiency: This establishes an EU target of 32.5% for 2030, setting obligatory savings each year from 2021 to 2030, per Member State, of 0.8% of annual final energy consumption averaged over the period 2016-2018. It encourages the electrification of the heating and cooling and transport sectors and states explicitly that States may use contributions to Energy Efficiency National Funds as alternatives to obligation schemes.

- Regulation 2018/1999 on the Governance of the Energy Union and Climate Action establishes the rules for drawing up States' national energy and climate plans in accordance with EU targets for 2030 and their reporting to the EC. It imposes a calendar (draft by 31 December 2018, final plans by 31 December 2019) for States' presentation of and the Commission's comments in these Plans, which define the national strategy for attaining the targets and security of supply. It establishes a mechanism for supervising the 2030 targets, allowing the EC to impose measures if the overall targets are at risk of not being met.

In December 2018 agreement was reached among the European Commission, Parliament and Council on the rules for the Market Design, concluding negotiations on the rules of the *Clean Energy for all Europeans* package. The main features of the proposed Directive and Regulation on the internal market for electricity are:

- Capacity mechanisms: An emission limit of 550 g CO_2 kWh for new plants was agreed, applicable once the new Regulation comes into force. For existing plants, the limit of 550 g CO_2 kWh and 350 kg CO_2 on average per year will be applied from 1 July 2025. After 1 July 2025, no power plant with emissions exceeding these limits will be able to receive State aid in the form of capacity

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mechanisms (except for those committed to in capacity contracts existing before 31 December 2019).

- Cross-border trade in electricity: At least 70% of interconnector capacity must be left available for cross-border trade in electricity. From January 2026, TSOs may use up to 30% of their interconnector capacity for reliability margins, loop flows and internal flows.

- Energy poverty and regulated prices: Member States may regulate prices temporarily in order to protect vulnerable households. However, preference has to be given to social security systems as the means to address energy poverty. Member States that maintain regulated prices for domestic consumers may continue to do so, but must present evaluation reports on progress towards abolishing regulated prices.

In the course of the first quarter of 2019 the Regulation on Risk-preparedness in the electricity sector will be published, as will the Regulation on the Agency for the Cooperation of Energy Regulators (attributes of the European Regulator) and the Regulation and Directive on the internal market (market design).

In November 2017, the EC published its Clean Mobility Package, which outlines measures to reduce transport sector emissions in 2020-2030, and adapt Europe's industry to comply with the Paris Agreements without losing global market share. Now being processed in the European Council and Parliament are the following matters:

- New emissions standard: vehicles sold between 2025 and 2030 must emit 15% less than those sold in 2021. For 2030 the emission reduction goal compared to 2021 is 37.5% for new vehicles and 31% for new vans. Annual goals will therefore be established for each manufacturer, and incentives will be granted to those with a lower percent than what is established for zero-emission and low-emission vehicles (<50gCO2/km principally plug-in hybrids).

- Clean Vehicle Directive: promotes the acquisition and leasing of vehicles for public administration. Each State will include a goal for 2025 - 2030 (Spain: 1/light vehicles, 33% set for entire period; 2/heavy vehicles, trucks 10%-14% and buses 50%-75%).

- Communication regarding action plans to promote the use of alternative fuels (electricity, LNG, biogas, etc.): for the purpose of evaluating the investment needs (from Euros 16,000 to 22,000 million in recharge and supply infrastructures) and proposes a strategy to adapt specific States' regulation. The EC will provide Euros 800 million to finance the projects.

Other significant rules published by the OJOU in the recent years:

- Regulation 2016/1952/EU on European statistics on natural gas and electricity prices (17 November 2016). This legislation establishes a harmonised framework to elaborate and disclose the statistics on gas and electricity prices, both for residential customers and for companies. The new rules allow more transparent understanding of the different price components, splitting energy, networks and “taxes and other”. EC's Energy Costs and Prices Study included in the "Clean Energy Package" is in accordance with this statistic methodology.

- On 17 August 2017, the Commission Implementing Decision (EU) 2017/1442 was published establishing emission thresholds applicable to large combustion plants (>50MW) using best available techniques Member States must adapt to these new limits on acid gas emissions [nitrogen oxides (NOx), sulphur dioxide (SO2), fine particulate matter and, for the first time, mercury] by 2021.

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- Regulation 2017/1938 concerning measures to safeguard the security of gas supply (28 October 2017). The Regulation's general purpose is to reinforce the European Union's energy security, reduce foreign dependence and enable it to confront possible. Main novelties:
    - Principle of solidarity: In the event of a serious gas crisis that puts the supply at risk, the Member States will help their neighbouring states to ensure the supply of gas to homes and necessary social services.
    - Reinforcement of regional cooperation: Common security risks of one Regional Group's supply will be jointly assessed and preventive and common emergencies measures will be agreed on.
    - Reinforcement of system security tools: Preventive action plans and mandatory regional emergency plans are established, along with regional risk analysis, which will be prepared jointly by all Member States that belong to the same risk group.
    - Transparency: To facilitate better supervision of the contracts' risks and clauses, the gas companies must notify the long term contracts that are relevant to the security of the supply (those that represent 28% of yearly gas consumption in the Member State).
- On 26 June 2017, the EC published Directives regarding environmental and social information, complementary to Directive 95/2014 requirements regarding non-financial information. Applicable to more than 500 employees. They comprise a voluntary guide applicable to firms with more than 500 employees, to report information relevant to environmental, social, and labour policies and risks, human rights issues, anti-corruption efforts and gender policies. They include best practices and among others, experience in monitoring Sustainable Development Objectives and the Paris Agreement.
- Electricity balance sheet: EC Regulation 2017/2195 was published on 28 November 2017, establishing a guideline on electricity balancing including the establishment of common principles for the procurement and the settlement of frequency containment reserves, frequency restoration reserves and replacement reserves and a common methodology for the activation of these reserves. This Regulation applies to all transmission systems and interconnections in the European Union except the transmission systems on islands that are not connected with other transmission systems
- EC Decision SA.40348 (2015/NN) was published, authorising the Spanish system for aid to renewables (December 2017). The EC has come to the conclusion that the Spanish system of support for electricity generation from renewable energy sources, cogeneration of high efficiency heat, electricity and waste is in accordance with the state aid rules of the European Union.

2. Industry regulation in Spain

The National Commission for Market and Competition (CNMC) is as a public body attached to the Ministry of Energy, Tourism and Digital Agenda and is subject to parliamentary scrutiny. Its functions include market regulation and supervision.

– Industry regulation and functioning of the electric system in Spain

The electricity sector is regulated by Electricity Industry Law 24/2013 of 26 December 2013, the principles of which are summarised as follows:

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1. **Activity separation**

It establishes the legal and accounting separation of regulated activities (economic and technical management of the system, transmission and distribution) and liberalised activities (generation, wholesale and retail or other activities unrelated to electricity or activities abroad). However, a group of companies can carry out both kinds of activity provided that these are performed by different companies within it.

2. **Energy generation activities:**

Generation activity is carried out in free market competition, subject to a schedule of approvals, with its remuneration established in the market:

- The daily hour price for energy is established in the wholesale market by marginalist criteria; the dispatch determined by the lowest price until the demand is satisfied. Intra-day markets are also established to adjust the position with regard to the daily schedule. Conversely, certain production plants obtain additional remuneration to provide additional necessary services to guarantee supply.

- Order ITC 3127/2011 regulating payments for capacity, which consist of an investment incentive, an environmental incentive and an availability service is established. This Order establishes an incentive to investment during the first 20 years of the useful life of a facility and an environmental incentive during 10 years to investments for improving air quality. On the other hand, it governs a yearly availability service to be extended at the end of each year. In 2018 this incentive was capped to the first half of the year, except for hydroelectrical plants for draught reasons. For 2019 Order TEC/1366/2018 on tolls has been repealed.

Renewable generation

Royal Decree 413/2014 regulating electricity generation by means of renewable energy sources, cogeneration and waste establishes the specific remuneration scheme for existing and new facilities. The remuneration will be on the basis of six-year periods and some of them may be revised every three years. For facilities prior to July 2013, the remuneration system consists of the sum of:

- Investment remuneration (EUR/MW) to cover, where applicable, the investment costs that cannot be recovered from the sale of electricity in the market, defined on the basis of the reasonable yield on 10 year government bonds plus a spread, initially fixed at 300 basis points for the first regulatory period ending on 31 December 2019 (i.e., 7.398% before taxes).

- Operation remuneration (EUR/MWh) to cover, where applicable, the difference between the operating costs and income obtained in the electricity market. The return on the operation in circumstances where the operating cost of a technology is dependent on fuel prices may be changed at least once a year. The last Order published including an update of these operational costs is the Order ETU/1046/2017.

On the other hand, the Order IET/1045/2014 of June 2014 sets out a classification of standard installations in terms of the technology, installed capacity or any another characteristic already in place for the application of this remunerative scheme. These have been revised by Order ETU/130/2017 for the period 2017-2019.

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The remuneration for new renewable facilities, cogeneration and waste will be set by a competitive tendering process. In 2017 there were two competitive bidding processes, with 3,000 MW of wind power awarded in the first and 3,909 MW of solar power and 1,128 MW of wind power in the second. In neither case will any awardee receive additional remuneration if market prices remain at their current levels — only if they fall below a certain threshold.

For 2019, the first call for tenders for wind power in the Canary Islands has been issued for projects co-financed by the ESIFs for a maximum of 271 MW. No other bidding processes have been initiated, although the government has announced a possible one for 3,000 MW of new renewable power.

3. Agents that guarantee the proper functioning of the market

- System Operator (SO): Red Eléctrica de España, S.A. carries on the transmission management and system operation activities. As system operator, it is responsible for managing the adjustment markets to guarantee a continuous balance demand and generation between energy.

- Market Operator (MO): The Iberian Market Operator (IMO) is responsible for the operation the Iberian electricity market (MIBEL) which manages Portuguese and Spanish daily, intra-day and forward markets in Spain and Portugal.

4. Transmission and Distribution

The Electric Industry Law [LSE] establishes that distribution and transmission are regulated activities that are classified as low-risk, whose remuneration is determined by six-year regulatory periods.

- It introduces the concept of “efficient and well-managed company, and the financial remuneration rate will be in accordance with ten year government bonds plus an appropriate spread for a low risk activity.

- It stipulates that the collection of the remuneration generated by new investments starts in the year n+2.

On 30 December 2013 two royal decrees regulating the new remuneration methodology of the transmission (Royal Decree 1047/2013) and distribution (Royal Decree 1048/2013) activities were published, as part of the regulatory and tax measures that started in the second half of 2013. The methodology set out in Royal Decree 1048/2013 is in accordance with new standard investment and operation costs and limits the annual volume of investment.

It also sets incentives in quality (it may fluctuate between +2% and -3% of the company’s remuneration), in losses (it may fluctuate between +1% and -2%) and in anti-fraud measures, which may reach 1.5% of the company’s remuneration.

Orders IET/2659/2015 and IET/2660/2015 published on 12 December 2015 determine the type of facilities and unit values to consider when calculating the remuneration for 2016 onwards.

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Remuneration to transmission and distribution for 2016 was published on Order IET/980/2016 on 10 June 2016. However, in September 2017 proceedings were instigated aimed at having this order declared harmful to the public interest due to the treatment of fully depreciated assets still in use, and this has still not been resolved. An objection was also lodged in respect of the parameters used to calculate remuneration for 2016, on the basis that the final amount recognised should take account of the valuation of assets constructed by third parties and subsequently ceded to distributors.

Apart from this, the remuneration has still not been published for either 2017 or 2018, and an amount equivalent to that of 2016 is being paid provisionally, in accordance with Orders ETU/1976/2016 and ETU/1282/2017 which maintain the values published for 2016 for remuneration of distribution (Euros 5,175 million for the sector and Euros 1,655.5 million for IBERDROLA) and transmission (Euros 1,709 million for the sector).

The recent Royal Decree-Law 20/2018 of 7 December on urgent measures to boost economic competitiveness in the industrial and commercial sector in Spain, empowers the government to develop legislation covering Closed Distribution Networks, for supplying electricity only to industrial users which, basically for reasons of safety, are within geographically confined areas. The economic and financial sustainability of the electricity system must be taken into account, as must non-discrimination among consumers and non-redundancy in networks.

5. Access tolls

Access tolls are defined as the consideration consumers will pay for use of the networks and other unrelated supply costs included in the invoice, designated as charges. Access tolls are uniform across the country and are collected by the distributors and carriers, which act as the collector agents of the electricity system.

Currently, the government establishes these access tolls for each year that consumers must pay in each voltage level, in absence of regulatory implementation that outlines an allocation methodology and calculates the tolls per network use as well as unrelated supply charges. The recently published Royal Decree-Law 1/2019 transfers the responsibility of establishing the methods of remuneration, the tariffs for use of the grid and the conditions of access to the electricity and gas transmission and distribution networks to the CNMC, starting with the next regulatory period (2020). The government retains the power to set the charges, which concern all other costs included in the bill that are not related to the use of the networks.

Royal Decree-law 14/2010 of 23 December, developed by Royal Decree 1544/2011 of 31 October, extended the application of access tolls to electricity producers and established a provisional access toll of Euros 0.5 per MWh fed into the grid.

The Order IET/1366/2018, of 20 December, establishes the access tolls for 2019. This Order:

- It freezes all the tolls and current capacity payments.
- It provisionally maintains the transmission and distribution remuneration, until the orders with definitive values for 2019 are published.

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- It establishes the use of funds from the accumulated surplus in such amount as is strictly necessary to balance income and costs. As regards revenues from the General State Budget, it includes Euros 750 million for auctions of CO_2, although the Royal Decree-Law on mining published on the same day raises this amount to Euros 1 billion.

- It consolidates the derogation of availability payments, although it maintains the current capacity prices paid by customers.

- It establishes the provisional remuneration of the SO and MO,

6. Supply activity

From 1 July 2009 all consumers may freely contract their supply of electricity with a supplier of their choice.

The government, however, maintains a Voluntary Price for the Small Consumer (VPSC), a regulated tariff for consumers that have a contracted power rating of less than 10 kW, and for those that do not meet the requirements to sign up for it but who temporarily do not have a valid contract with a free market operator.

Royal Decree 216/2014, of 28 March establishes the legal regimen for contracting the VPSC and methodology for calculating it, such as sum of energy cost, access tolls and charges, and commercial margin. In addition, as established by Law 3/2014, it provides the option for consumers to contracting an electricity price fixed for a year with the reference trader.

25 November 2016 saw the publication of Royal Decree 469/2016, changing the commercial margin of the PVPC ("voluntary price for the small consumer") established in Royal Decree 216/2014. Now the commercial margin is in accordance with the costs of three most efficient reference traders plus remuneration for the year of activity (1.05% on the energy price) and excludes face-to-face channel.

On 24 December, a Ministerial Order was published with the concrete values, both for the past (from 1 April 2014) and the future (until 2018).

The recently published Royal Decree-Law 15/2018 on urgent measures for energy transition and consumer protection approved a number of measures that affect sales and marketing:

- Prohibition of "door-to-door" selling of electricity and gas, except by prior appointment.

- CORs (reference marketers) should include a simulation of the application of the variable time slot costs in their invoice.

- It makes it easier to have fraudulent sellers disqualified.

- It facilitates contracting of power in multiple tranches of 0.1 kW for supplies of less than 15 kW.

- Supplies of less than 15 kW are exempt from invoicing for reactivation. Revenues obtained by distributors from reactive energy charges cease to be considered as subject to the settlement procedures and will be applied to actions necessary to comply with the voltage control requirements.

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7. Social tariff

The social tariff was created in 2009 as a measure to protect vulnerable customers. It offers a discount on the regulated rate for certain groups. The social tariff is financed by all parents of the Groups with supply activity, in accordance with the method for calculating the percentages for distribution and the procedure for settling the amounts to be financed, in accordance with prevailing legislation. In 2018 IBERDROLA is responsible for 35.05%.

On 24 December 2016, Royal Decree-law 7/2016, which regulates the mechanism for financing the cost of the social tariff and other measures to protect vulnerable electricity consumers, was published. It was subsequently developed by Royal Decree 897/2017, which governs who qualifies as a vulnerable consumer, the social tariff and other protection measures for household electricity consumers, and by Order ETU/943/2017.

Three categories of vulnerable consumers are defined in accordance with criteria involving income, number of minors in the household and other conditions, and a VPSC discount is applied to their bill up to an annual consumption limits count applied to their bill up to an annual consumption limit.

- Vulnerable consumer: 25% discount on VPSC.
- Severe vulnerable consumer: 40% discount on VPSC.
- Consumer at social exclusion risk: 100% discount on VPSC. They must be helped by social services, who will cover at least 50% of their bill at VPSC.

The procedures to suspend supply in the event of non-payment are also reviewed in this legislation. Information requirements are added for all suppliers, payment terms and suspension of supply due to non-payment in the free and regulated market is equalised, with special consideration to consumers at risk of social exclusion, whose service is deemed essential and therefore cannot be suspended. Royal Decree-Law 12/2018 adds an extra level of protection for households in receipt of the bono social subsidy with minors under 16 or disabled or dependent members whose supply is also considered essential and as such not susceptible of being cut off in the event of non-payment.

8. Electric mobility

Royal Decree-Law 15/2018 eliminates the role of gestor de carga (charging agent), introduced by Royal Decree-Law 6/2010. Any consumer can now provide charging services, free of charge or for valuable consideration, on their own behalf or that of others.

It also allows distributors to install charging points where there is no private interest. If subsequently conditions become economically attractive, the installations will have to be transferred to other operators against appropriate compensation; enabling regulations have yet to be developed for this process.

9. Self-consumption

Self-consumption is regulated for the first time in the Electricity Industry Law 24/2013 and defined as the consumption of electricity power provided by generation facilities associated with a consumer. In accordance with the aforementioned Law, self-consumers must pay the same access toll for the consumed energy.

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Subsequently, Royal Decree-law 9/2015 of 10 July 2015 modified Law 24/2013 to establish the possibility of setting exemptions for small power self-consumers (up to 10 kW). This measure is exceptional and it will be implemented provided that the safety and economic and financial sustainability of the system is guaranteed.

The administrative, technical and economic conditions of the self-consumption modes are regulated in Royal Decree 900/2015 of 10 October as amended by the recent Royal Decree-Law 15/2018 on urgent measures for energy transition and consumer protection, which establishes two modes of self-consumption:

- Without surplus: when the physical equipment installed prevent any injection of surplus energy into the grid, so that the consumer is only a consumer.

- With surplus: when the generating installations can inject surplus energy into the grid, so that the consumer is also a producer.

Furthermore, Royal Decree-Law 15/2018 eliminates the requirement for a meter for generation and the limitation whereby installed capacity had to be less than consumption. It also eliminates the charges and tolls on self-consumed energy from renewable sources, co-generation or waste and allows shared self-consumption and the setting of quantities for use of the grid. Lastly, it allows the remuneration of surpluses as the rest of production, and the simplified offsetting for self-consumers of shortfalls and surpluses in their production for facilities of up to 100 kW.

10. Interruptibility and assistance to electro-intensive consumers

The interruptibility service for a consumer consists of reducing its active capacity in response to a reduction order from the system operator, in line with the needs that arise in operating the electricity system in accordance with certain technical, security and financial criteria.

- Technical criteria: As a rapid response mechanism in emergency situations in the operation of the system.

- Economic criteria: In situations where the application of the service has a lower cost than that of the adjustment services of the system.

To execute the option, the system operator will send a power reduction order to the service providers who will reduce their active power demanded until the committed residual power values are fulfilled.

The allocation of the interruptibility service will be carried out through an auction procedure managed by the system operator, as established in the Order IET/2013/2013. In October 2017 its application was limited to the first five months of 2018, although subsequently Order ETU/362/2018 revised the mechanism, extending the period to 31 December 2018 and replacing the 90 MW interruptible product by one of 40 MW. Consumers wishing to provide the service must also show that they have no outstanding debts in connection with the provision of the demand-side interruptible load management service.

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Lastly, Royal Decree-Law 20/2018 of 7 December, on urgent measures to boost competitiveness, provides for the creation, by means of royal decree, of a Statute of Electro-intensive Consumers, which will take account of objective variables linked to the guidelines and volume of capacity and energy required, as well as its potential contribution to improved technical and economic management of the electricity system.

This Statute will develop mechanisms designed to mitigate the effects of energy costs on competitiveness, in accordance with EU legislation, with obligations and commitments in terms of energy efficiency, substitution of emitting and polluting sources of energy and investment in R+D+i and employment, among other things. Beneficiaries of the subsidies will be obliged to maintain productive activity for a period of three years.

11. Cogeneration

Royal Decree 413/2014 on electricity generation by means of renewable, cogeneration and waste establishes the remuneration scheme for existing and new facilities.

Royal Decree-Law 20/2018 of 7 December introduced an extension to the economic regime of co-generation. High-efficiency co-generation facilities that use renewable fuels or natural gas and that exceed their regulatory useful life after 1 January 2018 may receive the payment term for the operation for a further two years from the entry into force of this royal decree-law, unless an new regime regulating this technology is developed.

Apart from this, the recently published Order TEC/1303/2018 recognises the right of certain manure treatment plants to the efficiency complement for the period 2007-2010, amounting to Euros 11 million, which the CNMC must pay from its accumulated surplus. Euros 1 million corresponds to IBERDROLA plants.

12. Tariffs balance

The difference between collection of tariffs and access tolls set by the Government and real costs related thereto, produced a revenue shortfall between 2000 and 2013, which was financed by the electricity companies. Recovery of this shortfall is deferred through annuities incorporated in the annual tariff.

As measures adopted since 2009 proved to be insufficient throughout 2013, the Government carried out a process of regulatory and tax reform for the electricity sector. As a step prior to this reform, the Law 15/2012 set out new tax measures and Royal Decree-law 9/2013, was approved, adopting urgent measures to guarantee the financial stability of the electricity system and modified the methodology for calculating the remuneration of the transmission and distribution activities, special regime and capacity payments, among other measures.

To consolidate tariff balancing in the sector, Law 24/2013 is governed by the principle of economic and financial sustainability of the electricity system, meaning that any regulatory measure which causes an increase in costs or a reduction in income for the electricity system should include an equivalent reduction of other cost items or an equivalent increase in income that ensures the balancing of the system. Thus, the possibility of new deficits accumulating, as have occurred in the past, is ruled out.

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The Electricity Sector Act also establishes a mechanism limiting the revision of charges, by establishing that as long as cost items of the electricity system reflect payments corresponding to debts from previous years, charges may not be revised downwards. This principle is reinforced with the obligation to automatically review, from 2014 onwards, the tolls and fees if the annual or accumulated imbalances exceed 2% or 5%, respectively, of the income estimated for a given year.

The part of the imbalance that, without exceeding such limits, is not compensated by increases in tolls and fees will be financed by the parties to the settlement system in proportion to the remuneration that corresponds to them for their activities. The amounts thus contributed will be returned in the corresponding settlements during the following five years together with an interest rate equivalent to the market rate.

The surplus income that could arise will be used to compensate imbalances from previous years and, in 2017, by virtue of the 2018 General State Budgets Act, to compensate companies for the litigation resulting from the electricity regulation. Hence part of the accumulated surplus has been used to pay to companies in reimbursement of the financing of the “social bonus”, effectively a government-sponsored energy discount, for 2014, 2015 and 2016, including interest. The recently published Royal Decree-Law 15/2018 empowers the Ministry to use the accumulated surplus to cover possible deficits for the years 2018 and 2019, and increases the budgetary credit of revenues transferred from CO2 auctions.

Royal Decree 680/2014 of 1 August 2014, regulates the procedure of budgeting, recognition, settlement and control of the surcharges on the production of electricity power in the isolated electricity systems of the non-peninsular territories charged to the General State Budgets, thus developing the provisions of Law 24/2013, which stipulated that from 1 January 2014, 50% of these surcharges would be financed against the General State Budgets.

Final settlements for 2014, 2015, 2016 and 2017 were closed with a surplus of Euros 550 million, Euros 469 million, Euros 421 million and Euros 150 million, respectively. This accumulated surplus of Euros 1,074 million, deducting the return of the social tariff, will be paid into an account held by the CNMC.

13. Energy efficiency

In this sense, the European Union has set itself the target of achieving a 20% improvement in energy efficiency by 2020.

Law 18/2014 of 15 October, approving urgent measures for growth, competitiveness and efficiency, contains a set of mechanisms designed to achieve the energy saving targets established in the Energy Efficiency Directive. To this end, it created the National Energy Efficiency Fund, managed by the Institute for the Diversification and Saving of Energy (Instituto para la Diversificación y Ahorro de la Energía) and financed by an annual contribution from all suppliers of gas and electricity, wholesalers of oil products and of liquid petroleum gases, in accordance with their sales.

Law 8/2015 of 21 May, modified Law 18/2014 and established that the obliged entities must make an annual contribution from 2016 onwards to the National Energy Efficiency Fund in four instalments: on 31 March, 30 June, 30 September and 31 December of each year. Order ETU/257/2018 of 16 March, establishes the 2018 contributions to the National Energy Efficiency Fund.

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– Industry regulation and functioning of the gas system in Spain

The natural gas sector in Spain has undergone significant changes in its structure and operation in the last ten years, driven mainly by the liberalisation measures included in European directives concerning common rules for the internal market in natural gas (Directive 2009/73/EC is currently in force) aimed at opening up markets and creating a single European gas market.

1. Activity separation

The Hydrocarbon Industry Law of 1998 laid the foundations for the new gas system, particularly with regard to the separation of activities (regulated and liberalised), the introduction of third-party access to the regulated network, the abolition of the former concessions for piped gas supply and their conversion into regulated administrative permits, and the establishment of a timetable for progressive market deregulation.

The Hydrocarbon Industry Law 34/1998 provided for the legal separation of liberalised and regulated activities and the segregation for accounting purposes of the various regulated activities. Law 12/2007 took a further step in establishing the functional separation between liberalised activities and the grid and between the latter and the technical management of the system. In 2012, Royal Decree-Law 13/2012 was approved, establishing further measures of separation in management of the transmission network.

In line with these principles, the gas system has been structured around two types of activities: regulated (regasification, basic storage, transmission and distribution) and liberalised (trading and supply).

2. Deregulation of the gas sector

The effective deregulation began with the publication of Royal Decree-Law 6/2000 on urgent measures to intensify competition in markets for goods and services, which created the Technical System Manager, and Royal Decree 949/2001.

Royal Decree 949/2001 established the specific terms and conditions for third-party network access and, for regulated activities, a cost-based system of remuneration, tariffs, tolls and fees structured according to pressure levels and consumption bands. The remuneration assigned to each company as well as the tariffs, tolls and fees are updated annually by ministerial orders and resolutions.

The economic system also defined a settlement procedure to allow redistribution of revenues collected among the various regulated activities.

Other issues related to the regulation of the transmission, distribution and supply businesses, the administrative authorisation procedures for natural gas facilities and the regulation of certain aspects of the supply business are covered in Royal Decree 1434/2002.

The deregulation process in Spain was completed with Law 12/2007 transposing Directive 2003/55/EC. The two key changes enacted by this law were the elimination of regulated supply and the functional separation among activities.

As in the Spanish electricity sector, since 1 July 2008 all customers have been able to choose their gas supplier freely, although there is a regulated Last-Resort tariff that may be used by low-pressure customers with annual consumption of less than 50,000 kWh. The price is calculated automatically and cumulatively.

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3. Technical operation of the system

Order ITC 3126/2005 develops the rules for the technical management of the gas system. Inter alia, these regulations establish that each operator is individually responsible for maintaining its liquidity and enacts specific protocols for the conduct of the technical system manager in exceptional operating circumstances.

Despite the sector's progressive deregulation, prevailing regulation upholds the state's obligation to ensure the safety and continuity of supply. Royal Decree 1766/2007 establishes the obligation of sellers and direct consumers in the market to hold minimum safety stocks corresponding to 20 days of firm supplies, with a limit of 50% on the maximum percentage of supplies from any one country.

Additionally, the Winter Plan for Gas in force published in 2017 obliges gas retailers to hold a winter reserve (from November to March) in the form of stocks of liquefied natural gas (LNG) equivalent to 3.5 days of their contracted input capacity to the transmission and distribution network.

The State also maintains responsibility for obligatory planning work for certain infrastructures (for example, gas pipelines forming the core transmission network, the secondary transmission network, determining the total LNG regasification capacity necessary and core natural gas storage facilities). For all other infrastructures, the state's planning work is indicative only. In 2012, Royal Decree-Law 13/2012 enacted a series of measures to halt the construction of new infrastructure in a context of falling demand for gas.

Royal Decree 335/2018 of 25 May amends various royal decrees relating to the administrative handling of certain installations, the procedure to be followed in cases of disqualification of sellers and the setting of tolls and fees. This last point has been held in abeyance due to the transfer of responsibilities to the National Commission on Markets and Competition (CNMC).

4. Remuneration

Law 18/2014 approving urgent measures for growth, competitiveness and efficiency, and before that Royal Decree-Law 8/2014, establish the principle of economic and financial sustainability of the gas system. This principle is reinforced with the obligation of automatic revision of tolls and fees if the annual mismatch exceeds 10% of revenues subject to settlement for the financial year or 15% of the sum of the annual mismatch and annual amounts recognised and pending amortisation.

The part of the imbalance that, without exceeding the above limits, is not compensated by the increase in tolls and fees, will be financed by the parties to the settlement system in proportion to their remuneration. The amounts contributed will be returned in the following five years and will earn an interest rate equivalent to the market rate.

The deficit accumulated as at 31 December 2014 will be financed by the owners of the installations during a period of 15 years.

On the other hand, the remuneration of the regulated activities will be in accordance with the costs necessary for an efficient and well-managed company to carry out the relevant activity, following the principle of performing the relevant activity at the lowest cost for the gas system. In addition, the remuneration of regulated activities will be on the basis of six-year regulatory periods. The first regulatory period ends on 31 December 2020. Every three years adjustments may be made to the remuneration parameters within the gas system in the event that there are significant changes in revenues or costs.

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The remuneration system for distribution is in accordance with the previous year's system adjusted to market growth. The remuneration system for transmission, storage facilities and regasification is in accordance with the net value of the assets plus a complement associated with trends in demand. The cost of operation and maintenance is also taken into account.

5. The organised gas market

The Hydrocarbon Industry Law was modified by Law 8/2015 of 21 May, the main aspects of which regarding the gas system are:

- The creation of an organised wholesale gas market.
- The designation of the operator of the regulated gas market.
- Measures relating to minimum security stock levels.
- It empowers CORES (Corporación de Reservas Estratégicas de Productos Petrolíferos) to constitute, maintain and manage strategic gas and LNG stocks.
- Inspections may be carried out by any natural gas installation company, not only distribution companies.

Finally, the Royal Decree 984/2015 of 30 October 2015 regulated the organised wholesale gas market and the third party access to the facilities of the natural gas system. It establishes the bases for the development of the organised gas market, which will initially include the negotiation of short-term standardised products by an electronic platform managed by the Market Operator (MIBGAS - OMEL), together with a system of centralised management of guarantees. In addition, it centralises the contracting of capacity managed by the TSO (technical system operator) (ENAGAS), with standardised products and auction procedures.

At the end of 2017 the Resolution for the provisions of compulsory market service by dominant operators (Endesa y GNF) was published. They are therefore obliged to maintain a minimum volume of sales or purchases up to a maximum of 5.68% of their annual gas supplies in Spain. The price separation between the purchase and sale offers must be equal to or less than 0.50 euros per MWh. This measure is complementary to the periodic call of voluntary market makers.

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3. Industry regulation in the UK

The principal laws that govern Scottish Power Ltd.'s (hereinafter, *SCOTTISH POWER*) activities are the Electricity Act 1989 and the Gas Act 1986, as substantially amended and supplemented by numerous subsequent amendments, including the Gas Act 1995, the Utilities Act 2000, the Energy Act 2004, the Energy Act 2008, the Energy Act 2010, the Energy Act 2011, the Energy Act 2013, the Energy Act 2016 and various EU Directives (subject to any changes arising from the UK's forthcoming exit from the EU).

1. The Regulatory Authorities

The principal regulatory authority for utilities is the Gas and Electricity Markets Authority (*GEMA*), comprising a chairman and other members appointed by the Secretary of State for Business, Energy and Industrial Strategy (BEIS). GEMA is backed by the *Office of Gas and Electricity Markets* (OFGEM). The main instrument of regulation used by GEMA is the licensing regime which in most cases requires the various activities of the energy industry to be carried out under a licence to which standard conditions apply. In addition, there are a number of statutory obligations for licence holders, known as relevant requirements, which are enforced by GEMA as if they were licence conditions.

GEMA's principal objective is to promote the interests of present and future consumers and promote effective competition. Under the Energy Act 2010, the interests of such consumers must be taken as a whole, including their interest in reducing greenhouse gases and in the security of the supply of gas and electricity.

In furthering this objective GEMA must ensure that all reasonable demand for electricity and gas is met, ensure that licence holders are able to finance the activities they are obliged to undertake, and contribute to the achievement of sustainable development. It must also take into consideration vulnerable customers and GEMA must observe certain guides on social and environmental matters.

GEMA's functions include the granting of licences (and their revocation in certain limited circumstances), the proposal of changes to licence conditions (including the operation of price controls for the monopoly network functions), the review of industry code modifications, operating schemes for promoting renewable electricity and energy efficiency, and the enforcement of the industry's obligations.

GEMA's regulatory activities must be transparent, responsible, proportionate, consistent and focused solely on those cases where action is needed in line with best regulatory practices.

GEMA has the power to impose monetary penalties for past and ongoing breaches of licence conditions and relevant requirements and it can order that redress is provided to consumers. Fines and redress orders for a particular breach can in aggregate be up to 10% of the licensee´s applicable turnover.

The principal Regulatory Authority for competition matters is the Competition and Markets Authority (CMA). They can undertake general market investigations and, working concurrently with GEMA, can investigate potential breaches of competition law in the utility field. Consumer protection matters are enforced by the CMA, OFGEM and Local Authority Trading Standards departments.

2. Licences

Companies within the SCOTTISH POWER Group hold licences for various activities including:

- The supply, generation and distribution of electricity;

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- the shipping of gas (that is, arranging for the insertion, the transmission, and the removal of it from the public network) Gas; and

- the transmission of gas to certain specific sites (such as proposed new gas fired power stations).

The conditions of licences regulate such matters as:

- for network licences: the quality of service and the charges that can be made.

- for supply to household consumers: consumer protection provisions including rules on standards of conduct, provision of information, disconnection in view of debt, cost reflective pricing, supply information to customers and on treating customers fairly.

- for most types of licence: rules requiring adherence to industry codes that set down the detailed technical rules for operating the industry, and providing for OFGEM to determine whether proposed changes to the codes should go ahead.

The Gas Act 1995 and Utilities Act 2000 introduced standard licence conditions to ensure that all holders of a particular licence type are subject to the same conditions. Under the Electricity and Gas Regulations 2011 (Internal Markets), modifications of individual or standard licensing terms no longer require the holders´ consent.

A gas and electricity market investigation was carried out by the CMA, which issued a report on 24 June 2016. The final report concluded that competition in the wholesale gas and electricity markets works well and that the presence of vertically integrated companies does not have a detrimental impact on competition.

However, a number of adverse effects on competition were identified in the supply market, some due to ill-conceived regulation, but mainly focussed on the 'weak customer response' from the 70% of customers who are on standard variable tariffs (SVT) and who lose out through lack of engagement in the market. Most of the CMA's remedies are focussed on increasing competition in the SVT segment, including creating a database of disengaged customers (those who have been on SVT for more than three years) which could be used by rival suppliers for marketing, and a programme of trials to develop more effective customer prompts. In the case of customers with prepayment meters the CMA decided to impose a transitional safeguard tariff cap, to be set above the "efficient" level of pricing.

Other remedies include location-dependent charging for transmission losses, changes to industry settlement processes and code governance, and recommendations to the Government on a number of subjects including GEMA's duties.

The CMA made a number of orders in December 2016 to implement relevant remedies, ahead of its statutory deadline of 23 December to complete implementation. On 7 December 2017, OFGEM decided to extend the CMA's prepayment meter price cap to a further 1 million customers in receipt of Warm Home Discount (WHD) payments with effect from 2 February 2018.

On 19 July 2018, the Domestic Gas and Electricity (Tariff Cap) Act 2018 received Royal Assent. This legislation obliges OFGEM to cap energy tariffs temporarily (to the end of 2020) for all domestic customers on SVT and other default tariffs, with a view to protecting existing and future domestic consumers, and having regard to the need to create incentives for efficiency, enable effective competition, maintain incentives for switching and ensure licensed activities remain financeable.

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OFGEM decided on 6 November 2018 that the cap would come into effect on 1 January 2019 and for the first period (1 January 2019 to 31 March 2019) would be set at £1,137 for dual fuel customers paying by Direct Debit (DD) and £1,221 for those paying by Standard Credit (SC). Customers currently covered by the WHD price cap would move to the default tariff cap for DD (whether they pay by DD or SC). Those covered by the CMA's prepayment price cap are unaffected (but the cap is subject to review by the CMA in 2019).

3. Price controls

A number of temporary price controls are currently in effect in the domestic energy supply market.

- As noted above, following its 2014-2016 Energy Market Investigation, the CMA introduced a transitional safeguard tariff cap for domestic consumers with prepayment meters (PPMs), which will apply from 1 April 2017 to 31 December 2020. and in December 2017 OFGEM extended to consumers in the WHD programWHD, which will apply from 2 February 2018 to 31 December 2019. Following enactment of the Domestic Gas and Electricity (Tariff Cap) Act 2018, prices for the sale of electricity and gas to the domestic consumers on SVT or other default tariffs will be subject to a temporary cap (the 'Default Tariff Cap') applying from 1 January 2019 to 31 December 2020 (extendable on an annual basis to 31 December 2023). The level of the cap is set by OFGEM.

- The provisions of the Competition Act 1998 and the Transmission Constraint Licence Condition (TCLC), may also provide a constraint on prices charged to commercial customers or on other prices in the wholesale electricity and gas markets. TCLC prohibits electricity generators from making excessive profits resulting from possible actions in balancing markets. OFGEM has published guidelines on the interpretation and application of the TCLC. The condition was renewed and made permanent on 16 July 2017 and some elements were removed to address potential overlap with REMIT.

- OFGEM has implemented electricity market liquidity obligations for large integrated retail and generation companies, including SCOTTISH POWER. These include obligations to facilitate trading with smaller suppliers and also an obligation to create market in a number of wholesale products during two specified "windows" in each business day. Although the prices of bids and offers are not regulated, the licence condition limits the spread between them. OFGEM will revise this obligation in 2019 in view of the drop in the number of companies subject to it.

- The networks are considered to be a natural monopoly. Therefore, their revenues have been controlled and this is now achieved through the new RIIO framework (Revenue = Incentives + Innovation + Outputs). This involves setting a revenue profile for an eight year period (with the opportunity for Ofgem to propose a limited revision every four years) which would deliver a target return on investments in accordance with the regulator's assessment of the costs of an efficient network operator and the likely capital programme (aided by a business plan submitted by the company). The formula also includes various incentives and takes into account inflation. The formula uses a Market Indicator for setting the debt cost, and phases in (for electricity) an asset depreciation period of 45 years, replacing the 20 year period used previously.

In the transmission business, SPTL's new RIIO-T1 framework became effective from April 2013. In distribution, the new RIIO-ED1 for the Scottish Power network in the South of Scotland and in the Manweb area came into force on 1 April 2015.

OFGEM is reviewing the RIIO framework ahead of the second round of controls, which will start with RIIO-T2 in April 2021.

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- a duration of RIIO-1 of 5 years instead of 8;
- *Retail Price Index* will be replaced by *Consumer Price Index* (CPI);
- The participation of stakeholders will improve through the creation of *Stakeholder Challenge and User Groups*;
- the existing depreciation policy for *Regulated Asset Value* (RAV) will still be in force;

OFGEM is considering options for the adjustment mechanisms of the Fair Returns to limit the companies having abnormally high returns.Ofgem has also signalled that large, new and separable transmission projects may be tendered or made subject to a bespoke (lower) rate of return. OFGEM is currently developing two models: a 'Special Purpose Vehicle' (SPV) model, in which projects would be delivered through a SPV that would bid competitively for the financing, construction and operation of the assets in an Ofgem supervised auction; and a 'Competitive Proxy Model' (CPM) in which the project would be developed by the transmission licensee and Ofgem would set the allowed revenue using 'competitive' benchmarks.

4. Other issues

Other key elements of the regulatory regime in the United Kingdom include:

The Renewables Obligation (RO)

For some time, the United Kingdom Government's aim has been to source at least 30% of electricity from renewable sources by 2020. To help meet this objective, the RO Orders (which apply separately to different parts of the United Kingdom within a unified scheme) place obligations on suppliers of electricity to source an increasing proportion of their electricity from renewable sources (in accordance with the expected level of renewable energy production in each year plus a 10 percent spread in order to prevent certificate prices from falling sharply).

Suppliers meet their obligations by presenting sufficient Renewables Obligation Certificates (ROCs) or by paying an equivalent amount into a fund. If suppliers default on their obligations and the total shortfall is above a threshold amount, the shortfall is recovered from the remaining suppliers through a process of 'mutualisation'.

The proceeds of the fund are paid back to those suppliers that have presented ROCs in proportion to the number of ROCs presented. Since April 2009, the RO has been banded so that differing technologies receive different levels of support depending on the expected average costs.

The RO was closed for new projects after 31 March 2017 and the Government has implemented the Contracts for Difference (CFDs) mechanism that was part of the Electricity Market Reform (EMR) programme. The wind farms in ScottishPower's onshore renewables pipeline that received planning permission in time to qualify for the relevant grace period were be eligible to accredit under the RO. The RO remained in place for new facilities entering the scheme before the relevant closure date; payments will continue until 31 March 2027 for projects that started generating power before 1 April 2009 and for 20 years after entry into the RO for subsequently dated projects. The Energy Act 2013 foresees changing from the RO to a premium payment on substantially similar terms.

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Electricity Market Reform (EMR)

The principal elements of the United Kingdom Government's EMR programme are:

- a new incentive scheme, in accordance with CFDs to boost low carbon generation; and
- a Capacity Market to enhance security of supply (market-wide auction - CM mechanism).

The first CFD Allocation Round took place on 4 February 2015 in two "pots"; one for 'established technologies' (mainly onshore wind and solar) and a second one for 'less established technologies' (mainly offshore wind). ScottishPower's 714 MW East Anglia ONE offshore Wind Farm achieved a contract in the auction at a price of GBP 119.89 per MWh. The second round concluded on 11 September 2017 and procured some 3.2GW of offshore wind, mostly at a clearing price of £57.50 per MWh. The Government has now announced a further CFD Allocation Round for less established technologies which is due to commence in 2019). A budget allocation of GBP 557 million (2011/12 prices) has been made in aggregate for allocation rounds prior to 2025.

Within this overall budget the Government has published the draft budget for Allocation Round 3, namely, £60 million (2011/12 prices) for delivery years 2023/24 and 2024/25. The Government expects this to support the delivery of around 4GW of new capacity, and the allocation round will be subject to an overall 6GW capacity cap (subject to State Aid approval). The CfD administrative strike prices for offshore wind are set at £56/MWh for projects delivering in 2023/24 and £53/MWh for those delivering in 2024/25 (in 2012 prices). A final Budget and parameters will be set ahead of the auction.

Annual Capacity Market auctions took place in December 2014, 2015 and 2016, for capacity delivery in winter 2018, 2019 and 2020, respectively.

On 15 November 2018, the European Court of Justice upheld Tempus Energy's challenge against the EU Commission, annulling its decision not to raise State Aid objections to the UK CM. BEIS announced a 'standstill period' until the scheme can be approved again by the Commission. On 6 December 2018, BEIS published its forward plan (agreed with the Commission) for obtaining State Aid re-approval for the CM. This envisages the Commission issuing an Opening Decision to open the formal investigation in early 2019. The Government intends to hold a 'top-up' T-1 auction during summer 2019, for delivery in winter 2019/20, making any agreements conditional on the outcome of the Commission's formal investigation. The Government has also published (subject to consultation) a "minded-to" plan to resume supplier charging arrangements to fund deferred payments to capacity providers (upon State Aid re-approval). The T-4 auction for 2022/23 is planned to be run as a T-3 auction upon State Aid re-approval.

EU-ETS and United Kingdom Carbon Price Support

The Climate Change Act 2008 set out a trajectory towards reducing UK greenhouse gas emissions from 1990 levels by at least 80% by 2050, with interim reduction targets.

A positive final State Aid decision would allow CM payments to be made to CM agreement holders that have met their obligations during the 'standstill period'. This EU ETS participation position for the UK remained the case for 2018, but the position for 2019 and subsequent years is not yet clear due to ongoing Brexit negotiations. In light of Brexit developments to date, as expected, the EU Commission has suspended for the time being the UK-related processes in the Union Registry of the EU ETS with effect from 1 January 2019.

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The Carbon Price Support mechanism is a United Kingdom tax levied on fossil fuels used for electricity generation at differential rates which simulate a charge on the CO2 emissions. In recent years, this charge has been set at GBP 18 per tonne of CO2. The Government announced in its 2018 budget that it will maintain this GBP 18 per tonne of CO2 rate for 2020/21. In the case of a Brexit without agreement the budgets of 2018 establish that the Government will introduce a new rate to the CO_2 emissions (Carbon Emission Tax) that in 2019 would be of 16 pounds sterling per ton.

The Energy Companies Obligation (ECO)

Energy suppliers who supply over 250,000 domestic customers are required to achieve energy efficiency improvements or heating cost reductions by domestic customers.

As with any other cost, the costs of making those improvements can be incorporated by suppliers into tariffs, subject to the need to remain competitive in the market. These costs need to be taken into account in any price caps.

The current ECO program began in April 2017 at a cost of 640 million pounds sterling per year. The new program (ECO3) began in October 2018 (and will continue until March 2022) focused on vulnerable customers. Under the ECO3, the exemption is reduced to the program of small suppliers in a staggered way, leaving exempt in 2019/2020 those suppliers with less than 200,000 clients and, in 2020/2021 those with less than 150,000 clients (instead of the current 250,000).**Closure of coal plants**

In November 2015 then Secretary of State Amber Rudd announced plans to consult on requirements for all coal power stations without CCS to close by 2025 (subject to any security of supply issues). At the end of 2016 the Government published a request and in January 2018 confirmed its intention of eliminating coal generation from the system in 2025.

Pollution Control

European pollution control directives are: The Integrated Pollution Prevention and Control (IPPC), the Large Combustion Plant Directive (LCPD) and the Industrial Emissions Directive (IED) impose limits on various categories of emissions transposed into United Kingdom law through the Pollution Prevention and Control (Scotland) Regulations 2012 and amendments to the Environmental Permitting (England and Wales) Regulations 2010. These controls are enforced by the Environment Agency or, in Scotland, the Scottish Environmental Protection Agency.

The Medium Combustion Plants Directive places emission limits on smaller generating and other combustion plants. As part of the implementation of this, Defra (Department for Environment, Food and Rural Affairs) is expected to impose NOX limits on diesel generators, which could reduce the air quality implications of allowing such plants to participate in the capacity mechanism.

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4. Industry regulation in the USA

1. Electricity and natural gas distribution

Some of the most important specific regulatory processes that affect AVANGRID Networks, Inc. (hereinafter, AVANGRID NETWORKS) include the New York rate settlement for NYSEG and RG&E, the Connecticut United Illuminating distribution rate case decision, the Maine and Connecticut transmission Federal Energy Regulatory Commission (FERC) Return on Equity (ROE) case and the Reforming Energy Vision (REV) process of New York.

The main revenues of AVANGRID NETWORKS are essentially regulated, and are in accordance with tariffs established in accordance with administrative procedures set by the various regulatory bodies. The tariffs applied to regulated activities in the United States are approved by the regulatory commissions of the different States and are in accordance with the cost of providing service. Energy, financial and capital costs are included (capital costs show the Company's capital index and legitimate capital profitability).

Energy costs that are set on the New York and New England wholesale markets are passed on to consumers. The difference between energy costs that are budgeted for and those that are actually incurred by the utilities is offset by applying compensation procedures that result in either immediate or deferred tariff adjustments.

These procedures apply to other costs, which are in most cases exceptional (due to effects of extreme weather conditions, environmental factors, regulatory and accounting changes, treatment of vulnerable customers, etc.) that are offset in the tariff process.

Each of the eight supply companies in AVANGRID NETWORKS, must comply with regulatory procedures that differ in form but in all cases conform to the basic framework outlined above.

As a general rule, tariff reviews cover various years (three in New York and Connecticut) and provide reasonable returns on equity, protection and automatic adjustments for exceptional costs incurred and efficiency incentives.

2. New York

- **New York State Electric & Gas Corporation (NYSEG) and Rochester Gas and Electric Corporation (RG&E) Tariff Plans presented in 2015:**

On 20 May 2015, NYSEG and RG&E filed electric and gas rate cases with the New York Public Service Commission (NYPSC). The companies requested, on the one hand, rate increases for NYSEG Electric, NYSEG Gas and RG&E Gas and, on the other hand, RG&E Electric requested rate decreases.

On 19 February 2016, the NYSEG, RG&E and other signatory parties filed a Joint Proposal, or the Proposal, with the NYPSC for a three-year rate plan commencing on 1 May 2016. The Proposal was submitted on April 7, 2016 and June 15, 2016, the adoption resolution of the NYPSC, with the retroactive application of May 1, 2016.

The delivery rate increase can be summarized as follows:

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	01 May 2016		01 May 2017		01 May 2018	
Utility	Rate Increase (Millions USD)	Delivery Rate Increase (%)	Rate Increase (Millions USD)	Delivery Rate Increase (%)	Rate Increase (Millions USD)	Delivery Rate Increase (%)
NYSEG Electric	29.6	4.10	29.9	4.10	30.3	4.10
NYSEG Gas	13.1	7.30	13.9	7.30	14.8	7.30
RG&E Electric	3.0	0.70	21.6	5.00	25.9	5.70
RGE Gas	8.8	5.20	7.7	4.40	9.5	5.20

The allowed rate of return on common equity for NYSEG Electric and NYSEG Gas is 9%. The equity ratio for both Electric and Gas is 48%. The Proposal includes an applicable Earnings Sharing Mechanism (ESM). The customer share of earnings would increase at higher earnings levels, with customers receiving 50%, 75% and 90% of earnings over 9.5%, 10% and 10.5% of ROE, respectively, in the first year. Earnings thresholds would increase in subsequent years.

The Proposal reflects the recovery of deferred costs of approximately USD 262 million incurred by electric storms and borne by NYSEG, and also continues reserve accounting for qualifying Major Storms (USD 21.4 million annually at NYSEG and USD 2.5 million annually at RG&E). Incremental maintenance costs incurred to restore service in qualifying divisions will be chargeable to the Major Storm Reserve provided that they meet certain thresholds.

The Proposal establishes threshold performance levels for designated aspects of customer service quality and continues and expands bill reduction and arrears forgiveness Low Income Programs at increased funding levels.

The Proposal provides for the implementation of NYSEG's Energy Smart Community ("ESC") Project in the Ithaca region which will serve as a test-bed for implementation and deployment of Reforming the Energy Vision (REV) initiatives. The ESC Project will be supported by NYSEG's planned rollout of Distribution Automation and Advanced Metering Infrastructure (AMI) to customers on circuits in the Ithaca region.

The Proposal provides for partial or full reconciliation of certain expenses including, but not limited to: pensions, other postretirement benefits; property taxes; variable rate debt and new fixed rate debt; gas research and development; environmental remediation costs; Major Storms; nuclear electric insurance limited credits; economic development; and Low Income Programs. The Proposal provides for partial or full reconciliation of certain expenses including, but not limited to: pensions, other postretirement benefits; property taxes; variable rate debt and new fixed rate debt; gas research and development; environmental remediation costs; Major Storms; nuclear electric insurance limited credits; economic development; and Low Income Programs.

- **Reforming the Energy Vision**

Reforming the Energy Vision: In April 2014, the NYPSC commenced a proceeding titled Reforming the Energy Vision (REV), which is an initiative to reform New York State's energy industry and regulatory practices.

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The REV has followed several paths simultaneously: Track 1 deals with market design and platform technology and Track 2 deals with the regulatory reform. REV's objectives include the promotion of more efficient use of increasing the utilization of renewable energy resources such as wind and solar power (in support of New York State's renewable energy goals) and a wider deployment of "distributed" energy resources, and storage.

REV is also intended to promote greater use of advanced energy management products to enhance demand elasticity and efficiencies. AVANGRID is currently participating in the initiative with other New York utilities The NYPSC issued a 2015 order in Track 1, which acknowledges the utilities' role as Distribution System Platform (DSP) providers, and requires the utilities to file an initial Distribution System Implementation Plan (DSIP) by 30 June 2016. The DSIP was filed on 30 June 2016 and included information regarding the proposed deployment of Automated Metering Infrastructure (AMI). Various REV-related proceedings have also been initiated by the NYPSC, and each proceeding has its own schedule. These proceedings include the Clean Energy Fund, Demand Response Tariffs, Net Energy Metering/Value of Distributed Energy Resources and Community Choice Aggregation.

Track 2 of the REV initiative is also underway, and through a NYPSC personnel Whitepaper review process, is examining potential changes in current regulatory, tariff, market design and incentive structures which could better align utility interests with achieving New York state and NYPSC's policy objectives. On 1 December 2016, NYSEG and RG&E filed their proposed Earnings Adjustment Mechanism (EAM), and despite collaborative sessions have been held in the first and second quarters of 2017, the companies cannot forecast the result of the proceeding.

On 20 December 2016, NYSEG and RG&E filed a petition for the full deployment of Automated Metering Infrastructure (AMI) with the Commission. The AMI petition requests authorisation to implement full-scale AMI at NYSEG Electric, NYSEG Gas, RG&E Electric and RG&E Gas. Approximately 1.8 million AMI electricity meters and gas modules will be installed.

The Companies also requested to implement a surcharge to recover the investment until such values can be included in base delivery rates in their next rate cases.

On 14 September 2017, the NYPSC issued an order related to the Value of Distributed Energy Resources (VDER), which included filing requirements for (1) new tariffs, (2) a timeline and cost estimate for implementing automated consolidated billing, and (3) proposed changes to Standard Interconnection Requirements.

- **NY Transco**

AVANGRID NETWORKS owns approximately 20% of New York Transco. New York Transco was established by the New York transmission utilities to develop, own, and operate electric transmission in New York.

In December 2014, New York Transco filed for regulatory approval of its tariffs, terms, and conditions, with the FERC, including a base ROE of 10.6%, plus 150 basis points as incentives. The New York Transco will not make final decisions on transmission project development until a FERC decision.

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On 2 April 2015, the FERC issued an order granting, inter alia, a 50 basis points adder for NY Transco's membership in the NYISO RTO. The FERC also set the formula rate and base ROE issue for hearing and settlement judge procedures. In addition, the FERC rejected the New York Transco's owners' cost allocation method for the Transmission Owner Transmission Solutions (TOTS), Projects because it would allocate costs to the Long Island Power Authority (LIPA) and the New York Power Authority (NYPA) that they did not voluntarily agree to pay.

On 5 November 2015, New York Transco's owners filed the Settlement with the FERC to resolve all outstanding issues associated with the TOTS Projects, including the base ROE of 9.50%, and a 50-basis point ROE adder, the capital structure of 53%, and the cost allocation by virtue of an Open Access Transmission Tariff (OATT) under the New York Independent System Operator, Inc. (NYISO) for the TOTS Projects. The FERC approved the Settlement on 17 March 2016.

- **Net Energy Metering**

On 16 October 2015, the NY Commission issued an order establishing interim ceilings on the interconnection of net metered generation (Floating Cap Order). The Commission directed that net metering limitations should "float" until completion of a proceeding to develop an interim method of evaluating the benefits of distributed energy resources.

Following the issuance of the Floating Cap Order and the launch of the CDG program, the Joint Utilities experienced a surge in new applications for net metered resources, ultimately leading to more than 4000 MW of interconnection applications. The Commission implemented the Value of Distributed Energy Resources (VDER) mechanism in response to the decision to leave the limit of net metering open and the promise to adopt a "new regulatory approach" for assessing Distributed Energy Resources (DER).

- **New York State Department of Public Service Investigation of the Preparation for and Response to the March 2017 Windstorm**

On 11 March 2017 the New York State Department of Public Service (the "Department") commenced an investigation into NYSEG's and RG&E's preparation for and response to the March 2017 windstorm, which affected more than 219,000 customers.

A Department Report on the investigation was issued in November 2017 which identified 29 recommendations for corrective action, as well as identifying four Emergency Response Plan (ERP) alleged violations for NYSEG and eight ERP alleged violations for RG&E.

On December 18, 2017, NYSEG and RG&E filed a response to the order in which it accepted the 29 recommendations and proposed implementation plans associated with each of the recommendations. These plans will be reviewed by the Department Staff and will be subject to approval by the NYPSC. On May 18, 2018, NYSEG and RG&E filed two settlement Joint Proposals with the NYPSC, both which have been executed by the Companies and the New York State Department of Public Service. The settlement Joint Proposals reflect agreement by the Companies to make resiliency and emergency response investments totalling $3.9 million, which will not be reflected in the Companies' rate base or operating expenses. The Joint Proposals are a settlement of potential penalties statedand should not be construed as an assessment of a fine or penalty.

The settlement Joint Proposals will be subject to a public comment period and we expect the NYPSC Commission to make a determination on the settlement agreements in 1Q19.

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- **NY 2018 March Snowstorms**

NYSEG's lower Hudson Valley and United Illuminating's service territories were significantly impacted by three of four March Nor'easter snowstorms, resulting in tens of thousands of customer outages, primarily in NYSEG's Brewster division. For some customers, outages lasted up to a week, causing customers and local politicians to harshly criticize NYSEG's storm preparedness and response.

On March 6, 2018 NY Governor Cuomo called for an investigation on NYSEG's preparedness and restoration efforts related to Winter Storm Riley, the first of the four Nor'easters. The investigation includes an evaluation under the Public Service Commission's emergency response scorecard, a regulatory tool developed following Super storm Sandy to gather data and assess utility performance. Utility filings of scorecard data were submitted in April 2018.

3. Maine

- **CMP Distribution Rate Case**

On May 29, 2018 the MPUC received a ten person complaint requesting the MPUC open a rate case to determine if CMP and its parent Companies are making excessive returns on investment. The Complaint also request that CMP be denied recovery of its October 2017 storm costs. CMP responded stating the Complaint should be dismissed because it is without merit. On July 24, 2018, the MPUC issued Order dismissing the complaint as it relates to CMP's parent companies and the October 2017 Storm costs.

The MPUC performed a calculation of CMP's returns and found that its 2016 and 2017 returns exceeded the allowed reasonable range and therefore opened and investigation and ordered CMP to make a general rate case filing by October 15, 2018.

On October 15, 2018, CMP submitted its required rate case as directed by the Maine Public Utilities Commission (MPUC). In its filing, CMP is proposing to keep customer distribution rates the same as those rates currently in effect. The Company is proposing to use savings from changes in federal tax laws to keep its distribution prices stable while making its electric system more resilient. CMP plans on using savings from the *Tax Cut and Jobs Act*, passed in December 2017, to pay resiliency programmes costs and other investments.

The Commission has established a 10-month process to review CMP's filing and we expect a decision in August of 2019 with new rates taking effect in September of 2019.

- **MPUC Investigation into the Response by Public Utilities to the October 2017 Storm**

On December 19, 2017, the Commission issued a Notice of Investigation regarding utility response to the October 2017 Storm. The wind storm of October 2017 was unprecedented in the number of customers impacted and the magnitude of the damage across the entire Central Maine Power service territory. The vast majority of tree related damage was from trees that were located outside of the maintenance clearance zone. Damage occurred on nearly every CMP distribution circuit, resulting in more than 1,400 broken poles. CMP incurred the total incremental costs are approximately $68.6 million, of which $24.7 million are capital costs associated with the replacement of damaged infrastructure, including poles, cross arms, transformers and related equipment and after applying the agreed up capitalization method contained in the approved stipulation.

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On June 29, 2018, the MPUC approved a Stipulation Agreement in Docket no. 2018-00069 which provides for the recovery of incremental storm restoration costs through CMP's distribution rates. The Stipulation agreement included a revised storm capitalization amount and the value of recovery was reduced by approximately $531 thousand of cumulative underspent funds on non-cycle vegetation management activities.

On October 4, 2018, the Commission issued an Order stating that in accordance with the weather forecast information and the availability of storm restoration crew resources, that both Central Maine Power Company (CMP) and Emera Maine acted reasonably in their preparation for and response to a major wind and rain storm in October 2017 (October Storm) and that no further investigation of this aspect of the utilities response is warranted. The Commission identifies there are potential for improvements for future storm performance of the utilities, and with respect to coordination and communication with other involved entities. CMP filed its report on December 1, 2018.

- **Net Energy Metering**

On 14 September 2016, the Maine Public Utilities Commission (MPUC) issued a Notice of Rulemaking regarding Amendments to the Net Energy Metering Rule.

The MPUC made a decision on its Notice of Rulemaking on 31 January 2017. The MPUC has not yet issued the final rule but did issue a notice stating that the resulting rule a) grandfathers existing customers for fifteen years, b) for new entrants it locks in the phase down level, at the year in which they enter, for fifteen years, and c) maintains incentive margins consistent with the declining costs of solar technology.

4. Connecticut

- **UI rate case**

On 1 July 2016, UI filed an application with the Connecticut Public Utilities Regulatory Authority, or PURA, requesting approval of a three-year rate plan commencing 1 January 2017, and extending through 31 December 2019.

UI's rate request is attributable primarily to the amount of capital expenditures devoted to its electric distribution system for the purpose of reliability and system resiliency, both in relation to routine operations and during major storm events.

On 15 December 2016, the PURA issued its Final Decision authorising a cumulative three-year rate of USD 57 million (compared to the 98.3 million requested by UI during the process) for the years 2017, 2018 and 2019. The 2017 rate increase is USD 43.0 million, with an additional USD 11.5 million in 2018, and an additional USD 2.9 million in 2019. The PURA established a 9.10% ROE and 50% equity ratio.

The three year rate plan retains the existing earnings sharing level whereby earnings above the allowed ROE are shared equally between customers and shareholders. The Company's revenue decoupling mechanism continues. The PURA did reduce the residential basic service charge to USD 9.65 per month.

- **SCG rate case**

On June 30, 2017, The Southern Connecticut Gas Company (SCG) filed an application with PURA for new tariffs to become effective January 1, 2018.

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On 13 December 2017, PURA approved the amended settlement agreement and the new rates are effective as of 1 January 2018 the DIMP as proposed by SCG, the amortization of certain regulatory liabilities and rate increases in accordance with an ROE of 9.25% and approximately 52% equity level.

The parties also agreed on a three-year rate plan with rate increases of $1.5 million, $4.7 million and $5.0 million in 2018, 2019, and 2020, respectively. The new rates are effective as of 1 January 2018.

- **CNG Rate Case Settlement Agreement**

On June 30, 2018, CNG filed an application with PURA for new tariffs to become effective January 1, 2019. CNG requested a three-year rate plan for calendar years 2019, 2020 and 2021 and a proposed ROE of 10.20%. On August 30, 2018, the parties reached a three year settlement agreement with PURA for approval, which includes tariff increases in accordance with an ROE of 9.30% and 54%, 54.5% and 55% equity levels during years 1, 2 and 3. The parties agreed on rate increases of $9.9 million, $4.6 million and $5.2 million in 2019, 2020, and 2021, respectively.

PURA approved the rate case settlement agreement on December 19, 2018 and new tariffs became effective on January 1, 2019.

- **Net Energy Metering**

On May 24, 2018, Connecticut Public Act 18-50 was passed. The act changes the current annual net energy metering in Connecticut to a customer choice between either (A) a tariff for the purchase of all energy and renewable energy certificates produced by the distributed generation on a cents-per-kilowatt-hour basis (no net energy metering), or (B) a tariff for the purchase of any net energy produced by a facility and not consumed for a period of no greater than one day, to be determined by PURA (daily net energy metering). There is currently an active docket to determine the net energy metering interval, and other tariff requirements.

- **Millstone nuclear plant**

On December 5, 2018 PURA issued a decision finding that the Millstone nuclear power plan is at-risk of retirement as soon as June, 2023 if it needs to rely on the ISO New England wholesale market for its revenues. The Connecticut Department of Energy and Environmental Protection (DEEP) is conducting a request for proposals (RFP) for zero-carbon generation, including nuclear energy, and this RFP provides a mechanism for Millstone to receive a bidding preference as an existing generating resource found to be at-risk of retirement.

The RFP allows DEEP to select bids totalling up to 12 million MWh per year. It is possible that UI will be directed by DEEP to enter into one of more long-term contracts as a result of this RFP, including a long-term contract to procure a share of the output from Millstone.

5. Massachusetts

On May 17, 2018 Berkshire Gas Company filed a petition with the Massachusetts Department of Public Utilities seeking approval of a distribution rate increase of approximately $3.3 million. The Company requested a 10.35% ROE and a 61.5% equity ratio and to implement a revenue decoupling mechanism.

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On December 4, 2018, Berkshire Gas and the Attorney General's Office filed a Settlement Agreement with the MDPU. The Settlement Agreement provides for a $1.6M distribution base rate increase effective January 1, 2018 and an additional $0.7M based distribution increase effective November 1, 2019 if certain investments are made by Berkshire. The distribution rate increased is in accordance with a 9.70% ROE and 55% Equity. The Settlement Agreement, pending of approval by the MDPU, provides for the implementation of a Revenue Decoupling Mechanism and pension expense tracker and also provides that Berkshire Gas will not file to change base distribution to become effective before November 1, 2021.

6. FERC

Federal Tax Cuts and Jobs Act (Tax Act): On 22 December 2017, the US President approved the tax reform, Tax Act, which implied a cut of 1.5 billion US dollars. The new law establishes the following:

- The permanent reduction of corporate income tax from 35% to 21%, effective as of 1 January 2018.
- The elimination of the corporate Alternative Minimum Tax (AMT).
- The maintenance of corporate deductions for local and state taxes.
- The limitation on the deduction of interests.
- The exclusion of the utilities (regulated public services) from the total expense and their exemption from the limitation on the deduction of interests.
- The inclusion of normalisation and the excess provisions of deferred taxes.
- The maintenance of tax on dividends and capital gains.
- The maintenance of the elimination and gradual reduction of the PTC (Production Tax Credits) and the ITC (Investment Tax Credits), without modifications.
- Enforcement of a Base Erosion Anti-Abuse Tax on the deductions for the costs paid or accrued to a foreign subsidiary.

AVANGRID does not anticipate a direct impact from BEAT under current conditions. However, most U.S. providers of tax equity for renewable energy projects (generally, large banks and other corporations) meet the criteria to be subject to the BEAT.

By January 2018, inquiries and/or proceedings were initiated in all Avangrid Networks jurisdictions to assess the impact of this new law and ensure resulting benefits are passed back to customers.

- The deferred liability associated with the tax rate change began to be returned to customers in July 2018 for CMP (deferred balance from Jan 2018 – Jun 2018) and May 2018 for MNG (deferred balance from Jan 2018 – Apr 2018). CMP purposed to keep rates stable by taking advantage of the tax cuts in their Rate Case filing.
- On 8/9/18 the NYPSC issued a Ruling requiring credits effective 1/10/18 for annual savings plus a three-year amortization of the existing deferred liability. Estimated impact to NYSEG and RG&E is $61M ($54M annual value + $6M amortization). Consistent with the ruling, Credits began to be reflected in tariffs on 1/10/18.

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- In Massachusetts, the Company is proposing to return the tax rate reduction in the Berkshire Gas Rate Case presentation effective April 2019.

- In Connecticut, PURA reopened the most recent rate case decisions of each public utility to determine how the new tax law will impact rates. A Hearing was held on 7/5/18 establishing the appropriateness of an adjustment to rates.

- Utilities with formula rates will automatically have the tax benefits returned to customers through the formula. In May, NYSEG and RG&E submitted proposed revisions to its stated transmission rates which if approved would have an effective date of 1/1/19.

In all jurisdictions, the Company has created regulatory liabilities to capture the tax benefits of the Tax Act. Revisions to these balances are possible upon resolution of the proceedings. The final result of these cases will likely include the amortization of the liabilities.

FERC Rates

CMP's and UI's transmission rates are determined by a rate regulated by the FERC and administered by ISO New England (ISO-NE). Transmission rates are set annually pursuant to a FERC-authorised formula that allows for recovery of operating and maintenance expenses, as well as the return on assets invested. Prior to 16 October 2014, the FERC provided a base ROE of 11.14% and additional ROE incentives applicable to assets based upon vintage, voltage and other factors.

On 30 September 2011 a complaint was filed (Complaint I) seeking sought an order from the FERC reducing the 9.2% base return on equity (ROE) used in calculating formula rates for transmission service under the ISO-New England.

On 16 October 2014, FERC issued its final decision in the Complaint I setting the base ROE at 10.57% and a maximum total ROE of 11.74% (base plus incentive ROEs) for the October 2011 – December 2012 period as well as prospectively from 16 October 2014.

In June 2015, the affected parties filed an appeal in the U.S. Court of Appeals for the District of Columbia, which overwrited FERC's decision on Complaint I and remanded it back to FERC. The Court ruled that FERC should have first determine that the then existing 11.14% base ROE was unjust and unreasonable before selecting the 10.57% as the new base ROE.

On 26 December 2012, a second ROE complaint (Complaint II) for a subsequent rate period was filed requesting the ROE be reduced to 8.7%. On 19 June 2014, FERC accepted Complaint II, and established a 15-month refund effective date of 27 December 2012.

On 31 July 2014, a third ROE complaint (Complaint III) was filed for a subsequent rate period requesting the then effective ROE of 11.14% be reduced to 8.84%, and on 29 April 2016, a forth ROE complaint (Complaint IV) was filed for a subsequent rate period requesting the then effective ROE be reduced from 10.57% to 8.61% and that a ROE cap of 11.24% be established.

CMP and UI reserved refunds for Complaints I, II and III consistent with the FERC's final decision of 3 March 2015 in Complaint I. Refunds were provided to customers for Complaint I. The CMP and UI total reserve associated with Complaints I, II and III is USD 22.2 million and USD 4.4 million, respectively, as of 30 September 2017.

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On 5 October 2017 the New England Transmission Owner's (NETO) companies filed a Motion for Dismissal asserting that all four complaints should be dismissed because the complainants have not proven that the existing ROE of 11.14% is unjust and unreasonable as the Court decision requires. In addition, the NETOs assert that Complaints II, III and IV should also be dismissed because the Court decision implicitly found that FERC's acceptance of Federal Energy Legislation Section 206 complaints was statutorily improper. In the event FERC chooses not to dismiss the complaints, the NETOs request that FERC consolidate the complaints and issue a final order.

FERC issued an "Order Directing Briefs" on October 16, 2018 regarding the New England Transmission Owner's (NETO) ROE Complaints I - IV. The FERC Order addresses United States Court of Appeals (D.C. Circuit) Remand of FERC Opinion No. 531-A issued October 16, 2014 relating to ROE Complaint I. FERC proposes a methodology for addressing Remand; including New ROE Method resulting in a base ROE of 10.41% and maximum ROE at 13.08% for Complaint I. The FERC Order is not a Final Order or Opinion. "Order Directing Briefs" requires "Paper Hearing" on the new proposed ROE method.

Initial Briefs due January 2019 and responses are due March 2019. There is no decision due date. The FERC Order applies to Complaint I. If adopted, then new ROE method would need to be applied to Complaints II, III and IV periods.

CMP and UI have been reserving in accordance with FERC Opinion 531-A base ROEs of 10.57% and 11.74% Cap. Total reserve is $26.4 million as of September 2018. If New FERC Proposed ROE (Base ROE of 10.41% / Cap ROE of 13.08%) is adopted for all Complaint Periods, then preliminary impacts are: $24 M historical one-time benefit; $3.4 M annual prospective benefit.

FERC Formula Rate Proceeding: A settlement in principle was reached in February 2018 providing for regional and local transmission formula rates for calendar years periods consistent with the majority of transmission formula rates across the country.

The new formula rates will be effective January 1, 2020.

7. Electricity generation from renewable energy resources

Numerous State Governments and the Federal Government have adopted measures and implemented numerous regulations designed to foster the development of electricity production from renewable resources. State programs have generally come in the form of: 1) Renewable Portfolio Standards (RPSs) that usually require utilities to generate or purchase a minimum amount of renewable electricity; and 2) tax incentives. To date, the Federal Government has primarily supported renewable energy development through tax credits for production and investment as well as accelerated tax depreciation.

State Law

Several States have adopted mandatory RPS requirements, which vary across the states but will generally range from 15-33% of the generation by 2025. The requirements are typically implemented through a system of tradable renewable energy certificates that verify that a kWh of electricity has been generated from a renewable resource.

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Several state legislatures have debated whether to repeal or roll back significantly their RPS requirements. In 2014 Ohio enacted legislation to freeze its RPS program until 2017; in 2015, Kansas replaced its mandatory RPS with a 20% voluntary standard as part of a compromise that retained existing property tax exemptions. In contrast, California (in 2015) and Oregon (in 2016) enacted legislation to increase the state RPS to 50%. California in 2018 raised the bar further, to 60% by 2030 while Massachusetts and Connecticut also increased their requirements to 40%. New Jersey set a 50% standard by 2030 and Nevada approved a 50% by 2030.

Most states also offer a wide variety of tax incentives to promote investment in renewable energy resources. For instance, Washington and Colorado, among other states, exempt the sale and use of renewable energy equipment from taxation, which reduces development costs substantially. Several states reduce property tax requirements on renewable power generation facilities through enterprise zones or similar designations, while Minnesota has substituted a property tax in lieu of fixed production tax. Other states, such as Texas, boost the construction of electricity infrastructure (Competitive Renewable Energy Zones) to ease the transmission of renewable electricity towards load points.

In 2018 California legislators approved and signed Senate Bill 100, raising the RPS to 60% by 2030 (with interim targets) and establishing a state policy of zero carbon emissions from electric generation by 2045. Both New Jersey and Massachusetts raised their RPS requirement and set objectives for procurement of offshore wind generation. Maryland enacted an RPS increase. Proposals to provide financial support to operating nuclear plants in New Jersey.

Federal Law

In 1992, the US Congress enacted legislation that established a Production Tax Credit (PTC) of USD 15 per MWh (adjusted for inflation) for the production of electricity from wind power facilities for the first ten years of a project's operation.

This programme has been renewed several times and extended to include the generation of electricity from other renewable sources, such as biomass, geothermal power, urban solid waste and hydro power.

In 2005 the Congress established a 30% Investment Tax Credit (ITC) for solar power projects.

The PTC, which is currently valued at USD 24 per MWh, was extended and phased out by the Congress on 18 December 2015. The wind projects that are launched before 2017 will be eligible for full credit, while those that start construction between 2017 and 2019, will opt for a reduced credit. The plants that meet the requirements can also opt for an ITC of 30% instead of a PTC.

Congress also phased down the solar ITC. Projects to be commissioned before 2020 may opt for a 30% ITC, but those whose construction is to start after 2019 will opt for a lower ITC.

FERC

In regard to generation, FERC has focused on two areas. The first is the issue of resilience of the bulk power system. Following FERC's decision not to adopt the proposal submitted by the Department of Energy that would have directed payments to generation resources that maintain on-site fuel supplies, FERC initiated a new proceeding to collect information on the matter. Second, FERC in conjunction with certain of the Regional Transmission Organizations, has approved or is considering changes to capacity market eligibility requirements. Consideration of these matters will continue in 2019.

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5. Industry regulation in Mexico

The Mexican Energy Reform, which began at the end of 2013 with the amendment of three articles of the Mexican Constitution, set in motion the in-depth transformation of the electricity and hydrocarbons sectors, through the creation of a completely new regulatory framework and the promotion of competitiveness, non-existent up until now in the country. As a consequence of this constitutional reform, twenty-one new laws were enacted during 2014 and 2015 and twenty-five regulations were either created or reformed.

Besides having an impact on the hydrocarbons sector, the Proposal also introduced new business opportunities in the generation, transmission, distribution and management of electricity infrastructure. This transformation opens to the private sector some activities previously reserved for the state in the electricity sector.

The Hydrocarbons Law (LH) regulates activities like petroleum treatment and refining natural gas processing export and import of hydrocarbons and petroleum products; transportation, storage, distribution, compression, liquefaction, decompression, re-gasification, marketing and sale to the public of natural gas, hydrocarbons, petroleum products and petrochemicals, along with the management of integrated systems. All these activities are now open to private investment.

One of the main goals of the industry restructuring is to improve the electricity power generation, promoting the use of renewable sources or low carbon emissions. Thus, the Government introduced Clean Energy Certificates (CECs) through the Electricity Industry Law (Ley de la Industria Eléctrica - LIE).

Concurrently with the COP 21 in Paris, the Mexican Congress and Senate passed the Energy Transition Law (Ley de Transición Energetica - LTE), which creates binding obligations for clean energy generation and emission reductions targets for the future, bringing a strong legal framework to the development of clean energy projects in Mexico.

The previous regulatory framework will continue being applicable to IBERDROLA's existing businesses and facilities.

1. Competences after the Energy Reform

The planning and control of the National Electrical System (SEN), as well as the electricity power distribution and public transmission service are the exclusive responsibility of the Government of Mexico. Power generation, excluding nuclear, is open to private investment, as are electricity supply sales to the end users. The Mexican Government may grant service contracts to private companies, creating opportunities to participate in the construction, operation and maintenance of T&D infrastructure.

Power generation, excluding nuclear, is open to private investment, as well as power sales to the end users.

The Electricity Industry Law (Ley de la Industria Eléctrica - LIE) regulates activities in the electricity sector in Mexico. In accordance with the LIE, private companies can now generate and sell electricity under an organised Wholesale Electric Market, and also invest in transmission and distribution infrastructure, under specific Public-Private Associations and other legal structures described in the LIE.

From the regulatory side, three agencies will have primary responsibility for the sector. The Energy Secretariat (SENER) will have the function of applying public policies; the Energy Regulatory Commission (CRE) will have the regulatory function; and the National Energy Control Center (CENACE), a new decentralized and independent agency, will operate the power grid and the Wholesale Electric Market.

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2. Energy Secretariat

As part of the Energy Reform, the Energy Secretariat (Secretaría de Energía - SENER) has been empowered to coordinate the centralised planning and direct the national energy policy, both for hydrocarbon and electricity subsectors. SENER is also in charge of guaranteeing the implementation of the laws derived from the reform, including the LTE enacted in December 2015 for the transition to clean energy and emission reduction.

In 2015, SENER issued the "mandatory requirement of Clean Energy Certificates (CECs) for year 2018", with a target of 5% of the total consumption and in March 2016 established a target of 5.8% for 2019. In March 2017, the targets for CECs for 2020, 2012 and 2022 (7.4%, 10.9% and 13.9%, respectively) were defined. Penalties for non-compliance with the requirements of CECs have also been issued.

In 2016 SENER called for the second long term auction, and twenty three companies were awarded contracts to develop 2.8 GW of the renewable capacity; the cost of the clean energy was 30% lower than in the first auction in 2015.In 2017 a long-term auction was held where the award prices were again decreased (-40% with respect to the previous auction) for 2 GW of new allocated renewable generation.

In February 2017, the first Medium-Term Auction was held for 1- to 3-year energy and power contracts, which resulted in less than 4% of the Power purchase bid and 0% of the Energy awarded. On 20 December 2018 CENACE convened the second Medium-Term Auction, while the publication of the final bidding specifications were pending.

Throughout this process, SENER has been responsible for publishing updates of all wholesale electricity market Operational Manuals that outline the fundamental aspects of the market Guidelines.In December 2017, SENER delivered this package of Manuals to the CRE, which will be responsible for carrying out modifications and updates in accordance with market behaviour.

In June 2018 SENER published the annual updated versions of the National Electric Grid Development Programme (Programa de Desarrollo del Sector Eléctrico Nacional - PRODESEN) including projections of power generation, demand and infrastructure requirements for the 15 years following its publication (2017-2031).

3. Regulatory bodies

As a key part of the energy reform in Mexico, the country enacted the Regulatory Body Law in August 2014, setting out the guidelines for operating and responsibilities of the new regulatory bodies in the energy field: the National Hydrocarbons Commission (Comisión Nacional de Hidrocarburos - CNH) and the Energy Regulatory Commission (Comisión Reguladora de Energía - CRE).

CRE and the CNH are the two most relevant regulatory authorities in the energy sector. They have their own legal status, budget, technical and governance autonomy. Both bodies have a similar governance authority of seven commissioners and an executive secretary.

Regarding electric power, the main faculties of CRE are to modify WEM's basis and define terms and conditions of auctions and bidding processes; to supervise the wholesale market operation; to issue rules for transactions between generators and suppliers; to authorise the contract and auction models; to regulate with regard to reliability issues; to define capacity requirements and operational costs; to regulate and define the regulated tariffs and contract models for services involving transmission, distribution and basic supply of electricity; to issue models and authorise technical specifications for interconnection of power stations and users, issue rules regarding smart grids;

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Other roles of the CRE include granting permits for market participants, to issue CECs and other instruments to promote clean energy; to resolve controversies and enforce fines related to non-compliance of wholesale market participants.

Regarding the hydrocarbons, the CRE regulates and promotes the development of transmission, storage, distribution, compression, liquefaction and regasification activities of all hydrocarbons. In this regard, the natural gas market deregulation began in 2017, for the purpose of promoting fair conditions for participation of new retailers in the market and protection of natural gas end users in the country.

The CNH has the fundamental task of regulating and supervising the exploration and extraction of hydrocarbons.

4. National Agency for Energy Control

Mexico created the National Agency for Energy Control (Centro Nacional de Control de Energía - CENACE) as a decentralised public body with authority to perform the operational control of the National Electricity System and the wholesale electricity market.

CENACE has full autonomy and acts under the authority of SENER and CRE, in order to control the participation of generators and suppliers in the market; acquire and provide electricity and capacity in a competitive environment; and summon and manage the long-term auctions of capacity, energy and CECs.

CENACE guarantees open access to the transmission and distribution facilities to all market participants, public and private.

Additionally, CENACE also operates and oversees the preparation of proposals for planning and expansion of the entire national electricity grid through its development programme (PRODESEN), which is then supervised and issued by SENER and thereafter by CRE.

During 2016, CENACE launched the first phase of the Wholesale Electricity Market, conducted the second auction for CECs, Clean Energy and Capacity and issued the first result of the Capacity Balance Market process.

In 2017, CENACE developed the Clearing House that allows all Responsible Load Entities (Users and/or Suppliers) to buy products from the Wholesale Electricity Market through long-term auction. Additionally, it develops the Market Information System, a key piece of the WEM's operations.

As is the case every year, in February 2018 it issued the results of the Power Balance Market for 2017, which sets a price on the available capacity during the year 2017. This availability is recognised for the system's 100 critical hours. The resulting price was US$37.7 per kW year (709.6 pesos per kW year) for the National Interconnected System (NIS), US$31.4 per kW year for the Baja California system and US$146.3 per kW year for the Baja California Sur system. As of February 2019, the same is expected for 2018; likewise it is expected that CENACE will operate for the first time the CEL Market.

At the end of March 2018, CENACE convened a new Long Term Auction, in which Purchase Offers were registered by five entities in addition to the CFE Basic Service Supplier, which considerably increased purchase volumes. Sales offers were registered from 28 bidders. At the beginning of December 2018, before the execution of the economic model, the Auction was suspended for the revision of its objectives and scope by the new CENACE administration, introduced after the change in the Republic's Presidency.

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On 12 July 2018 the CRE published the criteria that the CENACE must follow to purchase Power by means of Reliability Auctions (SEN). These auctions will be proposed by CENACE when it foresees a deficit of generation capacity within a horizon of three to twelve months, purchasing power for a maximum term of one year. Contracts will be paid at the price offered and their cost will be distributed among the entities responsible for the Charge according to the power not covered by electrical coverage contracts.

At the end of 2018, the second annual market report was published by an Independent Monitor to evaluate market operations, its evolution, performance, efficiency and level of competition with the intention of issuing a series of opinions and recommendations.

5. Federal Electricity Commission Law

The Federal Electricity Commission Law (Ley de la Comisión Federal de la Electricidad), issued in August 2014, stipulates that the Federal Electricity Commission (CFE) becomes a productive state-owned production company wholly owned by the Federal Government.

The new CFE has budgetary and governance autonomy, with a board of directors formed by members of the incumbent secretariats (SENER, Treasury, etc.) and independent board members.

The new CFE will operate through its subsidiaries and affiliates and will participate in electricity generation, transmission, distribution and supply, so that other parties will be able to participate in the private investment in the wholesale electricity market.

During 2016, SENER published the terms and conditions of the strict legal separation of CFE and carried out asset restructuring. The operation of its recently created subsidiaries and affiliates as separate entities in the wholesale electricity market was commenced. A very significant success of CFE during 2016 was the renegotiation of the Labour Union Contract, which significantly reduced the burden of the pension liability in CFE's Balance Sheet.

6. Transmission and Distribution

As ruled by the LIE, the Mexican Government will perform electricity transmission and distribution (T&D) as a strategic regulated public service through state-owned production companies or their subsidiaries. CFE´s legal separation allows creating these entities as regulated open access companies.

The Reform introduces the possibility for the State to form associations or enter into contracts with individuals to carry out the activities relating to this public service, such as financing, installation, maintenance, management, operation, expansion, rehabilitation, surveillance and preservation of the required infrastructure for this service.

Therefore, in December 2017, the preliminary guidelines for the first bidding for transmission lines were published following the Reform's implementation. Called by SENER in February 2018, this bid invitation will award the High Voltage Direct Current (HVDC) project that connects the National Interconnected System with Baja California. This bid was cancelled on 16 January 2019.

One of the key elements in this matter is the implementation of a HVDC transmission line that will connect Istmo de Tehuantepec (one of the most important wind energy generation zones in Mexico) with the central area of the country (one of the areas with highest demand in the country); the preliminary bidding package was issued in the last quarter of 2016 and in February 2018, although the bidding date has still not been defined.

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7. Generation and Supply

The LIE provides that generation and supply of electricity power can be performed by any private or public entities subject to the compliance of permits and market rules. Generation plants 0.5 MW or larger require a permit from the CRE.

These are three types of permits required for electricity power supply: 1- basic supply with regulated tariff (for those consumers with a demand of less than 1 MW) or 2- qualified supply through the wholesale electricity market under liberalised conditions for consumers with a demand of 1 MW or above and 3) supply of last resort, of temporary use when the qualified consumers have not chosen a supplier or the supplier has stopped supplying them.

SENER may revise and reduce the threshold of 1 MW to opt for qualified supply. However, becoming a qualified user is optional and is only mandatory for new customers.

Accordingly, several Qualified Services Supplier (QSS) licenses have been issued, which in a free access and not unduly discriminatory environment, have competed since 2016 with the CFE affiliate dedicated to this service is one of the keys to making the electricity market's liberalisation a success.

8. Wholesale electricity market

The wholesale electricity market (WEM) commenced operation at the beginning of 2016. It is a local marginal price market operated by CENACE, where generators, suppliers and qualified consumers of electricity power can carry out transactions involving energy, capacity, ancillary services, CECs and financial transmission rights in Day Ahead, Hour Ahead and Real Time markets.

All of the Market Rules have not yet been fully developed, although a high degree of progress has been reached and many aspects of this Market are already operational. The Market Guidelines were issued in the second half of 2015, and since then more than 20 WEM Operational Manuals have been published. The Manuals outlining all aspects of the WEM's management and operations were made public in 2018.

9. Sustaining of previous regime for permits, plants and existing electricity industry contracts

Private generators currently holding a generation permit granted under the former Public Electricity Power Service Law (Ley del Servicio Público de Energía Eléctrica - LSPEE) shall retain their permits and prevailing terms and conditions thereof, provided that they do not breach what is stipulated by the LIE.. Once the wholesale electricity market starts operating, the holders of these legacy contracts - self supply and Independent Power Producers ("IPP") - have the alternative to migrate partially or completely to the new market system. Generators which, upon entry into force of the LIE, hold interconnection contracts known as Legacy Connection Contracts (Contratos de Interconexión Legados - CIL) issued under the former system should take into account that these contracts cannot be renewed upon termination.

Permit requests for self-supply, co-generation, small-scale production, imports or exports made before August 2014 were resolved under the LSPEE terms and conditions, provided that the facilities under such permits start operation before 31 December 2019.

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10. Electricity tariffs

In November 2017, the CRE published the new calculation methodology for regulated tariffs that apply to basic supply. The principle of the new tariffs is to be in accordance with the recovery of all generation costs, connection services, transmission and distribution costs, clean energy certificates and other recoverable costs and collection targets.

During 2018, the performance of the rate showed high volatility due to the generation costs recognised by the CRE, partly because the performance of the generation mix was different from the forecast and partly because the fuel costs were not correctly reflected. At the end of 2018 it was felt that the revenue provided by the rate was able, in an aggregate way, to recover the necessary costs to an acceptable extent.

Throughout the second half of 2018, the CRE worked to fine-tune the rate methodology by designing improvements expected to apply as of 2019, contributing to a more predictable and less volatile rate.

As the main mechanism to promote the reduction of non-technical losses arising from customer fraud, the CRE has imposed collection targets on the transport and distribution companies.

11. Functioning of Natural Gas System

As part of the Energy Reform, the former owner of the Natural Gas Transportation System (SISTRANGAS), Pétroleos Mexicanos (PEMEX), has been split into the following affiliates and subsidiaries: Pemex exploration and production, Pemex industrial transformation, Pemex perforation, Pemex logistics, Pemex co-generation and services, Pemex fertilisers and Pemex ethylene, as provided under the PEMEX Law enacted in August 2014. This law transformed PEMEX into a state-owned production company which performs business activities with profitability goals. Concurrently with this transformation, the natural gas transportation system was transferred from PEMEX to Centro Nacional de Control de Gas Natural (CENAGAS), in order to promote an open market for gas transmission, distribution and supply.

As a result of liberalisation, provisions concerning open access and pipeline transport and natural gas storage services were published and amended at the end of 2018 as well as provisions for their marketing. In accordance with the principle of asymmetric regulation, PEMEX could not continue to integrate the transport and the marketing of gas within the same company so a programme to transfer the natural gas contracts to new marketers was established. This programme concluded in 2018.

CENAGAS has issued the 5 year programme (2015-2019) for the Expansion of the National Natural Gas Transmission and Storage System governing its operation, of which two revisions have been issued. As part of the programme to reduce fuel oil consumption, CFE called for several bidding processes to contract natural gas transmission services through private companies.

The large majority of these pipelines will be operational by 2018, thus increasing the availability of natural gas to generate electricity and reducing the CO2 emissions from the industry.

The Legacy Transportation Permits (permits given before the energy reform) for self-supply and the long-term natural gas supply contracts with PEMEX required by the electricity plants will remain in effect and will not be adversely affected by these changes in the new regulatory framework.

During the second half of 2016 CENAGAS was empowered to conduct the future bidding processes for natural gas transmission auctions, (CFE or Pemex no longer have exclusivity). Additionally, all capacity rights of the SISTRANGAS were transferred to CENAGAS to control its management.

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SENER issued a public policy to create a Natural Gas Open Market by 2018, in order to promote the entry of new players and to reduce the role of PEMEX in the supply.

As part of this public policy in 2017, CENAGAS issued an Open Season for Transportation Capacity in the SISTRANGAS, which granted firm capacity rights to the winning bidders for year 2017 and will help to identify the sections that need to be expanded in the future.

6. Industry regulation in Brazil

1. Generation

The Brazilian system

Although hydroelectric generation's share has decreased in recent years, Brazil's generation system is predominantly hydraulic. In terms of the energy matrix, from 2000 to 2018, hydraulic share has decreased from 83% to 64%, with reference to installed capacity. On the other hand, wind share has increased to 7%.In upcoming years, Brazil's government expects the system to expand mainly through wind, solar energy and firm complementation source possibly natural gas.

The Brazilian system is interconnected and the power plants are spread over four electricity regions: southeast, south, northeast and north. These regions have distinct hydrology and the synergies between them can be used.

Electricity (independent system operator) dispatch is based in power plant audited cost optimization done by ONS, the Brazilian independent system operator. ONS uses a series of computer programs to determine what generation assets (hydroelectric and thermoelectric plants) should be optimally dispatched considering hydrological uncertainty, reservoir storage capacity, thermal power plant fuel and O&M costs, non dispatchable (i.e.: wind and solar) generation forecast, interconnection restrictions and demand forecast. In addition to defining the power plants' dispatch, these programs calculate the marginal energy cost, used as the market's spot price.

Assured energy

Since the system is predominantly hydraulic, the installed capacity is insufficient to measure the supply guarantee. Therefore, each hydroelectric station has a related assured energy, calculated by the Brazilian government, which represents the contribution in terms of the reliability of each power plant interconnected to the system. Thermoelectric and hydroelectric plants (dispatchable generation) have their assured energy calculated by the computer programs used to determined dispatch when they participates in the energy auction. Non-dispatchable sources have their assured energy calculated considering their generation expectations in the long term.

The regulation establishes that hydroelectric plants' assured energy must be reviewed every five years, but the first review was conducted in 2017 and only for those power plants with have been running for at least five years.

The following table contains details of the assured energy (in MW med) for those plants that have been reviewed. It shows the new values valid from 2018 onwards.

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	Avg MW	
Utility	Former	New
Baguari	80.2	84.7
Corumbá III	50.9	49.3
Itapebi	214.3	209.1

Energy reallocation mechanism

A financial mechanism exists that allows centralized dispatch and mitigates the hydrologic risk of hydraulic plants. This mechanism is called energy reallocation mechanism (ERM) and all hydroelectric plants must participate in it. The important thing for the ERM is total hydraulic generation and not each plant's individual generation. According to this mechanism, each month the total hydroelectric generation is allocated between each hydroelectric plant in proportion to its share in the system's total hydroelectric assured energy.

The total hydraulic generation of the group of ERM generators divided by their total assured energy is denominated Generation Scaling Factor (GSF) and its monthly calculation is used to implement the ERM. The energy allocated to each generator is, then, the GSF multiplied to its assured energy.

This mechanism worked well until 2012. Since then, hydrological conditions and other issues have reduced the GSF and this has caused a significant financial impact on hydroelectric power plants.

Recent hydrology and litigation

In recent years, total hydraulic generation has been systematically less than the total assured energy (GSF below 100%). Part of this can be explained due to the low level of hydrology, but there are other reasons that have reduce the hydraulic generation.

- Thermal power generation outside the order of merit: on several occasions the operator decided to replace the hydraulic generation determined by the computer programs by higher cost thermal generation, for the purposes of conserving hydro reservoir levels.

- Delays in the transmission line construction: some new hydraulic power plants were finished before the transmission lines necessary for their electricity evacuation were operational. However, these hydroelectric plants still participated in the ERM with their total assured energy even though they could not generate at full capacity. This scenario reduces the energy allocated for all participants of the mechanism.

- Assured energy timeline acceleration hydroelectric plants has their assured energy recognised in advance during project construction and commissioning. That is, they have participated in the ERM with more assured energy than they were able to generate. This has been a regular practice at large hydroelectric plant, such as Belo Monte, Santo Antonio and Jirau.

- Increase of intermittent sources, such as wind has reduced hydraulic generation.

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All these reasons have resulted in energy allocated to each ERM generator below their assured energy.

Given that the assured energy has been used as the benchmarking level for long-term energy contracts resulting in the generators being short and the high spot market prices in those years, the ERM generators suffer huge financial losses. Because of this, since 2015 some companies have filed administrative and judicial claims with the government to review ERM rules and cease spot market charges.

At the end of 2015, the government offered an insurance to those generators with contracts with distributors in order to protect these generators against a GSFbelow a certain limit from 89% to 100%) in exchange of a premium to be paid by the generator.

This process, known as renegotiation of the hydrological risk, reallocated part of the hydrological risk to the customers in exchange for an insurance premium and abandonment of current and future hydrological risk litigation.

However, the majority of claims of generators with contracts in the free market are currently in force. At the end of October 2018, a preliminary decision which protected these generators was annulled. But the values from 2015 up to February 2018 are still under judicial dispute.

The total amount under dispute is 6.78 billion of Brazilian Reals and the final solution depends on the publication of a specific law to regulate the GSF. During 2019 is expected that this law will continue its parliamentary procedure (PL 10.985). This law tries to eliminate from the calculation of the GSF all the factors not related to the hydrological situation.

Generation assets

In the generation business, NEOENERGIA has 3.5 GW of installed capacity between hydroelectric, wind and natural gas projects.

The most relevant hydraulic projects are: Teles Pires with a participation of 50.1%; Belo Monte (10% participation) and Baixo Iguaçu (70% participation).

Regarding Baixo Iguaçu, the Ministry of Mines and Energy proposed in 2014 to reduce its assured energy from 172.8 MWmed to 171.1 MWmed. After submitting resources and several interactions, the assured energy has been set at 172.4 MWmed.

NEOENERGIA has 100% of its wind energy production contracted in PPA in the long term, in the free and regulated markets. In December 2017, NEOENERGÍA won 294 MW in auction A-6 with the award of nine wind farms. In accordance with the rules of the auction, these wind farms will begin commercial operation on January 1, 2023.

In June 2018, NEOENERGÍA started a process in ANEEL to obtain the construction authorization in Paraíba for six other free-market wind farms.

Regarding thermal generation, NEOENERGIA operates the gas power plant Termopernambuco that arose from the Priority Thermal Power Program (PPT in Portuguese), established by the Ministry of Mines and Energy in 2000. In accordance with the PPT the minister established that the gas supply guarantee should be provided by Petrobras. In recent years, Petrobras has tried to disregard the fuel supply contracts signed under the regulatory framework established by the PPT, alleging insufficient charges.

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In this regard, Petrobras started arbitrage proceedings in August 2010, which have been completed in November 2018, with a decision 100% favourable for Termopernambuco.

Generation auctions

The government held two new auctions in 2018: A-4 in April and A-6 in August.

The A-4 auction hired 39 new generation projects, representing 1,024 MW of installed power and respective assured energy equivalent to 356 MW average. Solar energy had a highlighted participation with 29 plants (807 MW), almost 80% of the total energy sold. Also four wind farms (114 MW), four small hydropower plants (42 MW) and two biomass plants (62 MW) were awarded winners.

The average final price of the auction was BRL 124.75/MWh, with average discount of 59.07% from the ANEEL's auction cap-price.

The A-6 auction hired 62 new generation projects, representing 2.1 GW of installed power and respective assured energy equivalent to 1.23 GW average. The average final price of the auction was BRL 149.87/MWh, with average discount of 46.89%. The energy supply will start on January 1st, 2024.

On December, the Government held two auctions for electric power from existing plants to adjust the demand needs of distributors in the next two years.

- In auction A-1, an average of 4 MW was awarded at a price of 142.99 Brazilian reais per R $ / MWh (discount of 16% on the ceiling of 170 Brazilian reais for R $ / MWh). The resulting supply contracts will last from 1 January 2019 until 31 December 2020.

- In auction A-2, an average of 359 MW was awarded at a price of 161.35 Brazilian reais per R $ / MWh (discount of 4% on the exit price 162 Brazilian reais for R $ / MWh). The contracts will have a duration from 1 January 2020 until 31 December 2021. 53% of the contracted energy is natural gas thermal, sold under the modality of contract for availability.

Regulatory laws published in 2018

On 5 June, ANEEL published resolution nº 817 with the criterions to treat transmission congestion surplus and expositions of some specific generators. By this rule, in case of congestion, the transmission surplus is used to cover primarily financial expositions of ERM and, secondarily, to gift the system charges account.

On 26 June, ANEEL published the resolution nº 822 that change the resolution nº 697. This resolution establishes a new ancillary service for complementary frequency control services.

On 10 July, ANEEL published resolution nº 824 which allows distribution companies to sell contracts in the free market through multilateral auctions in case they are long (have more energy contracted then demand). Additionally, the resolution changes some rules of current mechanisms for other distribution companies' contract exchange mechanism known as surplus and deficits compensation mechanism (or MCSD, its Portuguese acronym) and bilateral agreements limiting the participation only to generators that aren't in commercial operations. Resolution 833/2018, of December 4, establishes the specific marketing rules and the sanctions procedure. The first round of this market took place on December 26, 2018 (for 3-month energy delivery).

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2. Distribution

Distribution activities are regulated and executed in a 30-year concession under a monopoly. The concession term may be extended during the same period at the granting authority's (Union) discretion. At the end of the concession period, the assets will be reversed back to the Union and the concessionaire must be compensated for investments not depreciated or redeemed.

The Brazilian regulatory framework is in accordance with a price cap system which designates a major revision and reparametrization, known as tariff review, every four or five years, depending on each company concession contract. COELBA and COSERN have a five-year term, whilst CELPE and ELEKTRO have a four-year term.

Moreover, tariffs are updated annually by ANEEL, through the annual adjustment process that considers inflation, an ex-ante efficiency factor and variations on non-manageable costs components, such as energy purchase costs and transmission tolls.

The purpose of the annual adjustment is to ensure that the charges, transmission and energy acquisition costs (known as Parcel A) are passed on to the tariff and to adjust the distribution costs (known as Parcel B) for inflation, discounting a predetermined efficiency factor (factor X).

An annual tracking account mechanism is used to register Parcel A's imbalances, which should be passed on to tariffs in the following tariff review process.

In 2018 COELBA and COSERN's rates **were revised**:

- On 17 April, ANEEL approved COELBA's annual tariff readjustment, which increased its tariffs by an average 16.95%, in effect as of 22 April 2018. There was an increase of 15.85% in Parcel A (due to transmission costs and industry charges) and of 25.20% in Parcel B, mainly due to remuneration to investment.

- On 17 April, ANEEL approved COELBA's annual tariff readjustment, which increased its tariffs by an average 15.61%, in effect as of 22 April 2018. There was an increase of 10.42% in Parcel A (due to transmission costs and industry charges) and of 11.69% in Parcel B, mainly due to remuneration to investment.

Additionally, ANEEL approved CELPE and ELEKTRO's **annual tariff adjustment**.

- On 24 April, ANEEL approved the annual tariff adjustment of CELPE's tariffs, which increased its tariffs by an average 8.89%, in effect as of 29 April 2018. The most striking thing was the 8.26% increase in Parcel A (responsible for the final rate increase of 5.67%) due to energy acquisition costs and networks. Parcel B increased some 1.42% as a result of the inflation adjustment index, IGP-M minus factor X, and was responsible for the 0.45% drop in the final rate.

- On 21 August, ANEEL approved ELEKTRO's annual tariff readjustment, which increased its tariffs by an average 22.42%, in effect as of 27 August 2018. The most significant adjustment was the 13.11% hike in Parcel A due to energy transmission networks costs. Parcel B rose by 5.85% in accordance with index IGP-M minus factor X.

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2018 metering procedures	COELBA Change	ELEKTRO Change	CELPE Change	COSERN Change
Variation Parcel A	15.85%	13.11%	8.26%	10.42%
Variation Parcel B	25.20%	5.85%	(1.42%)	11.69%
Economic adjustment index	18.45%	11.28%	5.22%	10.81%
Package A monitoring account/Other financial components	2.73%	13.39%	5.36%	4.13%
Total	**21.18%**	**24.67%**	**10.58%**	**14.94%**
Removal of previous year's financial components	(4.21%)	(2.25%)	(1.69%)	0.67%
Consumer impact	**16.97 %**	**22.42%**	**8.89%**	**15.61%**

In accordance with current regulation, the distributors must sign PPAs with the generators in order to supply 100% of the estimated demand. The cost assumed by the distributors for the purchase of this energy is transferred to the final tariff, as long as it covers between 100% and 105% of the estimated consumption. . If the distributor purchases energy for less than 100% of its estimated demand it may be penalised; conversely, if it has contracts over 105% of its demand, it will be exposed to spot price risk.

In 2016, distributors had a surplus of energy contracts due to relocation[1] of hydroelectric energy participation (known as energy quotas), which increased the quantity of energy of PPAs of some distributors.

Other reasons for the surplus were the migration of consumers to the energy free market, (without the distributors being able to reduce the PPAs) and the significant market reduction, due to the economic crisis and the cumulative tariff increases of previous years.In order to confront this issue, MME and ANEEL have carried out several actions, such as:

- Acknowledgement that the additional energy received by the distributors by the quota system must be considered involuntary and transferred to the tariff (resolution 706/2016)

- Creation of a mechanism whereby the distributors and generators commonly agree to reduce their PPAs (resolution 711/2016)

- Determination of the distributors right to reduce PPAs for the purpose of compensating the exit of special customers to the free market (customers with demand between 0.5 and 3MW (resolution 726/2016)

- Broadening of the new energy relocation (MCSD de Energia Nova), thus allowing generators to offer reduction of the PPA (resolution 727/2016)

- Reduction of the energy limit that must be acquired by distributors in A-1 auctions, for distributors with surplus energy (decree 8,828/2016)

- Reduction from 95% to 90% of the insured energy volume considered under the quota system (whereby the electric power is distributed among the distributors regardless of the demand forecast they have; by decreasing the volume of insured energy, less energy is distributed)

- Permission for distributors to sell energy surplus to generators, retailing companies and consumers (up to 3 MW).

[1] Energy from hydroelectric power plants renewing their concessions in accordance with Law 12.783/2013.

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Since 2015, distributors' tariffs have been complemented with tariff flags, revised annually by ANEEL in accordance with marginal operation cost (energy cost).

In 2018 the flags were set in the following manner:

Flag	Thermal plants in operation (fuel cost)	BRL/MWh
Green	Up to 211.28 BRL/MWh	-
Yellow	211.28 - 422.56 BRL/MWh	10
Red - level 1	422.56 – 610.00 BRL/MWh	30
Red - level 2	More than 610.00 BRL/MWh	50

In 2018 the green flag was set for January, February, March, April and December, whereas the yellow flag was set for May and November and the Level 2 of red flag for from June to October.

WACC is used to define the remuneration of investments made by energy distributors. ANEEL decided during a Public Meeting of the Board of Directors held on March 6th,to maintain the weighted average cost of regulatory capital (WACC) of 8.09% for the distribution segment. According to the Agency's decision, the methodology used in 2015 has been maintained and the current percentage will be applied until December 2019. The idea is for a new system to be applied from January 2020 on.

ANEEL approved on 04 September 2018 the extraordinary review of the Energy Development Account (CDE) budget for 2018. On Dec. 28, 2018 Decree No. 9,642 was published on the reduction of subsidies in the sector account of the CDE. The decree establishes an annual reduction of the subsidy of the electricity tariff of rural consumers and irrigators of 20% until its elimination in 2023. It also eliminates the possibility that these rates accumulate more than one discount.

The Board of ANEEL decided on October 23, 2018 to approve a resolution authorizing the Electric Energy Trading Chamber (CCEE) to manage the restitution of the balance of the Reserve Energy Account (CONER), which generates a financial surplus when the Settlement Price (PLD) is higher than the average value of the reserve power contracts (renewables). Part of this surplus is retained at CONER's account to guarantee the payment of contracted generators. Under the rules previously in force, the reimbursement to consumers of reserve power would be equivalent to one third of that balance. With the new resolution, the expectation is that the reimbursement will increase bringing relief in the tariff of the distributors.

3. Transmission

In the electric transmission business, NEOENERGIA has five concession contracts between 2009 and 2013, which include transmission lines and substations, as well as reinforcements. Together, they generate an annual allowed profit (RAP) of approximately BRL 80 million.

Company	Annual profit allowed (BRL)
Afluente T	39,697,547
SE Narandiba	9,805,992
SE Extremoz II	3,111,373
SE Brumado II	1,953,742
Potiguar Sul	25,349,469
Total	**79,918,123**

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These assets are subject to tariff reviews every five years, in addition to annual adjustments made for monetary reformulation. In 2018 SSE Brumado II was submitted to a tariff review process; and in 2019, SE Naradibay Potiguar Sul will submit to a tariff review process.

In 2018, two transport auctions were held:

- The first (Auction 002/2018) made available 20 projects, representing 2,562 km of transmission lines and substations with a transformation capacity of 12,226 MVA.

- The second (Auction 004/2018) took place on 20 December 2018. It awarded 16 lots totalling 7,152 km of transport lines and 14,819 MVA in transformation capacity, with works in 12 Brazilian states and with an average discount of 46%. The total investment planned amounts to 13,170 million Brazilian Reals. The term of execution of the works varies between 48 and 60 months and the duration of the concession is 30 years from the signing of the contract.

4. Other regulatory changes

Changes in the regulatory framework and liberalization of the electricity market.

Currently, consumers over 3 MW can migrate to the free market. Customer between 0.5 and 3 MW can also migrate if they are supplied only from incentivized sources (wind and solar).

The National Congress has been working on a proposal to launch two bills: PL 1917/2015 (Chamber of Deputies) and PL 232/2016 (Federal Senate) that contemplate the following schedule of liberalization of the market: 2 MW in 2020 regardless of the contracted voltage, 1 MW in 2021, 0.5 MW in 2022 and 0.3 MW from 2024. On December 28, Ministerial Decree No. 514/2018 was published, which anticipates the liberalization of the electricity market by establishing the intermediate milestone of 2.5 MW in July 2019.

Hourly Spot Price in short-term market

At the end of 2017, the Ministry of Mines and Energy opened the Public Consultation 42, about the adoption of hourly spot prices in short-term market to 2019 onwards.NEOENERGIA, and other companies and associations noticed that the process was not taking all the necessary steps required to guarantee a safe transition. In April 2018 it was started a parallel accounting of prices and dispatch known as shadow operation. But in June 2018, the Independent System Operator (ONS) and the Commercialization Chamber (CCEE) realized that the DESSEM computation model (used to optimize dispatch and compute prices hourly), needed some improvements. Then, they decided to postpone the implantation of hourly spot price to 2020.

New limits of the LDP (Resolution No. 2498/2018 published on December 18, 2018)

The resolution establishes that the minimum limit of the PLD for 2019 is 42.35 Brazilian reais per MWh and the maximum is 513.89 Brazilian reais per MWh. It also establishes the rate of auxiliary services for 2019.

Light for All Program extended until December 2022 (Decree No. 9.357 / 2018)

The “Luz para Todos” program was created in 2003 with the aim of electrifying rural, isolated and economically disadvantaged areas.The program is coordinated by the Ministry of Mines and Energy, operated by Eletrobrás and executed by energy concessionaires and rural electrification cooperatives.

This program is financed jointly with: 1) sectorial funds such as the Conta de Desenvolvimento Energético

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(CDE) and the Reversão Global Reserve (RGR), 2) by the Governments of the States and 3) by the distribution companies (that recover later investments in the corresponding tariff reviews).

Privatisation of Eletrobras

During the second half of 2018, the privatization of the six distributors managed by Eletrobrás was carried out, with the following results:

Company	Auction winner	Discount
Companhia Energética do Piauí (CEPISA)	Equatorial Energia	119%
Companhia de Eletricidade do Acre (ELETROACRE)	Energisa	31%
Centrais Elétricas de Rondônia (CERON)	Energisa	21%
Boa Vista Energia S.A. (BOA VISTA)	Consórcio Oliveira Energia	-
Amazonas Energia	Consórcio Oliveira Energia	-
Companhia Energética de Alagoas (CEAL)	Equatorial Energia	-

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CONSOLIDATED DIRECTORS' REPORT 2018

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This directors' report has been prepared taking into consideration the "Guide of recommendations for the development of directors' reports of listed companies", published by the CNMV in July 2013.

1 COMPANY'S POSITION

The Company has undergone a major transformation over the last 15 years, staying clearly ahead of the energy transition in order to address the challenges posed by climate change and the need for clean electricity.

Boasting a track record that spans over 170 years, today IBERDROLA is an international energy leader producing and supplying electricity to more than 100 million people in the countries in which it operates.

As a result of our environmental commitment and our engagement in the decarbonisation of the economy, we stand out as the leading renewable energy company and have succeeded in reducing its emissions in Europe by 75% since 2000, reaching levels that are 70% below the average for European companies in its sector.

The IBERDROLA group is currently present in the following countries and geographical regions, where we occupy a leading position and are regarded as a benchmark thanks to our sustainable energy model.

- Euro zone: leading producer of wind power in Europe, leading energy company in Spain, with a presence in Portugal, France, Italy, Germany, Greece, Hungary, Romania, Cyprus, etc.
- United Kingdom: 100% renewable producer, transmission and distribution networks in England, Scotland and Wales.
- United States: Gas and electricity distributor in New York, Maine, Connecticut and Massachusetts and third biggest producer of wind power.
- Brazil: one of the leaders in the energy sector.
- Mexico: leading private sector producer of electricity.

As the electric utility of the future, IBERDROLA has placed its bets on clean energy, smart grids, efficient energy storage and the development of solutions tailored to its customers. At the centre of this strategy are the various stakeholders, with which it engages in ongoing dialogue. In order to confront the future energy scene with assurance of success, the Company places its trust in digital transformation, which is in accordance with two main pillars: technology and innovation.

On this basis, IBERDROLA is now embarking on a new stage of growth, supported by a strong investment drive essentially in regulated businesses or with long-term contracts, which will provide the security, stability and visibility that are the hallmarks of the company's business model. Likewise, IBERDROLA will continue maintaining its social commitments, acting as a driver for the growth and generation of employment in the countries where it operates, and creating sustainable value for all its stakeholders.

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1.1. Business model

The current trends in the energy sector — the decarbonisation and electrification of the economy, technological advances and customers' increased connectivity — confirm the focus of our three global businesses: networks, renewables and generation and retail, and all of them centred on the customer.

The IBERDROLA Group accelerates value creation along five strategic pathways: profitable growth, operational excellence, a customer-focused approach, optimisation of capital, and finally digitisation and innovation.

To make its business model as competitive as possible, IBERDROLA has organised the management of its activities into three global businesses:

Renewable Business the renewables area is tasked with generating and marketing electricity from renewable sources: wind (onshore and offshore), mini-hydroelectric, solar thermal, photovoltaic, biomass, etc. Among the main objectives of the renewable business are:

- Safety in operations.
- Efficiency in operations to maximise the return on assets.
- Efficiency in construction costs, with special emphasis on offshore wind projects.
- Profitable growth in onshore and offshore wind power in strategic countries for the Group and new counties of interest.
- New long-term energy sale contracts at global level.

Network business: the networks area is responsible for the construction, operation and maintenance of power lines, substations, transformer centers and other facilities for delivering electric power from the production centres to the end user. Among the main targets are:

- Zero accidents.
- Offering an excellent service to customers, in accordance with quality of supply and grid information.
- Maximising efficiency in the operation of the system through operating excellent and digitisation of assets.
- Leading change towards a more efficient integration of renewable distributed energy.
- Integration of the electrical vehicle.
- 100% smart grids by 2030.

Generation and Supply business: the generation and supply area focuses on the production of electricity through the construction, operation and maintenance of generation plants and the sale and purchase of energy in wholesale markets. It also supplies energy and additional products and services to end customers.

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- Competitive supply and excellence in customer service.
- Safety at work.
- Environmental management and respect for biodiversity.
- Identifying and minimising risks.
- Development of growth opportunities and new energy solutions.
- Growth in directs sales with private companies.
- Smart energy and mobility.
- Smart solar.

1.2 Mission, Vision and Values of the IBERDROLA Group

Our corporate governance system is inspired and takes form in our commitment to the Mission, Vision and Values of the IBERDROLA Group, which is our corporate ideology, channels our ordinary activity and guides our strategy and all our actions.

Mission

"Our mission is to create value in a sustainable way in carrying out our activities for society, citizens, customers, employees, shareholders, and other stakeholders, as the leading multinational group in the energy sector providing a quality service through the use of environmentally-friendly energy sources, which engages in innovation, leads the process of digital transformation in its area of activity, and is committed to the fight against climate change through all of its business activities, with a social dividend and the generation of local employment and wealth, and which considering its employees a strategic asset. With this in mind, we foster their development, training, and work-life balance, favouring a good working environment and equal opportunities. All of the foregoing is within the framework of our strategy of social responsibility and compliance with tax rules."

Vision

"We want to be the leading multinational group in the energy sector at the forefront of a better future, sustainably creating value with a quality service for people: citizens, customers and shareholders, whom we care for and involve in our corporate life, and for the communities in which we carry out our activities, generating employment and wealth, with whom we engage in constructive dialogue. We want to be known for our firm commitment to ethical principles, good corporate governance and transparency, the safety of people and security of supply, operational quality and excellence, innovation, protection of the environment, customer focus and the Sustainable Development Objectives approved by the UN. We will make this possible through the work of our employees and the people working at our suppliers and collaborators, whom we care for by offering all the training and work-life balance resources at our disposal for their development and to strengthen equality of opportunity."

Values

The mission and vision of the Group are in accordance with a firm commitment to 12 values to which all Corporate Policies, internal rules and other internal codes and procedures must adhere:

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- Creation of sustainable value
- Ethical principles
- Good corporate governance and transparency
- Development of our workforce
- Social commitment
- Sense of belonging
- Safety and reliability
- Quality
- Innovation
- Respect for the environment
- Customer focus
- Institutional loyalty

1.3. IBERDROLA' corporate governance model

Corporate governance system

IIBERDROLA constantly updates its corporate governance system, which consists of its By-Laws, the Mission, Vision, and Values of the IBERDROLA Group, the corporate policies, the governance rules of the corporate decision-making bodies and internal committees, and the compliance function. In order to move forward in developing specific aspects of its corporate governance system, the Company promotes the creation of working groups composed of authorised representatives of the stakeholder group(s) affected in each case, Company employees and top-level external experts in the field concerned.

The IBERDROLA Group's commitment to good corporate governance and transparency is reflected in its Mission, Vision and Values, the bases of which as regards corporate governance are the involvement of the shareholders in the Company's affairs and maintaining a leadership position in the application of best practices and in transparency.

The general corporate governance policy contains a summary of the basic principles regulating the corporate governance of the Company and of the Group and of its most important components, available in full at www.iberdrola.com.

Governance model

This duly makes a distinction between the functions of strategy and supervision and those of management and control:

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- The IBERDROLA Board, composed of a large majority of independent directors, focuses on defining, supervising and monitoring the policies, strategies and guidelines to which the group must adhere.

- The chairman of the Board, the chief executive officer and the rest of the management team are responsible for the group's strategic coordination and organisation, through the distribution, implementation and monitoring of the general strategy and its basic guidelines.

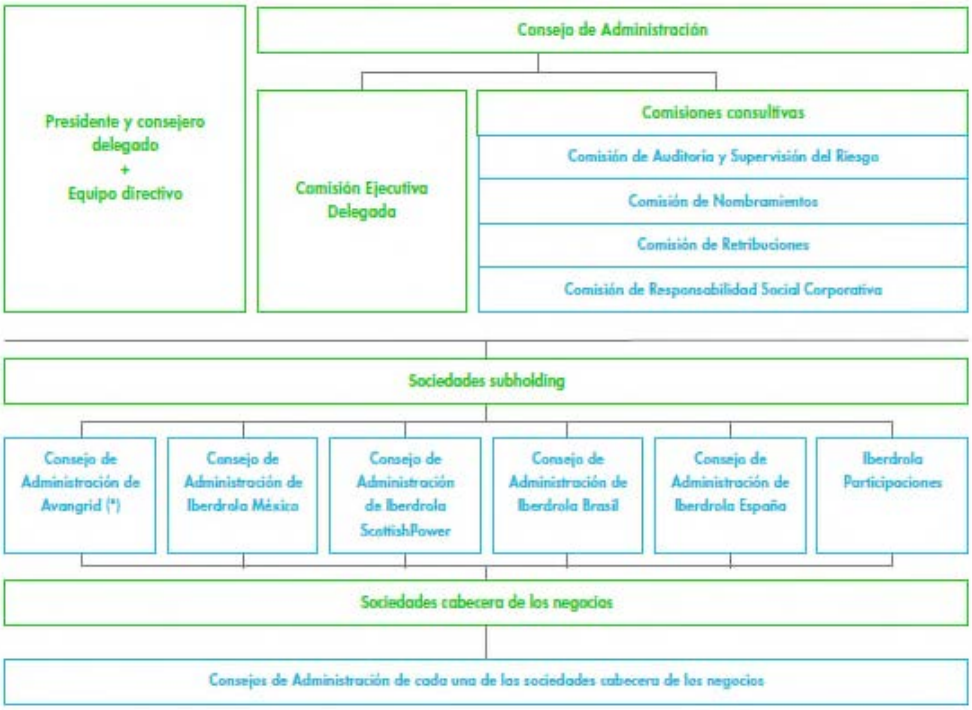
- In all countries in which the group operates, business is organised and strategically coordinated through subholding companies, which group investments in energy business operating in the country concerned and centralise the provision of common services to these companies. The group also has a subholding to handle all non-energy business.

  The subholdings have boards with independent directors, and their own Audit and Compliance Committees, Internal Audit departments and Compliance units or departments.

- Parent companies are tasked with ordinary management and effective administration of all lines of business. They also have boards with independent directors and specific management teams.

  This structure, which operates along with the group's business model, fosters global integration of the lines of business (Networks, Generation and Sales and Renewables), and focuses on maximising operational efficiency, by implementing best market practices.

Corporate and governance structure of IBERDROLA, S.A.



(*) Sociedad cotizada en la Bolsa de Nueva York.

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1.4. Corporate structure of the Group

Given the nature of the activities carried out by the IBERDROLA Group, its organization responds to the strategic business units, rather than product and service lines. These businesses are managed independently, as they respond to different technologies, regulations, and geographic markets (Note 7).

The IBERDROLA Group has a decentralised structure and management model to approximate the decision taking to places where they should have effect, through the subholding companies and parent companies of the businesses. In addition, the independence and listed subholding companies' reinforced autonomy are guaranteed.

The corporate structure encompasses the Company (IBERDROLA, S.A.), subholding companies and business parent companies.

- IBERDROLA, S.A. (Parent company)

  The board of directors of the Company defines and supervises the Group's policies and strategies and of the basic guidelines for the management thereof, and adopts strategic decisions.

  The chairman of the Board of Directors & chief executive officer of with the technical support of the Operating Committee, the Group's Business CEO and the rest of the management team, assumes the duty of organisation and strategic coordination of the Group through the dissemination, implementation and monitoring of the overall strategy and of the basic management guidelines established by the Board of Directors.

- Subholding companies

  The subholding companies group together the equity investments in the energy business parent companies that conduct their activities in the various countries in which the Group operates. This structure also comprises a subholding company that groups together certain equity investments in other entities, including the parent companies of non-energy businesses, present in several countries.

  They contribute to organisation and strategic coordination in their respective countries, disseminating and implementing the Group's guidelines and management policies.

  Furthermore, they centralise the provision of shared services to the business parent companies, always in accordance with applicable legislation and, in particular, with the rules on segregation of regulated activities.

  The subholdings have boards with independent directors, and their own Audit and Compliance Committees, Internal Audit departments and Compliance units or departments.

  Listed subholding companies enjoy greater autonomy, as provided for in legislation and with regard to related party transactions and management.

- Business parent companies

  The business subholding companies of the Group assume decentralised executive responsibilities. They have the necessary autonomy to carry out the day-to-day administration and effective management of each of the businesses, and are responsible for the day-to-day control thereof.

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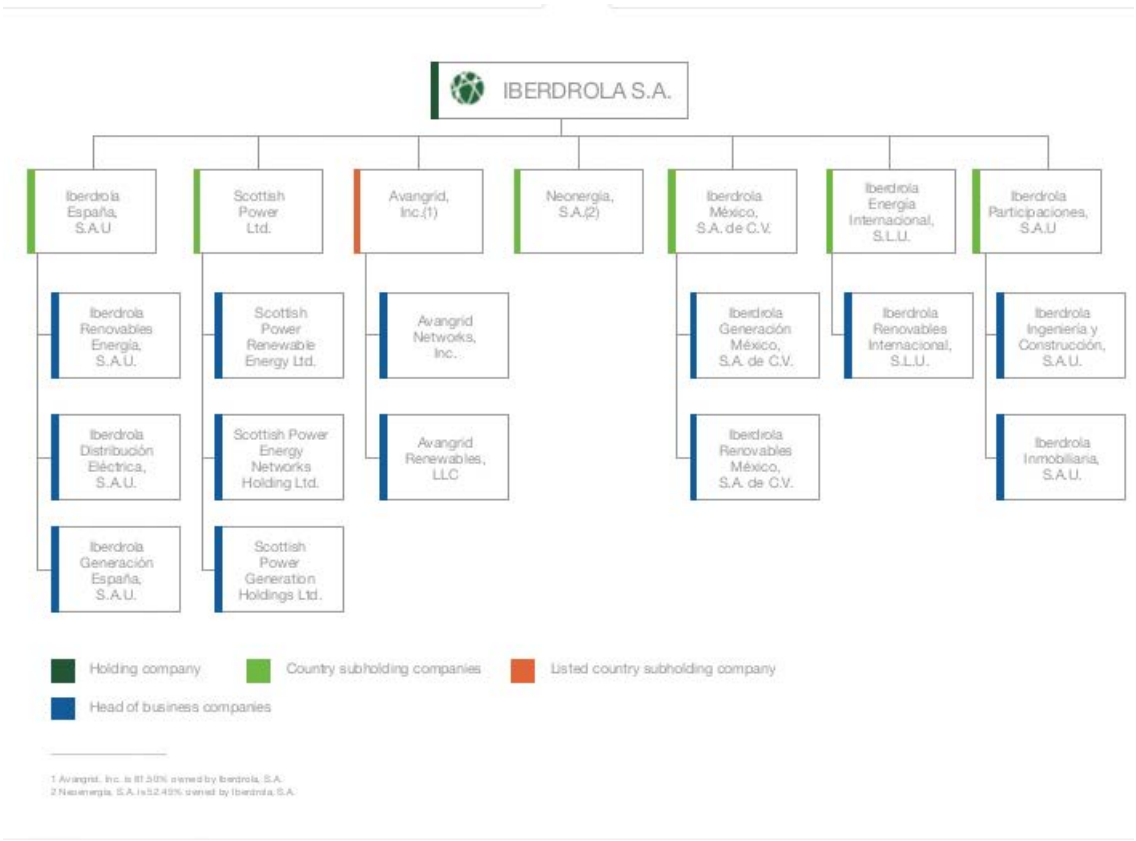
They are organised through their Boards of Directors, which may include independent directors, and their own governing bodies; they may also have their own audit committees, internal audit areas, and compliance departments.

Outline of the Group's corporate structure



The Company's and the Group's governance conforms to the structure described above: it segregates the duties relating to strategy, oversight, and control of the Group as a whole, those of organisation and coordination of the businesses in each country and the multinational non-energy business, as well as those of day-to-day administration and effective management of each business.

It is established on the following bases:

a) The board of directors of the Company, which solely exercises holding company duties, has been assigned powers relating to the establishment of the Group's policies and strategies and of the basic guidelines for the management thereof, as well as general oversight of the implementation of such policies, strategies and guidelines and of decisions on matters that are strategically significant at the Group level.

b) The chairman of the board of directors & chief executive officer of the Company, with the technical support of the Operating Committee, the Group's Business CEO and the rest of the management team, assumes the duty of organisation and strategic coordination of the Group through the dissemination, implementation and monitoring of the overall strategy and of the basic management guidelines established by the board of directors.

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c) This organisation and coordination duty is strengthened through the boards of directors of the subholding companies, which includes independent directors, as well as their own audit committees, internal audit areas, and compliance units or departments.

d) The business parent companies of the Group assume decentralised executive responsibilities. They have the necessary autonomy to carry out the day-to-day administration and effective management of each of the businesses, and are responsible for the day-to-day control thereof. These business parent companies are organised through their respective boards of directors and their own governing bodies.

The corporate and governance structure of the Group described above operates in parallel with the Group's business model, which entails the global integration of the businesses and aims to maximise the operational efficiency of the different units. The business model ensures the dissemination, implementation and monitoring of the overall strategy and of the basic management guidelines established for each business, primarily through the exchange of best practices among the various companies of the Group, while upholding their decision-making autonomy.

In any case, the Company and the Group assume the commitments established by law in connection with the legal and functional separation of the companies carrying out regulated activities, while the subholding companies ensure compliance with such legislation.

1.5. Organisation of the board, or the bodies to which its decision-making function is delegated, including control functions and the policy with respect to non-controlling interests.

A comprehensive description of the governance structure of the Company, and of the functions and internal regulations of the committees is provided in section C of the annual corporate governance report, which forms part of this directors' report.

1.6. Regulatory framework of the activities

A comprehensive description of sector regulation and operation of the electricity and gas system in the markets in which the Group operates is provided in Appendix 2 "Sector regulation and operation of the electricity and gas system" attached to the annual accounts.

1.7. Main products and services, and production processes

The main products that IBERDROLA offers to its customers are electricity and natural gas, in both the wholesale and retail markets serving the end consumer. The Company also offers a wide range of products, services and solutions in the fields of:

- Improving the quality of life, peace of mind and safety of the consumer.
- Efficiency and energetic services.
- Caring for the environment: renewable energy and sustainable mobility.
- Quality of power supply and safety of facilities.
- Installation of electrical infrastructure.

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- Global management of facilities and energy supplies.

Through its subsidiaries, the Company also provides services for the engineering and construction of power generation, distribution and control facilities; operation and maintenance of power generation facilities, land management and development; and the sale and rental of housing, offices and commercial premises. More detailed information can be found at www.iberdrola.com, in the "customers" section.

As a general rule, companies directly manage the activities that make up their core business and outsource the activities they consider will be conducted more efficiently by other specialised companies, of which IBERDROLA requires certain quality standards and responsible behaviour as regards environmental, social and labour aspects.

This information can be extended with the corresponding indicators described in the sustainability report.

1.8. Strategic principles for the 2018-2022 period

The energy scenario in which IBERDROLA will be undertaking its activity in the coming years will be based on three pillars:

- The need for decarbonisation.
- Technological advances, continuing the trend toward increased efficiency in terms of the sources of renewable energy and electricity grids.
- New demands from consumers, who need new energy services, more connections. These will be possible thanks the possibilities offered by digitalisation.

All of this means an increase in demand for energy, especially for electricity, which will grow 60% in the years to 2040[2]. In order to attend to this growth in demand for electricity, associated investment will exceed 16.3 billion dollars[2] in power grid and renewables alone.

In accordance with this increase in electricity consumption, in the 2018-2022 period, the company will continue to develop its strategy in the different businesses and markets where it has a presence:

- In the United States the company is taking up a position to home in on opportunities for investment in energy infrastructures and renewables through the platform operated by its subsidiary AVANGRID, which has eight regulated energy transmission and distribution companies in New York, Connecticut, Maine and Massachusetts, as well as being one of the country's thrid largest wind energy producer. The group will continue investing in transport and distribution network infrastructures and will continue with its strategy of growth of onshore wind energy and solar energy. The company is also working in the development of the offshore wind power sector, in which it has an extensive portfolio of projects, with Vineyard (800 MW[3])

[2] International Energy Agency: *World Energy Outlook 2018, New Policies Scenario (NPS)*

[3] *50% corresponding to Avangrid*

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- In the UK, where IBERDROLA has become the first 100% renewable utility, its commitment to renewable energy will continue to be underlined, especially that of offshore wind power via an existing platform, with the company maintaining development of the “East Anglia One” offshore wind farms in the North Sea of 714 MW, which will be fully operational by 2020. Moreover, reading renewables projects in the UK it will continue developing networks infrastructures under regulatory frameworks already approved for transmission and distribution (RIIO-T1 and RIIO-ED1).
- In Iberian Peninsula it will strengthen its leadership in networks and renewable energies. Investments will focus on networks, and more in particular in distribution. The company will also continue to develop its renewable energy portfolio through wind and solar power projects, as well as the Tâmega hydroelectric complex in Portugal, which has a total generating capacity of 1,158 MW.
- In Mexico, where work on projects currently under construction is set to finish, investment will focus on contracted power generation and renewables, analysing the opportunities that may arise.
- NEOENERGIA, one of Brazil's main power generating groups with a presence in 18 states, offers growth opportunities in both the renewable and transmission and distribution network sectors.
- In other countries in Europe, where the company has already brought its first offshore wind farm in Germany on line. The company's commercial activities have expanded into new European markets, including Portugal, France and Italy.

Operating efficiency

IBERDROLA has always been one of Europe's most efficient electricity companies, and will continue to boost its operational efficiency on the strength of technical progress in terms of the digitisation of all its businesses and processes, as well as synergies arising from process standardisation through the Group’s implementation of best practices in all its businesses.

Earnings performance

The strategy, consisting in the profitable growth in mature businesses, efficient operation of ongoing assets, and the aforementioned investment plan, will lead to sustainable growth in company profits.

Shareholder remuneration

The trend forecast for the period will enable the Company to increase long-term remuneration for shareholders, in keeping with results.

Financial solvency

The Company will continue to present a solid financial position that is compatible with the investment plans and the forecasted shareholders remuneration.

This section of the directors’ report of IBERDROLA contains forward-looking information, including financial projections and estimates and their underlying assumptions, statements regarding plans, objectives and expectations with respect to future operations, capital expenditure, synergies, products and services, and statements regarding future performance or directors’ estimates which are in accordance with assumptions they consider reasonable.

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Although IBERDROLA believes that the expectations reflected in such forward-looking statements are reasonable, investors and shareholders of IBERDROLA are cautioned that forward-looking information and statements are subject to risks and uncertainties, many of which are difficult to predict and generally beyond the control of IBERDROLA; risks that could cause actual results and developments to differ significantly from those expressed in, or implied or projected by, the forward-looking information and statements.

The forward-looking statements are not guarantees of future performance and have not been reviewed by the auditors of IBERDROLA. It is recommended that no decisions be made on the basis of the forward-looking statements, which refer only to the date they were made. All of the forward-looking statements included in this report are expressly qualified by the cautionary statement above. All forward-looking statements included in this directors' report are in accordance with the information available on the date hereof. Except as required by the applicable law, IBERDROLA undertakes no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

2. BUSINESS PERFORMANCE AND RESULTS

2.1. Highlights for the period

From 1 January 2018 results of hydroelectrical generation is presented under the scope of the Renewables business (before, they were presented within the scope of the Liberalised business). Subsequently, information regarding 2017 has been re-stated bearing in mind this circumstance.

As for the average performance of IBERDROLA's main reference currencies regarding t the Euro in 2018, the main currencies depreciated: the Pound Sterling by 0.9%, the US Dollar by 4.7%, and the Brazilian Real by 19.5%.

Regarding the performance of electricity production in the period, the main areas of activity were:

- The energy balance on the Iberian Peninsula in 2018 can be characterised by a significant increase in hydroelectric production (up 74%) compared to the previous year. 2018 closed with the index of producible hydroelectric power reaching 1.3, with hydroelectric reserves at 44.1%, compared to an index of 0.5 and reserve levels at 26.3% at the close of 2017. Coal and combined cycle production fell 18% and 22% respectively in comparison to the previous year. The rest of energy production from renewable sources closed 2018 at levels that were similar to the previous year, the result of greater wind power production (up 3%), which offset the drop in solar power production (down 12%).

  In terms of demand, it increased by 0.4% with respect to the same period of 2017, while in terms adjusted for work and temperature, it grew by 0.3%.

- In the United Kingdom, electricity demand peaked by 0.3% compared to 2017, while customer gas demand (not including energy used in generation) is up 5.2% compared to 2017.

- In the AVANGRID area in the East Coast of the United States, electricity demand increased by 3.2%, while gas demand increased8.8% compared to 2017.

- In the IBERDROLA catchment area in Brazil, electricity demand rose by 2.8% compared to 2017.

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2.2 Basic indicators

At the end of 2018, IBERDROLA had 44,104 MW of installed generation capacity, of which 68.2% emission-free energy while operating at a very low variable cost. The tables below show distribution by country and technology:

Power per countries (MW)	2018	2017	MW change
Spain	25,574	25,607	(33)
United Kingdom	2,086	4,616	(2,530)
United States	7,180	7,009	171
Mexico	6,663	6,242	421
Brazil	1,640	1,640	–
RoW	961	961	–
Total	**44,104**	**46,075**	**(1,971)**

Power per technology (MW)	2018	2017	MW change
Renewables	26,909	27,066	(157)
Onshore	15,251	15,032	219
Offshore	544	544	–
Hydroelectric	10,421	10,984	(563)
Mini Hydroelectric	301	301	–
Solar and other	392	205	187
Nuclear	3,166	3,166	–
Gas combined cycle	12,542	14,465	(1,923)
Cogeneration	613	504	109
Coal	874	874	–
Total	**44,104**	**46,075**	**(1,971)**

IBERDROLA Group's total production in this period grew by 8.4% to 136,737 GWh (126,198 GWh in 2017). Net production by geographical areas and technologies is the following:

Net production per country (GWh)	2018	2017	% change
Spain	56,636	50,358	12.5
United Kingdom	10,576	11,945	(11.5)
United States	19,462	17,612	10.5
Mexico	41,323	41,854	(1.3)
Brazil	6,560	3,047	115.3
RoW	2,180	1,382	57.7
Total	136,737	126,198	8.4

Power per technology (MW)	2018	2017	MW change
Renewables	53,684	42,216	27.2
Onshore	35,711	32,340	10.4
Offshore	1,642	820	100.2
Hydroelectric	15,711	8,659	81.4
Mini Hydroelectric	279	150	86.0
Solar and other	341	247	38.1
Nuclear	23,419	23,190	1.0
Gas combined cycle	55,910	55,964	(0.1)
Cogeneration	2,108	2,163	(2.5)
Coal	1,616	2,665	(39.4)
Total power (MW)	**136,737**	**126,198**	**8.4**

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2.3. Business performance

2.3.1. Analysis of the profit and loss account

As indicated, the information for 2017 has been re-stated to show hydroelectric generation within the Renewables business (in 2017, it was shown within the Liberalised business).

The key figures for the financial year 2018 are as follows:

Millions of Euros	2018	2017	% change
Revenue	35,076	31,263	12.2
Gross margin (1)	15,435	13,364	15.5
EBITDA (2)	9,349	7,319	27.7
EBIT (3)	5,439	2,713	100.5
Net profit	3,014	2,804	7.5

(1) Gross margin: Revenue – Supplies
(2) EBITDA: Operating profit+ Depreciation/Amortisation and provisions
(3) EBIT: Operating profit

The profit for the year has exceeded the goals initially set for the performance in all countries and businesses. Operating profit (EBITDA) came to Euros 9,349 million and net profit exceeded Euros 3,000 million for the first time (Euros 3,014 million).

This improvement was underpinned by the Group's growth, particularly in Brazil, Mexico and the US and by the return to normal of margins and the small sales margins in the UK. All this in spite of currency devaluations (Pound Sterling by 0.9%, the US dollar by 4.7% the Brazilian real by 19.5%) which supposed a minor Euros 363 million off EBITDA.

The effect of the reorganisation in Brazil during the first eight months of the financial year (from September 2017 on, the bases for comparison are like-for-like) improved EBITDA by Euros 570 million, although it did not affect net profit significantly.

Net profit for the year increased by Euros 210 million or 7.5% relative to 2017, despite the recognition in 2017 of a gain of Euros 255 million on the Gamesa transaction the positive impact Euros 1,284 million of the US tax reform on net profit after restructuring and early retirement plan, as well as other positive non-recurring effects recognised in 2017, such as the exceptional positive result in the Gas business in Spain as a result of the exceptional price revision in supply contracts, which was not repeated in 2018 and therefore has a negative effect on the year-on-year comparison. On the negative side, we would point to the impact of the severe storms in the US.

From an operational point of view, outstanding positive points were the improvements in tariffs in the US and Brazil, the increase in onshore wind power production (thanks both to the greater operating capacity and the increased load factor) and in hydroelectric power, the normalisation of conditions in the liberalised business in the UK and the increased CFE tariff in Mexico.

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2.3.1.1 Gross margin

The gross margin stood at Euros 15,435 million, with an increase of Euros 2,071 million, up 15,5% compared to that obtained in 2017, supported by the positive performance of all the countries and businesses and the incorporation of Neoenergía. The performance of reference currencies had a negative effect of Euros 406 million offsetting the Euros 1,505 million improvement in business performance, and the impact of the incorporation of Neonergia in the first eight months of the year 2018, which represents Euros 972 million,.

The gross margin by business is as follows:

Millions of Euros	2018	2017	% change
Networks business	7,641	6,786	12.6
Liberalised business	4,168	3,757	10.9
Renewable business	3,611	2,791	29.4
Other businesses	58	70	(17.1)
Corporation and adjustments	(43)	(40)	(7.5)
Gross margin	**15,435**	**13,364**	**15.5**

- **Networks business**

The Networks business improved its contribution by 12.6% to reach Euros 854 million up to 7,641 million euros (Euros 6,787 million in 2017) propelled by the improvement all geographic areas.

Without taking into consideration the integration in Brazil, of Euros 784 million, and the impact of exchange rate, a lower gross margin of Euros 287 million, gross margin would rise Euros 358 million, up by 5.3%.

Thousands of Euros	2018	2017	% change
Spain	2,109	2,003	5.3
United Kingdom	1,222	1,174	4.1
United States	2,780	2,754	0.9
Brazil	1,530	856	78.7
TOTAL	7,641	6,787	12.6

As significant facts in the performance of the Networks business' gross margin, the following stand out:

- In Spain, the gross margin amounted to Euros 2,109 million, Euros 106 million more than in the previous year, mainly due to a rise in recognised earnings in Euros 105 million.

- The United Kingdom contributes Euros 1,222 million (4,1%), up by Euros 48 million compared to 2017 and impacted by the depreciation of the Pound Sterling, Euros 11 million. The increase is explained by an improvement in transmission and distribution income due to larger assets.

- The contribution of the US in the period was Euros 2,780 million, Euros 26 million more than in the previous financial year (0.9%). Without the dollar's depreciation of Euros 130 million, the margin would have grown by Euros 156 million (+5.7%), thanks to new "rate cases" (formal process to determine charges to customers for utilities) and reduced costs of energy.

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- Brazil's Gross Margin amounted to Euros 1,530 million (78.7%), Euros 674 million more than in 2017, of which 784 million was the result of the corporate reorganisation in the first eight months of the financial year and a negative 145 million due to the depreciation of the Brazilian real, the remaining positive 35 million being the result of the growth of the business itself. The tariff revisions of COELBA (Bahia state electricity company) and COSERN (Companhia Energética do Rio Grande do Norte) and increased demand compensate lower inflation and higher losses.

- **Renewables business**

The Renewable business increased its gross margin by 29.4% to Euros 3,611 million (Euros 2,791 million in 2017), up Euros 820 million more than in 2017.

Millions of euros	2018	2017	% charge
Spain	1,580	1,174	34.6
United Kingdom	644	547	17.7
United States	835	783	6.6
Brazil	178	92	93.5
Mexico	88	71	23.9
ROW	286	124	130.6
Total	**3,611**	**2,791**	**29.4**

The main causes of this trend are:

— Spain: gross margin reached Euros 1,580 thousand growing by 34.6% compared to the same period of 2017. This growth was due to the increase in production, of both hydroelectric (72%) and wind power production (3.9%).

— The gross margin in the United Kingdom increased by Euros 97 million to Euros 644 million (17.7%) with the impact of the depreciation of the Pound Sterling, which accounted for Euros 6 million. The details of the impact are:

- Improvement of Euros 41 million as a result of larger onshore wind output (13.7%) to which contribute both wind factor and a better installed power for the new wind farms in 2017.

- Reduction of Euros 9 million due to lower offshore wind output (7.9%);

- The improvement in wind prices represents Euros 19 million and the peak in ROC prices increases margin in Euros 21 million and 2 other minor effects million ;

- Hydroelectrical energy contributes Euros 29 million due to better prices despite output going down by 16.2%;

— The contribution of the United States for the period totalled Euros 835 million (6.6%), Euros 52 million more compared to the previous year. The depreciation of the US Dollar had a negative impact of Euros 39 million. The improvement compared to the previous year in production (10.7%) enhanced the gross margin by Euros 95 million and was offset by the Euros 4 million in the impact of lower prices and derivatives.

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- Mexico improved its contribution to the gross margin by Euros 17 million due to price increases to reach Euros 88 million in 2018 due to a larger output of 13.8%, which overcomes the depreciation of the dollar, which in turn lowers margin in Euros 4.2 million.

- Brazil improved its contribution to the gross margin by Euros 86 million, affected by the appreciation of the Brazilian Real (Euros 35 million) due to the global integration of the plants of the Neoenergia subgroup since the second half of 2017.

- The rest of the world increased Euros 162 million, due to the commissioning of Wikinger, with an installed capacity of 350 MW and an output of 887 GWh in December 2018.

- **Liberalised business**

The Liberalised business (Generation and Supply) increased its contribution to gross margin in Euros 411 million, to Euros 4.168 million (Euros 3,757 million in 2017).

Thousands of Euros	2018	2017	% change
Spain	2,415	2,293	5.3
United Kingdom	863	743	16.2
Mexico	756	646	17.0
Brazil	134	75	78.7
Total	**4,168**	**3,757**	**10.9**

— In Spain and Portugal the gross margin was Euros 2,415 million, an improvement of Euros 122 million (5.3%), basically due to:

  - the Euros 111 million improvement in the generation business, the lower production being offset by better margins;

  - Improvement of Euros 88 million in the customer business, thanks to increased sales activity, with increased sales of electricity in volume terms, as well as a greater contribution from other products and services;

  - negative impact of Euros 77 million on the Gas business due to the comparison's being affected by the exceptional revision of prices in the supply contracts portfolio in 2017.

— The UK improved its gross margin by Euros 120 million (+16.2%) to Euros 863 million. The basic reasons for this improvement compared with 2017 are the recovery in sales margins from the compression experienced in the previous financial year, Euros 109 million, and the slight improvement in generation, Euros 11 million. This improvement was affected by the 0.9% depreciation of the pound (Euros 128 million). Without this effect the margin would have improved by 17.3%, as it did in local currency.

— Mexico contributed Euros 756 million to the gross margin (+17.0%), up by Euros 110 million on its contribution in 2017. Without taking account of the dollar's depreciation, which represented Euros 35 million, the business increased its contribution by Euros 145 million, underpinned by the good progress of the IPP projects with the CFE (Mexican state-owned electric utility), Euros 30 million, the recovery of the tariff with private customers in 2018, and other minor effects – Euros 108 million and 7 million respectively.

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— Brazil's gross margin increased by Euros 59 million to Euros 134 million. The effect of the incorporation of Neoenergía in the first eight months of the 2018 financial year amounted to Euros 76 million and the depreciation of the real Euros 11 million, leading the gross margin to diminish by Euros 6 million, basically explained by poorer performance of the Termopernambuco power plant due to the stoppages of 2018.

- **Other businesses**

The contribution of other businesses amounted to Euros 58 million, a decrease of Euros 12 million compared to 2017 (Euros 70 million in 2017), although this is due to the discontinuation of the engineering business.

2.3.1.2 Gross Operating result – EBITDA

Consolidated EBITDA increased by Euros 2,030 million, 27.7%, to Euros 9,349 million (compared to Euros 7,319 million in 2017). The devaluation of currencies and the integration of Neonergia represent Euros 252 and 570 million, respectively. Notwithstanding these effects, EBITDA would improve in 23.4% amounting to Euros 1,713 million.

All business improve: Networks by 16.2%, Renewables by 39.3%, and Liberalised (Generation and Supply) by 39.2%.

Millions of euros	2018	2017	% charge
Network business	4,915	4,228	16.2
Liberalised business	2,038	1,464	39.2
Renewable business	2,445	1,755	39.3
Other businesses	29	13	123.1
Corporation and adjustments	(78)	(141)	44.7
EBITDA	**9,349**	**7,319**	**27.7**

The EBITDA performance variables are explained as follows:

- **Net operating expenses**

Net operating expenses go down Euros 16 million (−0.4%) to Euros 4,155 million (Euros 4,171 million in 2017). The impact of exchange rate resulted in Euros 128 million and the reorganisation in Brazil in Euros 399 million for the first 8 months of the year. If we excluded these impacts, the decrease would be Euros 287 million, down 6.9%.

This variation is explained by:

— An increase of Euros 20 million due to the storms in the United States;

— A decrease of Euros 175 million as a result of the application of IFRS "Revenues from contracts with customers" due to customer acquisition costs which improve compared to previous years;

— The implementation of personnel leaving plans in 2017 amounting to Euros 203 million less in personnel expenses.

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— The net result of business growth and efficiency plans represent an increase of Euros 71 million.

Millions of euros	2018	2017	% charge
Networks business	2,079	1,922	8.2
Liberalised business	1,328	1,432	(7.3)
Renewables business	698	685	1.9
Other businesses	28	52	(46.2)
Corporation and adjustments	22	80	(72.5)
Net Operating Expenses	**4,155**	**4,171**	**(0.4)**

- **Taxes**

Taxes increased by Euros 57 million to Euros 1,931 million, up 3.0% compared to 2017, due to:

- the exchange rate impact improves in Euros 25 million whereas the incorporation of Neonergia has a negative impact of Euros 3 million;
- increase in US rates in contributing Euros 13 million to the Networks Business.
- Sustainability taxes increase in Euros 65 million due to a higher water fee and the price increase (on which a 7% is charged despite having been eliminated in the last months of 2018).
- The net of appropriations and reversions of provisions increase the headings in Euros 13 million.
- Increase in Enresa rate in the amount of Euros 3 million:
- Lower taxes in the United Kingdom in Euros 24 million of which Euros 13 million are a result of the implementation of the WHD (since the end of the previous plan in March until the implementation of the new one in October) and Euros 9 of ECO (the programme ended on 30 September 2018).
- Raise in public prices and other less relevant variations result in an increase of Euros 9 million.

2.3.1.3. Net Operating result – EBIT

EBIT totalled Euros 5,439 million, 100.5% higher in comparison with 2017 (Euros 2,713 million).

Millions of euros	2018	2017	% charge
Network business	3,034	2,660	14.1
Liberalised business	1,139	704	61.8
Renewable business	1,397	352	297.0
Other businesses	20	(798)	102.5
Corporation and adjustments	(151)	(205)	26.3
EBIT	**5,439**	**2,713**	**100.6**

- **Depreciation, amortisations and provisions**

Depreciation, amortisation and provisions rose by 17.1% to Euros 3,656 million:

- Amortisation increased in the amount of Euros 401 million (12.6%) to stand at 3,587 million.

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- Effect of exchange rate changes of Brazil reduces amortisation in Euros 89 million and the impact of the integration in Brazil amount to Euros 212 million.

- Accelerated amortisation of thermal power plants whose closure is expected in 2021 increases provisions in Euros 15 million.

- The application of IFRS 15 results in Euros 81 million due to the amortisation of customer acquisition costs as described above;

- Larger investments in the Networks business in the United Kingdom represents an increase in amortisations of Euros 38 million.

- Larger investments in the Networks business result in higher amortisations of Euros 88 million for Wikinger and the rest of the business of Euros 37 million;

- The sale of the gas business in the United States reduces this item in Euros 31 million;

- The rest of the new investments, networks in Spain, the United States, Brazil and Mexico increase amortization by 49 million euros.

- The Provisions represent Euros 69 million decreasing Euros 1,154 million compared to 2017. Additionally, as well as the impact of exchange rates improves in Euros 89 million and the integration of Neonergy amounting to Euros 212 million, the main impacts explaining the variation are:

  - Provision derived from the classification of the gas business in the United States and Canada as held for sale in an amount of Euros 743 million;

  - Reorganisation of the goodwill of the renewables business in the United States as a result of the tax reform amounting to Euros 450 million;

  - The remaining Euros 39 million is the net effect of several less significant provisions and reversals.

2.3.1.4. Net finance cost

The net finance cost was Euros -1,156 million, Euros 219 million higher than in 2017, 23% lower compared to 2017 mainly due to the restructuring of our business in Brazil.

Average cost stands at 2.97% (2.91% in 2017).

Miles de euros	2018	2017	charge
Debt profit	(913)	(920)	7
Impact IFRS 9	(35)	-	(35)
Differences derivatives exchange rates and other	36	68	(32)
Restructuring Brazil	(245)	(86)	(159)
Total	**(1,156)**	**(937)**	**(219)**

The main items that explain the variation are:

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- The reduction of financing costs, as a result or optimising and diversifying sources of financing, has contributed to better debt which has more than offset the raise in average balance of Euros 1,150 million (excluding Neoenergia) due to investment effort.

- The reinterpretation of IFRS 9, which reflects the highest interest rate of financial liabilities amended but not in a material manner compared to 2017, has resulted in a loss of Euros 35 million.

- The positive profit of derivatives and others is reduced in Euros 33 million mainly due to the performance of net revenue hedges on the main currencies. Its impact is offset in operating result.

- Last, the consolidation of Neonergia for a whole year, as a result of the restructuring in Brazil, compared to the four months in the previous year, has worsened profit in Euros 158 million.

2.3.1.5 Profit/loss of equity-accounted investees

Profit/loss of equity-accounted investees amounted to Euros 56 million, of which Euros 31 million correspond to the sale of Tirme.

2.3.1.6 Gains on disposal of non-current assets

Gains on disposal of non-current assets amounted to Euros 9 million, down Euros 270 million compared to 2017 (Euros 279 million). The Siemens-Gamesa merge and the company reorganisation in Brazil occurred in 2017 have an impact on the comparative information.

In 2018 the most significant transactions were as follows:

- The sale of the gas business in the United States and of 80% of the interest in Coyote Ridge Wind LLC resulted in gross losses of Euros 37 million.

- The sale of IBERDROLA Energía Solar de Puertollano, S.A. and of Scottish Power Generation Limited resulted in gross gains of Euros 38 million.

- The profit of intangible assets resulted in gross gains of Euros 8 million.

2.3.1.7 Net profit

Net income rose to Euros 3,014 million, Euros 210 million more than in the prior year, as a result of:

- Corporate tax costs stood at 959 million , an increase of Euros 2,357 million as a result of:

    - Reductions to nominal rates compared to the previous year in America and companies in the Bizkaia tax system in Spain, as well as greater contribution in terms of income from the United Kingdom, where the nominal rate is below average, reduced the Group's average effective ordinary tax rate (from 26.3% in 2017 to 23.6% in 2018). The overall effect of this was an increase in corporate tax expenditure for the year of 192 million.

    - The effect of the 2017 tax reforms in the US and the fiscal effect of the associated write-offs meant a tax revenue of 2.026 billion euros and 225 million respectively

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- o Other less significant effect improved corporate tax expenditure by Euros 87 million.

- Non-controlling interests stemming from the integration of NEOENERGIA, improved results in the US and increased funding through hybrid loans stood at 323 million.

- Discontinued operations saw a loss of Euros 51 million.

2.4 Operating performance of the period

2.4.1 Networks business

A. Spain

IBERDROLA has approximately 11 million managed supply points and total distributed energy 93,897 GWh, an increase of 0,7%% compared to the same period of the previous year (93,289 GWh in 2017).

The TIEPI (continuity of supply indicator) for 2018 was 44.6 minutes, an improvement of 15.37% on the previous year (52.70 minutes in 2017).

The table shows the values of the TIEPI (interruption time in minutes), the lowest in the last years, and NIEPI (number of interruptions in number) in relation to the previous year:

Year	Accumulated TIEPI	Accumulated NIEPI
2017	52.70	1.14
2018	44.6	0.91

The STAR project for the rollout of smart meters has been completed. IBERDROLA has installed more than 10.8 million digital meters and adapted the infrastructure that supports them to a smart grid, which represents a modernisation of the company's meter pool in Spain.

In July works for the first 2 MWh batteries storage system for the distribution grid in Caravaca de la Cruz commenced. This system will guarantee supply in the in case of breakdown, improve power control and facilitate the integration of distributed renewable generation.

B. United Kingdom

IBERDROLA has more than 3.5 million supply points in the United Kingdom. The volume of energy distributed during 2018 was 32,460 GWh (32,772 GWh in 2017), a decrease of 1% compared to 2017

All quality of service indicators, the average Customer Minutes Lost (CML) and the number of consumers affected by interruptions per every 100 customers (Customer Interruptions, CI) have been as follows:

	2018		2017	
	CML	CI	CML	CI
Scottish Power Distribution (SPD)	49.4	35.9	29.4	40.7
Scottish Power Manweb (SPM)	34.7	35.3	33.2	29.6

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C. United States

– Distribution

In the United States IBERDROLA has 2.2 million electricity supply points. The volume of energy distributed in the year was 37,336 GWh, which represents an increase of 2.0% compared to 2017 (36.591 GWh).

The System Average Interruption Frequency Index (SAIFI) and the Customer Average Interruption Duration Index (CAIDI) are as follows:

	2018		2017	
	SAIFI	CAIDI	SAIFI	CAIDI
Central Maine Power (CMP)	* 1.24	* 2.14	* 1.61	* 1.83
NY State Electric & Gas (NYSEG)	* 0.84	* 2.07	* 1.20	–
Rochester Gas & Electric (RG&E)	* 0.54	* 1.85	* 0.55	* 1.77
United Illuminating Company (UI)	* 0.50	* 1.54	* 0.41	* 1.36

The whole area of energy distribution in US has suffered the impact from heavy storms in winter and spring that battered the east coast of North America, affecting quality indicators.

In Maine, a violent windstorm in April left tens of thousands of Central Maine Power customers without electricity, hitting supply indicators compared to 2017. CMP was praised for its extraordinary response to further heavy storms in October last year, receiving the Edison Electric Institute's EEI Emergency Recovery Award for the seventh consecutive occasion. This award recognises the great effort that companies make to restore the power supply as swiftly as possible in the face of inclement weather conditions and natural disaster.

In Connecticut, UIL's quality indicators for its distribution business were adversely affected by a grid incident which coincided with equipment renewal in the same area.

In March, the New England Clean Energy Connect project presented by Avangrid, CMP and Hydro-Québec, was chosen as the best way to supply clean energy to Massachusetts. With an investment of 950 million dollars, the project involves the construction of a 233-kilometre HVDC transmission line between Canada and New England, supplying 1,200 MW of 100% hydroelectric energy to customers in Massachusetts for twenty years. In 2018 the project sought to obtain the required permits in order to begin construction in 2019. The majority of these permits have been applied for, with only local and municipal approval still pending, meaning that construction work is expected to start on schedule.

– Gas

At the end of 2018 there are slightly more than 1 million gas users in the United States who have been supplied with 59,301 GWh, a 15.3% increase compared to the previous year (51,440 GWh).

D. Brazil

The demand of distributors in Brazil in 2018 increased by 2.3% to 56,760 GWh (55,510 GWh in 2017).

Energy distributed (GWh) 100% of business	2018	2017	% Change
COELBA	20,133	19,679	2.3
COSERN	5,704	5,623	1.4
CELPE	13,777	13,512	2.0
ELEKTRO	17,146	16,696	2.7
Total	**56,760**	**55,510**	**2.3**

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The number of customers served by the distributors at the end of the year amounts to 13.8 million.

Number of customers (million) 100%	2018	2017
COELBA	6.0	5.9
COSERN	1.4	1.44
CELPE	3.7	3.6
ELEKTRO	2.7	2.6
Total	**13.8**	**13.5**

2.4.2 Liberalised business

A. Spain and Portugal

A.1. Generation

Installed capacity in Spain (not considering renewables) totals 10,032 MW, with no variations compared to 2017 (10.032 MW).

Power per technology (MW)	2018	2017	Change
Nuclear	3,166	3,166	–
Coal-fired thermal	5,694	5,694	–
Gas combined cycles	298	298	–
Cogeneration	874	874	–
Total	**10,032**	**10,032**	**–**

In 2018 net production decreased by 2.39% to 31,139 GWh. Trends in the year by technologies are as follows:

Net production (GWh)	2018	2017	% Change
Nuclear	23,419	23,190	1.0
Gas combined cycle	3,996	3,884	2.9
Cogeneration	2,108	2,163	(2.5)
Coal-fired thermal	1,616	2,665	(39.4)
Total	**31,139**	**31,902**	**(2.39)**

- Nuclear production stands at 23,419 GWh, up 1%.
- Thermal power stations produced 2,108 GWh, compared to 2,163 GWh in the previous year, representing a reduction of 2,5%.
- Production of combined cycles increased their production by 39.4%, to 1,616 GWh.

A.2 Supply

Supplied energy (electricity and gas) in Spain amounted to 66,836 GWh for electricity (63,083 GWh in 2017), 55,882 GWh of electricity and 10,954 GWh of gas.

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Electricity sales on the free market in 2018 increased by 2.1% to GWh up to 48,448 GWh compared to 47,455 GWh supplied in the same period of 2017. Electricity supplied at the voluntary price for small consumers ("PVPC") amounted to 7,435 GWh.

Gas supplied in the free market in 2018 increased by 38.2% to GWh compared to 10,867 GWh supplied in 2017.

International retail (Portugal, Italy, France and Germany, mainly) IBERDROLA supplied 9,225 GWh during 2018, compared to the 7,587 GWh supplied in 2017, and was the second-ranking seller in the medium voltage industrial clients segment.

B. United Kingdom

B.1. Generation

Generation capacity has been sold to Drax. Therefore, at 31 December 2018 installed capacity in the UK is only renewable, although the year's output up until the moment of sale was managed by the Group. In 2018 output dropped by 23.2% to 5,453 GWh, compared to 7,100 GWh. The market share of the generation business in 2018 maintained similar levels to the previous years of 4%:

UK production (MW)	2018	2017	% change
Gas combined cycles	5,453	7,100	(23.2)
Total	**5,453**	**7,100**	**(23.2)**

B.2. Supply

Regarding sales, during 2018 customers were supplied with 20,008 GWh of electricity and 27,773 GWh of gas (21.591 GWh of electricity and 29.514 GWh of gas supplied during 2017). SCOTTISH POWER had 3 million electricity customers and 2 million gas customers at 31 December 2018.

C. Mexico

IBERDROLA is the leading private producer in the Mexico with installed capacity of 5,985 MW (5.832 MW in 2017). Highlights are the entry into commercial operation of Altamira (Dynasol) (57 MW) and Bajío (50 MW) cogeneration plants and the extensions of 23 MW to the California and to the MXL de Monterrey III, plants, contributing more than 21 MW extra to the plant for sale to private customers.

Currently the following cogeneration cycle plants are under construction and in the case of Topolobambo III is expected to be commissioned in 2019 and 2020:

Projects	MW
Escobedo	857
Topolobambo II	887
El Carmen	842
Topolobambo III	766
Combined cycle	**3,352**

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The electricity supplied from the combined cycle and cogeneration plants amounted to 40,227 GWh (40,891 GWh in 2017), representing a load factor of 80%, as generation with natural gas is the basis of electricity generation in Mexico. Cumulative availability of the plants in Mexico has been 97%.

D. Brazil

Brazil's generation power corresponds to the gas combined cycles Termopernambuco is 533 MW, whose production peaked in 2018 to 3,986 GWh.

2.4.3. Renewable business

At the end of 2018, the Renewables business had an installed capacity of 26,794 MW (26,951 MW in 2017).

Renewable production increased by 8.4% to 136,737 GWh (126,198 GWh in 2017).

In the last 12 months, IBERDROLA has increased its power by 456 MW and sold the hydraulic plants in the United Kingdom (563 MW) in the transaction with Drax already commented, and the solar plant of Puertollano (50 MW).

MW installed	2018	2017	MW change
Onshore wind	**15,251**	**15,032**	**219**
Spain	5,526	5,508	18
UK	1,891	1,891	–
US	6,305	6,145	160
Mexico	408	367	41
Brazil	516	516	–
RoW	605	605	–
Offshore wind	**544**	**544**	**–**
UK	194	194	–
RoW	350	350	–
Hydroelectric	**10,607**	**11,170**	**(563)**
Spain	10,016	10,016	–
UK	–	563	(563)
Brazil	591	591	–
Other technologies	392	205	187
Total	**26,794**	**26,951**	**(157)**

A. Onshore wind energy

In the last 12 months, the performance, IBERDROLA's installed capacity by country is as follows:

- In Spain, the Chimiche II wind farm (18 MW)
- In the United States, 162 MW were added as a result of the purchase of 50% in Colorado Green, consolidated as global, and the retirement of 2MW of the Peñascal II wind farm.
- In Mexico the 39 MW of PIER II are added and 2 MW of the Santiago wind farm were commissioned.

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Regarding ongoing and approved projects:

- In Mexico construction work continues on two wind farms – Santiago (105 MW in total) and Pier (220.5 MW), of which 39 MW has been handed over. In addition, approval has been granted to the building of a 105 MW onshore wind facility at Santiago, in the state of San Luis de Potosí. Work began in April 2018 and is expected to conclude sometime this year.

- In the United States, work has started on the Montague wind farm (201 MW) in Oregon, at Otter Creek (158.2 MW) in Illinois, at the Karankawa (288 MW) project in Texas, at the Tatanka (97 MW) and La Joya (166 MW) projects in South Dakota and New Mexico and at the Patriot facility in Texas (226 MW).

- In Brazil the construction of total de 15 wind-power projects totalling 472 MW has been green lighted in Paraiba state.

- Meanwhile, in Greece, approval has been given to the building of a 16 MW-onshore wind facility at Pyrgari.

B. Offshore wind energy

IBERDROLA has two offshore wind farms operating with 544 MW, West of Duddon Sands in the United Kingdom, located in the Irish Sea, with an attributable installed capacity of 194 MW and Wikinger in Germany with 350 MW.

Currently, offshore wind projects mainly in the United Kingdom, the United States, Germany and France are being developed.

- In the United Kingdom the East Anglia project in the North Sea. East Anglia 1 (714 MW) is under construction.

- In the United States with the acquisition of 50% of the company Vineyard Wind, owner of the rights to a wind farm off the coast of Massachusetts, with a generation potential of 3 GW. The wind farm will start its construction phase in 2019 and it is expected that 400 MW will come into operation by the end of 2021 and the remaining 400 MW by the second half of 2022. This way Vineyard Wind will become the first large scale US offshore wind farm.

- Also in the United States, with the award of the rights to develop another project under the name Kitty Hawk, off the coast of North Carolina, with a potential generation capacity of 2.5 GW.

- In Germany, in April 2018, IBERDROLA took part in the offshore wind tender and presented offers for its projects Baltic Eagle, Wikinger Süd and Windanker. IBERDROLA was awarded 476 MW in Baltic Eagle and 10 MW in Wikinger Süd, whose commissioning is expected in 2023.

- In France, the offshore wind farm Saint-Brieuc, of 496 MW of capacity. The project has stated its geotechnical studies which are currently under way as the first construction milestone.

The project is moving forward in order to commence the marine works in 2018, starting with the foundation works by Van Oord, and continuing with the installation of the marine substation by Seaway Heavy Lifting, and the installation of the marine cabling, for its connection with the terrestrial substation, by Nexans and DeepOcean. Siemens Gamesa will manufacture and install the 102 units of 7MW turbines, installation of which is expected to begin in mid-2019.

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C. Other technologies

The Renewables business has facilities of other renewable technologies in various countries whose breakdown is presented in the following table:

MW installed	2018	2017	change
Mini-hydroelectric special regime	130	130	0
Mini-hydroelectric ordinary regime	171	171	0
Solar thermal hybrid	–	50	-50
Photovoltaic	392	155	237
US	116	106	10
Mexico	270	43	227
Greece	6	6	0
Total	**693**	**506**	**187**

The evolution of installed capacity in the year is as follows:

- In the United States, the solar photovoltaic plant of W'y East (10 MWn) has been commissioned in Oregon and
- In Mexico 227 MWn were commissioned with the solar photovoltaic plants of Santiago (150 MWn) in San Luis de Potosí and Hermosillo (77 MWn) in Sonora.
- In Spain the hybrid solar thermal plant of Puertollano of 50 MWn has been sold.

Among photovoltaic projects the following should be highlighted:

- In Spain, the photovoltaic plant of Núñez de Balboa with a capacity of 391 MWn in Badajoz, and
- In Mexico the construction of Hermosillo of a total 100 MWc is under way, of which 77 MWn are already in operation. Moreover, the following two photovoltaic projects have been approved: Cuyoaco, of 200 MW in the State of Puebla, and Apaxco, of 190 MW in the State of México, whose construction works are expected to start in the first half of 2019.

3. LIQUIDITY AND CAPITAL

3.1. Leverage

Gross financial debt as of 31 December 2018 increased by 1.315 billion euros to 34.199 billion euros compared to Euros 32,884 million as of 31 December 2017, mainly as a result of the integration of Neoenergía, which accounts for an increase of Euros 2,817 million, and investments made over the year. As a result, financial leverage rose to 43.7% compared to 43.5% for the previous year (see Note 24).

IBERDROLA has a varied debt maturity profile, with an average maturity of six years, mainly as a result of the active management of liabilities carried out during this financial year.

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3.2. Credit rating of IBERDROLA senior debt

Agency ratings are as follows:

Agency	Long-term [1]	Outlook	Date
Moody´s	Baa1	Stable	14/03/2018
Fitch	BBB+	Stable	08/07/2016
Standard & Poors	BBB+	Stable	22/04/2016

(1) The above ratings may be revised, suspended or withdrawn by the rating agency at any time

3.3. Debt structure

At 31 December 2018 the Company's borrowings costs stood at 2.97% compared to 2.91% in the same period of the previous year (Note 27).

The debt structure by interest rate and currency is presented in notes 4 and 27 of the consolidated annual accounts.

In accordance with the policy of minimising the financial risks of the Company, foreign currency risk has continued to be mitigated through the financing of international businesses in local currencies (Pound Sterling, Brazilian Real, US Dollar, etc.) or in their functional currencies (US dollar, in the case of Mexico).

IBERDROLA has a strong liquidity position at the end of 2016 exceeding Euros 13.012 million (Note 4).

IBERDROLA presents a comfortable profile of debt maturities, with more than six years of average debt life. IBERDROLA's debt maturity profile at the end of 2018 can be seen in note 27 of the consolidated annual accounts.

3.4. Working capital

Working capital has increased by Euros 52 million since December 2017 as a result mainly due to several different effects which partially offset one another:

- An increase in working capital as a result of an increase in inventories.
- A decrease of Euros 428 million in working capital associated with assets held for sale, in the gas business in the United States and Canada.
- Other assets of lesser amounts

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Millions of Euros	31.12.2018	31.12.2017	Change
Assets held for sale	62	356	(294)
Nuclear fuel	273	332	(59)
Inventories	2,174	1,870	304
Trade and other accounts receivables	6,855	6,721	134
Current investments	572	601	(29)
Asset derivative financial instruments (1)	225	175	50
CURRENT ASSETS	**10,160**	**10,055**	**106**
Liabilities linked to assets held for sale	1	135	(134)
Provisions	580	627	(47)
Liability derivative financial instruments (2)	209	136	73
Trade and other payables	8,476	8,422	54
Current liabilities	**9,266**	**9,320**	**(54)**
NETWORKING CAPITAL	**894**	**735**	**52**

(1) Not including cash and cash equivalents or debt derivative assets (note 20)

(2) Not including financial debt or debt derivative liabilities (note 20)

4 MAIN RISKS AND UNCERTAINTIES

4.1 Risk management system

The IBERDROLA Group is exposed to various inherent risks in the different countries, industries and markets in which it operates and through the businesses it carries out, which could prevent it from achieving its objectives and executing its strategies successfully.

The Company's board of directors, aware of the importance of this matter, has undertaken to develop its capabilities to ensure that the risks relevant to all of the Group's activities and businesses are appropriately identified, measured, managed and controlled, and has established, through the Group's general risk control and management policy, the basic mechanisms and principles necessary for the appropriate management of risk-opportunity with a level of risk that enables it to:

- attain the strategic objectives defined by the Group while controlling volatility;
- provide the maximum level of assurance to the shareholders;
- protect the results and reputation of the Group:
- defend the interests of shareholders, customers, other groups interested in the progress of the Company, and society in general, and
- ensure corporate stability and financial strength in a sustained fashion over time.

For the implementation of the aforementioned commitment, the board of directors and its Executive Committee have the cooperation of the Audit and Risk Supervision Committee, which, as a consultative body, monitors and reports on the appropriateness of the system for assessment and internal control of significant risks, acting in coordination with the audit committees existing at other companies of the Group.

All actions aimed at controlling and mitigating risks shall conform to the following basic action principles:

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a) Integrate the risk-opportunity vision into the Company's management, by defining the strategy and risk appetite and incorporating this variable into strategic and operating decisions.

b) Segregate duties, at operating level, between risk-taking areas and areas responsible for the analysis, control and monitoring of such risks, ensuring an appropriate level of independence.

c) Guarantee the proper use of risk-hedging instruments and the maintenance of records thereof as required by applicable legislation.

d) Inform regulatory agencies and the principal external players, in a transparent fashion, regarding the risks to which the Group is exposed and the operation of the systems developed to monitor such risks, maintaining suitable channels to favour communication.

e) Ensure appropriate compliance with the corporate governance rules established by the Company through its corporate governance system and the update and continuous improvement of that system within the framework of the international best practices as regards to transparency and good governance, and implement the monitoring and measurement thereof.

f) Act at all times in compliance with the law and the Company's Corporate Governance System and, specifically, with due observance of the values and standards of conduct set forth in the Code of Ethics and the principles and best practices contained in the Corporate Fiscal Policy, under the principle of zero tolerance as regards the unlawful acts and fraud situations included in the *Prevention of Fraud and Crimes Policy*.

The *General Risk Control and Management Policy* and the basic principles underpinning it are implemented by means of a comprehensive risk control and management system, supported by the Group's Risk Committee and based upon an appropriate definition and allocation of duties and responsibilities at operating level and upon suitable procedures, methodologies and tools for the different stages and activities of the system, including the following:

a) The establishment of a structure of policies, guidelines, and limits, as well as of the corresponding mechanisms for the approval and implementation thereof, which effectively contribute to risk management being performed in accordance with the Company's risk appetite.

b) The ongoing identification of significant risks and threats in accordance with their possible impact on key management objectives and the annual accounts (including contingent liabilities and other off-balance risks).

c) The analysis of such risks, in each corporate business or function and taking into account their combined effect on the Group as a whole.

d) The measurement and control of risks, by following consistent procedures and homogeneous standards that are common to the Group as a whole.

e) The analysis of risks associated with new investments, as an essential element of decision-making based upon risk/return.

f) The maintenance of an internal control system to monitor compliance with policies, guidelines, and limits, by means of appropriate procedures and systems, including the contingency plans needed to mitigate the impact of the materialisation of risks.

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g) The periodic monitoring and control of risks that could have a significant impact on the income statement, in order to control the volatility of the Group's profit or loss for the year.

h) The ongoing evaluation of the suitability and efficiency of applying the system and the best practices and recommendations as regard risks for their possible inclusion in the model.

i) The audit by the Internal Audit Division of the comprehensive risk control and management system.

In addition, the General Risk Control and Management Policy is further developed and supplemented through the policies listed below which are also subject to approval by the Company's board of directors:

a) Corporate risk policies:

- Corporate credit risk policy.
- Corporate market risk policy.
- Operational Risk in Market Transactions Policy.
- Insurance Policy.
- Investment Policy.
- Financing and Financial Risk Policy.
- Treasury Share Policy.
- Risk Policy for Equity Interests in Listed Companies.
- Reputational Risk Framework Policy.
- Procurement Policy.
- Information Technology Policy.
- Cybersecurity Risk Policy.

b) Specific risk policies and limits for the various businesses of the Group:

- Risk policy for the Generation and Supply business of the IBERDROLA Group.
- Risk policy for the Renewables business of the IBERDROLA Group.
- Risk policy for the Networks business of the IBERDROLA Group.
- Risk Policy for the Real Estate business of the IBERDROLA Group.

The *General Risk Control and Management Policy*, as well as a *Summary of the Corporate Risk Policies* and a *Summary of the Specific Risk Policies* for the various Group businesses, are available on the corporate website (www.IBERDROLA.com).

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In order to align the risk impact with the established risk appetite, the Executive Committee of the board of directors, acting at the proposal of the business or corporate divisions involved and upon a prior report from the Group's Risk Committee, annually reviews and approves specific guidelines regarding the Group's risk limits in the Corporate Risk Policies.

Subholding companies are responsible for adopting the Group's risk policies and specifying their application, approving the guidelines regarding specific risk limits, in accordance with the characteristics and unique features of the businesses in each country. They shall also implement, within their areas of activity, the control systems required for their compliance.

Listed subholding companies and those with significant minority interests, by virtue of their own special autonomy framework have their own risk policies approved by the competent bodies, aligned with those of IBERDROLA group.

The risk factors to which the Group is generally exposed are listed below:

a) Corporate governance risks: the Company assumes the need to safeguard corporate interests and to maximise, on a sustained basis, the economic value of the Company and its long-term success, in accordance with the Group's corporate interest, culture and corporate vision, taking into consideration the legitimate public and private interests that converge in the conduct of all business activities, particularly those of the various stakeholders, communities and regions in which the Company and its employees act. A fundamental requirement for the foregoing is compliance with the Company's Corporate Governance System, made up of the *By-Laws, the Mission, Vision and Values of the IBERDROLA Group, the Code of Ethics, the Corporate Policies*, the corporate governance rules, and other internal functions and committees and compliance. Every rule has been approved by the competent decision-making bodies of the Company and is inspired by the good governance recommendations generally acknowledged in international markets.

b) Market risks: defined as the exposure of the Group's results and equity to changes in market prices and variables, such as exchange rates, interest rates, electricity and commodity prices (gas, CO2 emission allowances, other fuel, other mechanisms to promote renewables, etc.), prices of financial assets and others.

c) Credit risks: defined as the possibility of a counterparty failing to meet its contractual obligations, thus causing an economic or financial loss to the Group, including liquidity risks and replacement costs. Counterparties can be end customers, counterparties in financial or energy markets, partners, suppliers, or contractors.

d) Business risks: defined as the uncertainty regarding the performance of key variables inherent in the business, such as the characteristics of demand, weather conditions, the strategies of different players.

e) Political and regulatory risks: defined as those arising from regulatory changes made by the various regulators, such as changes in compensation for regulated activities or in the required conditions of supply, or environmental or tax regulations, including risks related to political changes that could affect legal certainty and the legal framework applicable to the Group's businesses in each jurisdiction, the nationalisation or expropriation of assets, the cancellation of operating licences and the early rescission of government contracts.

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f) Operational technological, environmental, corporate and legal risks: defined as those related to direct or indirect economic losses resulting from external events, inadequate internal procedures, technical failures, human error and/or fraud, including those associated with climate change, information technology and cybersecurity, and the risk of technological obsolescence.

g) Reputational risks: the potential negative impact on the value of the Company resulting from conduct on the part of the Company that does not meet the expectations of the different stakeholders defined in the Stakeholder Relations Policy.

Owing to its universal and dynamic nature, the system allows for the consideration of new risks that may affect the Group as a result of changes in its operating environment or revise of objectives and strategies, as well as adjustments resulting from ongoing monitoring, verification, review and supervision activities.

The audit and risk supervision committee of the board of directors periodically monitors the trends in the Company's risks:

- It reviews the Group's quarterly risk reports, which include monitoring compliance with risk limits and indicators and updated key risk maps, submitted by the Group's director of corporate risks.

- It coordinates and reviews risk reports sent periodically, at least half-yearly, by the audit and compliance committees of the main subsidiaries of the Group, including the subholding companies of the main countries where the Group operates, which are used, together with the risk director's input, to prepare a risk report for the board of directors at least every half-year.

For further details, see section E "Risk management and control systems" of the Corporate Governance Report for 2018 and the Risks section included in the Integrated Report dated February 2019.

4.2. Credit risk

The IBERDROLA Group is exposed to credit risk arising from the possibility of counterparties (customers, suppliers, financial institutions, partners, etc.) failing to comply with contractual obligations. This exposure may arise with regard to unsettled amounts, the cost of replacing products that are not supplied, as well as, in the case of plants, that supply one customer, amounts on which depreciation is pending, for those plants.

Credit risk is managed and limited in accordance with the type of transaction and the credit worthiness of the counterparty. A specific corporate credit risk policy is in place which establishes criteria for acceptance, approval systems, authorisation levels, scoring tools, exposure measurement methodologies, etc.

With regard to credit risk on trade receivables for electricity and gas sales, the cost of defaults has remained moderate and stable at close to 1% of total turnover of this activity, despite the difficult economic environment in recent years.

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4.3. Financial risk

4.3.1. Interest rate risk

The IBERDROLA Group is exposed to the risk of fluctuations in market interest rates affecting cash flows and the market value of debt in respect of items in the balance sheet (debt and derivatives). In order to adequately manage and limit this risk, the IBERDROLA Group determines the required proportion of fixed and variable debt annually and establishes the actions to be carried out throughout the year: new sources of financing (at a fixed, floating or indexed rate) and/or the use of interest rate derivatives.

The reference interest rates for floating rate borrowings are basically market rates: primarily Euribor, Libor-Pound Sterling, Libor-Dollar, and the CDI in the case of the Brazilian subsidiaries' debt.

Additionally, as of 31 December 2018 the IBERDROLA Group has arranged future funding derivatives for a notional amount of Euros 4,642,000 thousand, which help to mitigate the interest rate risk.

The Group's debt structure at 31 December 2018, after considering hedging derivatives, and sensitivity to an increase in interest rates are included in the note 4 to the consolidated annual accounts.

Bearing in mind the composition of the IBERDROLA Group's debt at the end of the financial year, between fixed and variable interest rates, and assuming it remains constant in the future, the impact on the income statement of a potential increase of 25 basis points (0.25%) in the reference rates referred to in the foregoing paragraph would be Euros 45 million (increased finance income).

4.3.2. Foreign currency risk

As the IBERDROLA Group's presentation currency is the Euro, fluctuations in the value of the currencies in which borrowings are arranged and transactions are carried out with respect to the Euro, mainly the Pound Sterling, the US Dollar and the Brazilian Real, may have an effect on the finance costs, profit and equity of the Group.

The following items could be affected by currency risk:

- Proceeds and payments for supplies, services or the acquisition of capital goods in currencies other than the local or functional currency.
- Income and expenses incurred by certain foreign subsidiaries indexed to currencies other than the local or functional currencies.
- Debt and finance cost denominated in currencies other than the local or functional currency.
- Profit or loss on consolidation of foreign subsidiaries.
- Consolidated net value of investments in foreign subsidiaries.
- Tax expense in Mexico owing to the functional currency (US Dollar) being different from the currency used to calculate corporate income tax (Mexican peso).

The IBERDROLA Group mitigates this risk by:

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- Ensuring that all its economic flows are carried out in the functional currency of each Group company whenever possible and economically viable and efficient or using derivatives if not.

- Hedging the risk of transferring forecast earnings for the current year, insofar as possible, thereby limiting the ultimate impact on Group earnings

- Hedging the currency risk on corporate income tax in Mexico, insofar as possible, thereby limiting the overall impact on the earnings of Mexico and of the Group.

- Mitigating the impact on the consolidated net asset value of a hypothetical depreciation of currencies due to Group's investments in foreign subsidiaries, by maintaining an appropriate percentage of debt in foreign currency and by arranging derivatives.

The sensitivity of the consolidated profit and equity of the IBERDROLA Group to fluctuations in the US Dollar/Euro, Pound Sterling/Euro and Brazilian Real/Euro exchange rates is as presented in note 4 to the consolidated annual accounts. Detailed information on debt by currency can be seen in note 27 to the consolidated annual accounts.

In accordance with the breakdown by currency of the finance costs in 2018 and assuming it remains constant in the future, a 5% appreciation of the main currencies would have a negative impact on the income statement of Euros 2.7 million (increased consolidated finance income in euros).

4.3.3. Liquidity risk

Exposure to adverse situations in the debt or capital markets or in relation to the IBERDROLA Group's own economic-financial position may hinder or prevent the IBERDROLA Group from obtaining the financing required to properly carry on its business activities.

The IBERDROLA Group's liquidity policy is designed to ensure that it can meet its payment obligations without having to obtain financing under unfavourable terms. For this purpose, various management measures are used such as the arrangement of committed credit facilities for a sufficient amount, term and flexibility, diversification of the coverage of financing needs through access to different markets and geographical areas, and diversification of the maturities of the debt issued.

The combined balances of cash, liquid assets and available committed credit facilities are sufficient to meet the Group's forecast liquidity needs in a risk scenario for more than 18 months, without the need to source new financing.

The figures relating to changes in the Company's debt are included in notes 27 and 51 to the Consolidated annual accounts and additional information is also provided in Note 4 of the Consolidated annual accounts.

4.4. Country risk

All international activities of the IBERDROLA Group are exposed to a greater or lesser extent and depending on their characteristics, to the risks inherent to the country in which they are conducted:

- Imposition of monetary limitations and other restrictions on the movement of capital.

- Changes in the trade environment and administrative policies.

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- Economic crises, political instability and social unrest affecting operations.
- Nationalisation or expropriation of assets.
- Exchange rate fluctuations.
- Cancellation of operating licences.
- Early termination of government contracts.
- Regulatory changes.

The results of our international subsidiaries, their market value and their contribution to the Group may be affected by such risks.

The IBERDROLA Group's main operations are concentrated in Spain, the United Kingdom, the United States, Brazil and Mexico, countries with low or moderate risk, whose credit ratings at 31 December 2018 are as follows:

Country	Moody´s	S&P	Fitch
Spain	Baa1	A-	A-
United Kingdom	Aa2	AA	AA
United States	Aaa	AA+	AAA
Brazil	Ba2	BB-	BB-
Mexico	A3	BBB+	BBB+

Presence in countries other than those mentioned above is not significant at Group level from an economic point of view.

Note 5.c in these consolidated annual accounts include information regarding the potential impact of Brexit on IBERDROLA Group.

4.5. Activity risks

The Group has presence in the regulated businesses of electricity transmission and distribution sector in Spain, the United Kingdom, the United States (through Avangrid) and Brazil (through Neonergia). In the United States, the Group also has presence in the natural gas distribution sector.

IBERDROLA operates in the renewables industry sector carried out in Spain, the United States (through Avangrid), the United Kingdom, Mexico and Brazil (through Neonergia) and other European countries.

Last, IBERDROLA operates in the thermal generation sector in Spain, Mexico and Brazil (through Neonergia) and electricity and gas retail in Spain, the United Kingdom and to a lesser degree in Brazil (through Neoenergia) and other European countries.

The activities of the different businesses conducted by the IBERDROLA Group are exposed to various risks including market, credit, operational, business, regulatory and reputational risks arising from uncertainty in the main variables by which they are affected. Section 4.6 addresses the operational risks associated to the Group's three main businesses.

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4.5.1.Regulatory and political risks

Regulated and liberalised businesses in the IBERDROLA Group are subject to laws and regulations concerning tariffs and other regulatory aspects of their activities in each of the countries in which they operate. The introduction of new laws and regulations or amendments to the existing ones may have an adverse effect on our operations, annual results and the economic value of our businesses.

The following sections summarise the regulatory frameworks in force in the main markets where the Group operates, as well as the array of new regulatory measures approved in 2019 or expected to be developed in 2019.

4.5.2. Networks business risk

The regulations of each country in which the IBERDROLA Group's networks businesses operate establish regularly revised frameworks to guarantee reasonable and predictable returns for these businesses. These frameworks include incentives and penalties for efficiency, service quality and, where applicable, for default management, which have a minor, immaterial impact overall. Any significant structural changes to the aforementioned regulations may represent a risk for these businesses.

In general, the profitability of the IBERDROLA Group's networks businesses is not exposed to demand risk, except for the Brazilian subsidiaries.

The IBERDROLA Group's networks businesses in Spain and in the United Kingdom do not sell energy and are not exposed to any market risks associated with energy prices.

The Group's networks businesses in Brazil and certain networks subsidiaries of Avangrid in the USA sell energy to regulated customers at previously determined tariffs. Assuming prudent procurement management in line with each regulator's specifications, the regulatory frameworks in both countries guarantee sums will be collected in subsequent tariff readjustment reviews in the event of deviations in purchase prices with respect to those previously stipulated in the tariff.

Given the above, in the case of extraordinary events (extreme drought in Brazil, catastrophic storms in the USA, etc.), occasional temporary imbalances between payments and collections may arise with an impact on the cash flows of some of these businesses and potentially on profits recognised under IFRS.

- ***Networks in Spain***

The present regulatory model is in accordance with Electricity Industry Law 24/2013 of 26 December, which stipulates six-year regulatory periods and profitability for the distribution activity calculated as the yield on government bonds plus 200 basis points.

Royal Decree 1048/2013 of 27 December establishing the methodology to calculate remuneration for electricity distribution activities defines a methodology in accordance with standard unit costs of investment and operation. Profitability was set at 6.5% for the first regulatory period, which runs until the end of 2019. Fluctuation in the financial remuneration rate used between two consecutive years may not exceed 50 basis points in absolute value.

This methodology is currently under revision:

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- During November 2018 the CNMC, Spain's competition authority, published a proposed new methodology in accordance with WACC for calculating the rate of financial remuneration of transmission and distribution activities applicable to the following regulatory period (2020-2025), with a resulting rate of 5.58% at the date of its publication.

- On 11 January 2019 the Spanish government approved the new Royal Decree-law 1/2019 on urgent measures to adapt the powers of the CNMC to the requirements deriving from EU law and thus transferring to the CNMC the powers and responsibilities to determine the remuneration of the electricity and gas transmission and distribution networks to apply from the next regulatory period (2020).

- ***United Kingdom Networks***

The group operates in the United Kingdom through its subsidiary Scottish Power Ltd, which manages the following licences:

- SP Distribution PLC (SPD)

- SP Manweb PLC (SPM)

- SP Transmission PLC (SPT)

The framework of remuneration for the electricity transmission and distribution activities in the UK is in accordance with a price control model using a recognised cost of capital (WACC), depreciation of assets and operating and maintenance costs plus an incentive which is obtained if management is better than the regulatory standard, and which the companies retain (in part) in the following tariff revision.

The current regulatory model for SPD and SPM is in accordance with the RIIO ED1 framework, and on the RIIO T1 framework in the case of SPT. The latest tariff review for electricity distributors (RIIO ED1), including SPD and SPM, is valid from April 2015 to April 2023. The SPT review (RIIO T1) is valid from April 2013 to April 2021. Recognised ROE after tax (in real terms) is 6% for SPD and SPM, whereas for SPT it is 7%.

The regulator (OFGEM) also establishes incentives/penalties for safety, environmental impact, consumer satisfaction, social obligations, connections and quality, which could have an effect on the income statement.

In July 2018 the OFGEM published its preliminary report included some of the hypothesis proposed for the next regulatory revision. Companies are expected to present their investment plans in the second half of 2019 and the OFGEM is expected to publish its conclusions in 2020.

- ***United States Networks***

The IBERDROLA Group operates in the US through its listed subsidiary Avangrid, which in turn has the following subsidiary networks companies:

- New York State Electric & Gas (NYSEG), New York, with a 3-year rate case valid from 30 April 2016 (base ROE 9% for distribution Electricity).

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- Rochester Gas and Electric (RG&E), New York, with a 3-year rate case valid from 30 April 2016 (base ROE 9% for distribution Electricity).

- Central Maine Power (CMP), Connecticut, whose annual rates are in force since 1 July 2014. They may extended for its electricity distribution businesses (base ROE 9.45%) and transmission business (base ROE 10.57%).

  Last October, CMP, following the instructions provided by Maine's utilities regulatory commission, started a rate case review.

- United Illuminating (UI), Connecticut, with rates in force since 1 January 2017 for its electricity distribution business (base ROE 9.1%) and transmission business (base ROE 10.57%).

- As well as the following natural gas distribution companies: Maine Natural Gas Corporation (MNG), Connecticut Natural Gas (CNG), Southern Connecticut Gas (SCG) and Berkshire Gas (BG).

Companies that carry out regulated business in the US are exposed to risks associated with the regulations of a number of federal regulatory bodies (FERC, CFTC, DEC) and the different state commissions, responsible for defining the regulatory frameworks of the companies regulated (tariffs and other conditions).

The distributors' tariff plans have been designed to reduce the level of risk to which the business is exposed through mechanisms for deferral, reconciliation and provisions for costs. Regulated distributors pass on the costs of gas and electricity to end customers, thereby mitigating any impacts of fluctuations in demand.

- ***Brazilian Networks:***

The IBERDROLA Group operates in Brazil through its listed subsidiary Neoenergía, which in turn has the following subsidiary networks companies:

- Elektro Redes, S.A., operating in the states of Sao Paolo and Mato Grosso do Sul. Rates in force until August 2019 and WACC of 8.09%;

- Companhia de Eletricidade do Estado do Bahia (Coelba), operating in the state of Bahía. rates in force until April 2023 and WACC of 8.09%;

- Celpe Energetica de Pernambuco S.A. (Celpe), operating in the state of Pernambuco. rates in force until April 2021 and WACC of 8.09%; rates in force until April 2021 and WACC of 8.09%;

- Companhia Energética do Rio Grande do Norte (Cosern), operating in the state of Rio Grande do Norte. rates in force until April 2023 and WACC of 8.09%;

- Several transmission assets with their specific regulation.

The Brazilian regulatory framework is in accordance with a price cap system that is revised every four or five years, depending on each company's concession contract and is updated annually by the regulator. Coelba and Cosern have a five-year term and Celpe and Elektro have a four-year term.

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Brazilian legislation applicable to regulated electricity distribution business establishes two types of costs: i) "Plot A", which includes the costs of energy, transmission and other obligations and regulatory charges, which can be recovered through tariffs ("pass through") as part of the conditions and limits imposed by ANEEL, and ii) "Plot B", which includes remuneration for investment and the costs of operation and maintenance (calculated using a reference model that compares all distribution companies in the country and determines efficient cost levels, which generates either an incentive or a risk for the investor).

ANEEL also allows for other smaller incentives to minimise default and impairment of quality and customer satisfaction, which could affect the income statement.

Pursuant to current legislation, electricity distribution companies transfer the cost of supplying electricity to the end customer through the regulated tariff, provided the energy contracted is between 100% and 105% of the demand required.

4.5.3. Renewables business

Since 2018 all Group's hydroelectric generation activity has been included in the Renewables business.

The regulations of each country in which the Group operates establish regulatory frameworks aimed at promoting the development of renewable energies in accordance with formulas which may include feed-in tariffs, green certificates, tax deductions or regulated tariffs, which allow investors to obtain a sufficient and reasonable return. Any significant structural changes to the aforementioned regulations could represent a risk for that business.

In addition to the aforementioned regulatory risk, the Group's renewable energy businesses may be exposed to a greater or lesser extent, to Hydraulic wind resource risk and market risk:

- In the medium to long term, years with lower than average water and/or wind resources are offset by years with above-average overall resources.

- The risk of water resources in a given year basically affects the Renewables business in Spain, and to a lesser extent Brazil.

- The risk of wind resources in any given year affects the Renewable Energy Businesses of all countries in which the Group operates. The Group considers that the wind resource risk is mitigated by the large number of wind farms available and their geographical diversification.

- Management of market risk of the Renewables Businesses in Spain, the UK, Brazil and Mexico is transferred to the Generation and Retail Businesses of those countries so that it can be integrated into a single risk position. Management of market risk of the Renewables Business in the US is integrated within the business itself.

- ***Renewables Spain***

  The Group currently has an installed capacity of renewable energy in Spain of: 5,570 MW through wind power, 9,715 MW through hydroelectric plants and 303 through mini hydroelectric plants. Additional, it is worth mentioning that the 391 MW photovoltaic plant Nuñez de Balboa in Caceres is under development and that in the north of Portugal the Alto Tamega hydraulic project, with a total capacity of 1,158 MW is being built and that its estimated commissioning date is 2021-2023 (depending on the stage).

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Subsequent to the approval of the new regulatory framework (Royal Decree-Law 9/2013 of 12 July 2013, Law 24/2013 of 26 December 2013, Royal Decree 413/2014 of 6 June 2014, Ministerial Order IET/1045/2014 of 16 June 2014 and Ministerial Order ETU/130/2017 of 17 February 2017), all renewable energy generated since 2004 is remunerated at market price plus a feed-in tariff per MW. This guarantees a reasonable regulated return in accordance with a recognised standard investment.

- The reasonable rate of return is calculated on the basis of the yield on 10-year government bonds plus a differential, initially fixed at 300 basic points (equivalent to 7.4% for the initial period of 6 years that ends at the end of 2019);

- At the middle of each 3-year regulatory period different parameters are revised, among them price estimates, and the asset value pending of recovery in accordance with prices observed in the previous 3 years is updated following certain tranches:

- The facilities that began operating in 2003 or before have a null premium, and therefore are fully exposed to market risks.

- On 30 October last the CNMC published a proposed methodology for calculating the rate of financial remuneration for energy generated from renewable sources, co-generation and waste for the second regulatory period 2020-2025, in accordance with the commonly accepted WACC methodology, the resulting value with the information available at that time being 7.09%.

- At the end of December 2018 the Ministry for Ecological Transition published on its website a proposed draft bill which among other things proposed that for renewable installations prior to Royal Decree law 9/2013 the current remuneration of (7.4%) be maintained for the next two six-year regulatory periods.

Large hydroelectric plants generation is not subject to the above mentioned regulation and is exposed to market risk. The lesser or greater availability of hydro resources has an impact on the marginal hour prices of the Spanish electricity system.

Despite having a large water storage capacity Spain, IBERDROLA Group's annual results depend significantly on the rainfall contributions. The changes in output from a dry year to a wet year with respect to the average value can be up to -4,000 GWh in a dry year and +5,000 GWh respectively in Spain, and the variability would be between an estimated Euros -170 and Euros +210 million. In the mid and long-term dry years are offset by wet years.

Lastly, we should highlight Royal Decree law 15/2018, ratified in October by the Spanish Parliament, which includes a set of measures, prominent among which is, in addition to the promotion of renewable energy and greater protection for vulnerable customers, the temporary suspension of the 7% tax on generation. The package also included a reference to a possible future revision of the wholesale generation market.

- ***Renewables United Kingdom***

The Group currently has an installed capacity of renewable energy in the UK of 1,906 MW in onshore wind farms and 194 MW in offshore wind farms, operational under current “Renewables Obligation” legislation. Under such legislation, revenues are partially exposed to the risk of the market price for electricity in the UK, as the revenues obtained reflect the price of the energy produced and the sale of Renewables Obligation Certificates (ROCs).

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UK regulations impose minimum ROC requirements per MWh sold on electricity suppliers, 10% more than the system envisages producing, and determine the price at which the rest must buy, which in practice amounts to a floor price equal to the price of the ROCs.

Renewable technology plants implemented from 1 April 2017 (those implemented as of 12 May 2016 in the case of onshore wind farms) may avail of the new "Contract for Difference" (CfD) remuneration scheme, which eliminates market risk for 15 years. Such is the case of the East Anglia 1,714 MW offshore plant, currently under construction. Its commissioning date is expected throughout 2019 and 2020 (depending on the stage).

The fixed prices for these projects are established under CfD on a project-by-project basis through public tenders. The counterparty guaranteeing this price, "The Low Carbon Contracts Company", finances its potential payments by imposing a levy on suppliers in accordance with their market share, and therefore credit risk vis-à-vis the counterparty is practically zero.

Additionally, the Group has a 15 MW onshore wind farm in the Republic of Ireland selling at market prices.

- ***Renewables United States***

The IBERDROLA Group conducts its renewables business in the US through its listed company Avangrid, which has an installed capacity of 6,466 MW in onshore wind farms, and 129 MW in operational photovoltaic plants and 115 MW in hydroelectric plants.

Approximately 70% of the energy produced is sold on fixed-price long-term contracts with third parties. If hedges of some type are considered, this percentage rises up to 80%. The remaining 20% of the energy produced is sold to the market in more or less short terms.

With electricity prices around USD 30/MWh, a 5% change in prices could give rise to an impact of Euros ±6 million on operating results.

Avangrid is building 988 MW of wind power and is also developing the Vineyard offshore wind farm in the coasts of Massachusetts, in the United States, under a 50% joint venture with a financial partner. The facility will consist of 800 MW and it is expected to be brought into operation in 2021. MHI Vestas Offshore Wind has been selected as preferential supplier for the turbines.

- ***Renewables Mexico***

In Mexico the business currently has an installed capacity of 409 MW in wind farms and 270 MW in solar plants, with two sale schemes: a) fixed-price sale to the CFE under a long-term contract and b) sale to third parties with a discount on the official price published by the CFE. In addition, facilities for 326 MW of wind power and is developing several solar projects.

Mexican legislation requires electricity retailers in the free market to present Certificates of Clean Energy (CEL in the Spanish abbreviation) at the end of each year for a percentage which increases over time of their energy sales for the year. The Group's renewable production for the market in Mexico gives rise to these certificates.

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- ***Renewables Brazil***

In Brazil the business currently has an installed capacity of 516 MW in onshore wind farms, all operating under long-term contracts (PPAs) with a fixed price for the country's distributors. Surpluses and shortfalls in the production contracted with the distributors are settled over periods of four years, and surpluses must be offered and shortfalls purchased at market prices. In addition, 472 MW of wind power are being under development.

Furthermore, in Brazil the Group has 2,419 MW in hydroelectric plants, of which 60% is sold to electricity distribution companies under long term contracts (PPA).

In order to incentivise the execution of new renewable energy projects, Brazilian legislation establishes that free market energy retailers must supply those of their free market customers that consume less than 3 MW entirely with energy from renewable sources ("energia incentivada").

- ***Renewables in other countries***

Germany: Wikinger offshore wind farm of 350 MW operating since the end of 2017. Pursuant to German regulations, Wikinger plant will have a fixed price for the energy it produces over the first 15 years of operation on a CfD contract, similar to the aforementioned setup for East Anglia 1.

Other European countries: the IBERDROLA Group currently has an onshore installed capacity of 605 MW in wind farms and 6 MW in photovoltaic facilities. Regulations in these countries make a distinction between two energy sale schemes: sales at the tariff (Portugal, Greece, Cyprus and Hungary), or sales at market price (Romania).

The Group has been selected, and is already taking part in them, for several significant offshore wind farm projects in Europe, which are expected to be brought into operation throughout 2023-2024.

- Germany: Wikinger Süd and Baltic Eagle projects, with a combined capacity of 486 MW.
- France: Saint Brieuc project, with an expected total capacity of 496 MR, in which the Group has a 70% stake in the promoting company.

4.5.4. Generation and Supply businesses

The IBERDROLA Group has a wide array of thermal generation plants in Spain and Mexico, a single thermal plant in Brazil and another in the US. A significant number of the plants in Mexico and the Brazilian plant have long-term PPAs (power purchase agreements) with the CFE (Mexican state electricity company) and the electricity distributors Coelba and Cosern in Brazil respectively.

Management of the risk of the energy produced for the market by the Group's thermal and renewable plants and surplus production of plants with PPAs is transferred to the Energy Management unit of each country where the Group operates, taking as a reference the wholesale market prices.

The various Energy Management units supply electricity and gas to the Retail Business at wholesale market prices (hourly or forward) in accordance with the usual practices of each of the countries in which the Group operates, and manage the sale and purchase of surpluses and shortfalls.

The Retail Businesses sell energy to end customers at fixed or indexed prices, together with other services, at such terms as may be customary in the retail markets of the countries in which they operate.

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Main risks:

- Market prices for electricity, both wholesale and retail, are closely correlated with prices of fuel (oil and gas) and of the emission allowances needed to produce electricity.

- Spot prices in the wholesale electricity market exhibit marked volatility as a result of: 1) the volatility of spot prices of fuels and emission allowances, 2) fluctuating demand, 3) availability of wind or water and 4) possible operational problems in networks or power plants.

- Forward electricity prices are further influenced by projections of new generation plants coming on stream and of increases or decreases in future reserve capacity.

- In general terms: 1) margins of the generation business (thermal and renewable to market) are subject to the risk of the differential between the wholesale spot price and the cost of production, and 2) margins of the retail business are subject to i) the risk of the price differential between the wholesale spot market and forward retail prices, ii) the degree of competition among retailers and iii) the risk of possible regulatory intervention in the form of regulated tariffs, taxes or other obligations.

The offsetting of risk positions between the generation business (thermal and renewable) and the retail business largely reduces the Group's market risk. The sensitivities shown below cover the exposures of both activities.

– ***Generation and Supply businesses in Spain***

In Spain the Group has 10,099 MW of installed capacity in conventional generation, of which 3,177 MW nuclear, 5,695 MW combined cycle, 353 MW co-generation and 874 MW coal.

Sales of the free-market retail electricity business in Spain amounted to nearly 48 TWh in 2018. Additionally, the Last Resort Tariff retail subsidiary supplied just over 7 TWh in 2018.

We would highlight the various measures contemplated by Royal Decree law 15/2018, ratified by the Spanish Parliament in October, as noted in section 4.5.2.

Commodity price risk

Given current market conditions, the production price at coal-fired power plants defines, to a large extent, the price of electricity in Spain since coal is the marginal technology necessary to cover electricity demand. Consequently, the price of coal conditions revenues from the other less expensive technologies which are used to cover demand. With coal prices around USD 89 per tonne, a 5% change in prices could give rise to an impact of Euros ±9 million on operating results.

The price of CO2 influences the cost of production at coal-fired thermal power plants. With coal prices around Euros 23 per tonne, a 5% change in prices could give rise to an impact of more or less Euros ±6 million on operating results.

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Payment of the majority of gas supplied in Spain is indexed to the price of oil by means of complex formulas. The IBERDROLA Group has another type of fixed-price supply agreement in place with prices not indexed to the market price of oil. These agreements are used for electricity generation, end customer consumption and for sales to other intermediaries. Inasmuch as the electricity generation margin is covered by the contracting schemes vis-à-vis the system operator, sales to end customers and third parties only entail residual risk. The risk assumed is minimal and depends on the correlation between the price of oil and European and international gas prices. According to the expected performance of said indexes, the maximum impact on the operating result would be approximately Euros ±5 million.

Demand risk

Given the current market condition, where price is primarily determined by the generation cost at coal-fired plants, which make up around 15% of the generation mix, demand fluctuations are not deemed to impact on marginal technology in the market. The impact on the market price of a 1% change in demand is therefore minimal, amounting to approximately Euros 0.25 per MWh.

A moderate drop in demand in Spain does not affect the scheduled output of the Group's nuclear, hydroelectric and wind power plants, since there is a mandatory electricity market in Spain guaranteeing the efficient dispatch of output from all technologies.

Nevertheless, there could be an impact if a drop in electricity demand entails an equivalent reduction in the Group's supply sales and consequent narrowing of the margin. This is mitigated to some extent by increasing sales of own energy on the wholesale market. This same effect of loss of margin on retail sales is seen in demand for gas.

Taking both effects into account, it is estimated that a 1% fluctuation in demand would have an impact of around Euros ±11.5 million overall.

Operational risk and nuclear plants risk

From the perspective of its impact on business results, the main risk arises from unscheduled outages at nuclear power plants (partially covered by a loss of profits insurance policy over and above an excess).

Nuclear power plants are also exposed to specific risks derived from the operation, storage and manipulation of radioactive materials.

- Constitutional Spanish law caps the liability of nuclear power plant operators in the event of a nuclear accident at Euros 700 million. This liability for a nuclear accident must be compulsorily insured by the operator of Spanish nuclear power plants. The IBERDROLA Group meets this obligation by taking out Nuclear Civil Liability insurance policies for each plant. However, Law 12/2011, of 27 May 2011, concerning civil liability for nuclear damage or damage caused by radioactive materials, will increase the operator's liability ceiling and the consequent ceiling on mandatory insurance to Euros 1,200 million for nuclear power plants. The law will enter into force when all signatories of the Paris and Brussels Agreements ratify the 2004 Amendment Protocols, as established in these agreements.

- Last, there is a debate currently going in the Spanish society regarding when nuclear plants should be closed.

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- ***Liberalised and Supply businesses in MEXICO***

The Group has 6,446 MW in combined cycles and 346 MW in cogeneration plants in Mexico. Additionally, 2,572 MW of combined cycles are being built.

Approval of the Energy Regulatory Commission's Agreement A/058/2017, which defines the methodology to determine the calculation and adjustment of the final tariff and the operations tariffs that will apply to the subsidiary production company CFE Suministrador de Servicios Básicos from 1 December 2017 to 31 December 2018.

Commodity price risk

Electricity generation at IBERDROLA Generación México is gas-intensive. Gas prices are therefore an essential component of this risk. In 2018, approximately 80% of the electricity generated in Mexico was sold under long-term sales agreements (to CFE and, to a lesser extent, other major industrial customers), whereby the risk associated with the price of gas used in generating this electricity is passed on.

The remaining energy is sold to customers (either under self-provision or the free market) at a price linked to the official tariffs published by CFE. The Group's competitiveness in this case relies on its obtaining a better input price for gas than the cost used to define the CFE's basic supply tariff. In the event of an adverse scenario (high cost of gas relative to other energy commodities), the impact would be below Euros 11.5 million in the 95 percentile.

Demand risk

The structure of the agreements IBERDROLA has entered into in Mexico shields business results from electricity demand fluctuations. Revenues come mainly from plant availability and only the sales indexed to the official Mexican tariff are exposed to a certain extent to fluctuations in demand. Nonetheless, most of the plants have committed sales exceeding their production capacity and therefore a shift in demand would not have an impact on their operations or results as the electricity generated would be sold to another customer. Changes in electricity demand in Mexico therefore have no effect on results.

Operational risk

From the perspective of its impact on business results, the main risk arises from the combined cycle power plants outages (partially covered by a loss of profits insurance policy over and above an excess). In the case of the contracts with the CFE, non-availability leads to a penalty, whereas the contracts with private sector customers in Mexico would oblige the Group to acquire the missing energy in the market.

- ***Generation and Supply businesses in UK***

Sales of the IBERDROLA Group's retail business in 2018 amounted to 20 TWh of electricity and 29 TWh of gas.

In November 2018, following the entry into force of the Domestic Gas and Electricity Tariff Act 2018, OFGEM published the new maximum prices that suppliers may charge to end customers under the "Standard Variable Tariff" during the first quarter of 2019. From 1 April 2019 this figure will be updated every six months. The desirability of maintaining this system of price caps will be reviewed in 2020; it may be extended to 2023.

As noted previously, last October we announced the sale of the generation business in the UK.

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- ***Generation and Supply businesses in Brazil***

The Generation Business had a 533 MW combined cycle plant in Brazil at the end of 2018, with long-term PPAs with Coelba and Cosern.

Renewable energy with no PPA and surpluses from thermal generation are sold through the Group's retail sales company in the free market. With market prices in the area of 175 R$/MWh, a price fluctuation of 30% would affect the results by some Euros 1 million.

— ***Gas supply operations***

The IBERDROLA Group maintains an adequate balance in the global mix, both in terms of the number of supplier countries and the type of supply (gas via pipelines or LNG).

In the case of Spain, gas supply is guaranteed through long-term agreements. This mix of agreements comprises 23% at a fixed price while the remainder is indexed to the prices of various fuels on international markets.

Gas supply in Mexico is either secured through i) long-term agreements with PEMEX and CFE at a price indexed to international natural gas prices in the US, or ii) is contracted in the United States, and therefore at a price that depends on the market price of gas in that country.

- ***Unhedged energy transactions (discretionary trading)***

Discretionary trading of electricity, gas, emissions allowances and other fuels and associated products performed by some of the Group's businesses is residual and the overall risk thereof is mitigated using individual stop-loss limits, the aggregate sum of which may never exceed 2% of consolidated net profit forecast for the period, pursuant to the market risk policy approved by IBERDROLA, S.A.'s board of directors.

IBERDROLA has reduced discretionary trading in recent years in line with the widespread move away from market speculation. At the end of December 2018, the notional value of derivatives used in speculative trading (calculated in accordance with the criteria set forth in the European Market Infrastructure Regulation (EMIR)) was Euros 63 million for commodity derivatives and Euros 8 million for equity derivatives. In both cases, these values are much lower than the Euros 3,000 million and Euros 1,000 million thresholds set for non-financial companies in the European regulation (EMIR).

4.6 Other operational risks

Any of the IBERDROLA Group's activities, may give rise to direct or indirect losses as a result of inadequate internal procedures, technical failures, human error or external factors.

The IBERDROLA Group is exposed to the following operational risks, inter alia:

- Risk of malfunctions, explosions, fire, toxic spillages or polluting emissions in gas and electricity distribution networks and in both traditional and renewable generation plants.

- Force majeure

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- Risk of sabotage and/or terrorism.
- Cybersecurity risks
- Operational risk of operations in treasury and energy markets.

Any of these risks could cause damage or destruction to the IBERDROLA Group's facilities, as well as injuries to third parties or damage to the environment, along with the ensuing lawsuits, especially in the event of power outages caused by accidents at our distribution networks and possible penalties imposed by the authorities.

Although many of these risks are unpredictable, the IBERDROLA Group mitigates them by making the necessary investments, implementing operation and maintenance procedures and programmes (supported by quality control systems), planning appropriate employee training, and taking out the required insurance to cover both material damage and civil liability.

In relation to insurance cover, IBERDROLA has international insurance programmes to cover equity (insurance for material damage, machinery breakdowns, loss of profits, damage due to natural disasters and risks arising from construction work) and third-party liabilities (general public liability, liability for environmental risks, professional public liability, etc.).

However, this insurance does not completely eliminate operational risk, since it is not always possible or in the Group's economic interest to pass all such risk on to insurance companies. In addition, cover is always subject to certain limitations and/or excesses.

- ***Operational risk of market transactions***

In addition, market trading conducted by the Group's various energy trading desks and treasury dealers is also exposed to operational risk.

This risk is mitigated by following the operational risk policy when trading on the market in accordance with a robust risk control culture, an appropriate segregation of duties, the publication of clear processes and policies and availability of secure and flexible information systems. This policy sets specific thresholds and guidelines applicable to all trades performed in accordance with the principle of proportionality.

- ***Cybersecurity risks***

The IBERDROLA Group companies may be affected by threats and vulnerabilities in connection with information, control systems or information and communications systems used by the Group, or by any consequences of unauthorised access to or the use, disclosure, degradation, interruption, modification or destruction of information or information systems, including the consequences of acts of terrorism.

These risks are managed in accordance with the basic principles of the lays down the necessary measures to promote secure usage of information and communications systems and other cyber-assets, bolstering detection, prevention, defence and response capacities with respect to counter cyberattacks.

The IBERDROLA Group currently has specific insurance protection against cyber risks under the terms allowed by the insurance market, and which will be regularly reviewed in view of the rapid evolution and extensive variety of cyber risks.

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4.7 Climate change risks

IBERDROLA has a Policy against climate change (available from www.iberdrola.com) and is clearly committed to the investor community's growing interest in the risks of climate change, which is why we are working to implement the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) initiative of the Financial Stability Board.

Climate change compromises several long-term risks which, to a greater or lesser extent are not new to the sector. Risks may be grouped in the following categories:

- Physical risks due to potential material impact on facilities due to the effects resulting from climate change (raise in temperatures, rise of sea level, variations in rainfall, increase both in frequency and intensity of extreme meteorological phenomena, etc.).

- Transition risks, linked to risks arising from global decarbonisation, such as regulatory, market price, technological, reputational, and demand changes, penalties and variations in demand, inter alia).

- Other risks, i.e. Credit impairment of counterparties (suppliers, banks, etc.,), social phenomena (humanitarian crises, impact on crops and fishing, refugee crises, epidemics, etc.) and larger competition for financial resources.

It is worth mentioning that the impact of climate change, despite being perceivable already in the short-term (i.e. Higher intensity and frequency of climate events in certain geographical areas), are progressive and act over relatively long periods of time. This mainly implies that it will be the Group's future assets and not current assets the ones more severely impacted, since assets are progressively renewed when they reach the end of their useful life. The design and specification of new equipment will bear in mind more severe climate conditions and technological improvements to come will allow obtaining more financial value from projects.

Regulated business

Given the geographical spread of our networks assets in Spain, the United Kingdom, the United States and Brazil, and in accordance with already existing studies, the potential increase in sea level in coast areas will have a reduced impact on the regulatory conditions of our Group's assets.

Increases in temperature and greater frequency of extreme weather events will imply a very moderate gradual increase in O&M costs (associated with various phenomena such as bigger technical losses and reduced useful life of assets) and in annual capital expenditure, although in perfectly manageable amounts given the multi-annual tariff revisions of these regulated businesses. Additionally, the investment and response plans already in force, accumulated experience and the design of networks (meshed) would act as mitigating factors.

In terms of risks of transition we would highlight that of large-scale development of distributed generation, the impact of which would be partly offset by the growing electrification of the economy (electric vehicles for example) and investment in smart grids.

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Renewables Business

The main risk is potential negative future performance of hydraulic and wind resources, the key elements having a financial impact on this activity at present. Added to the uncertainty associated with long-term global climate projections is the need to specify the impact on the geographical regions where our generating assets are located, whether hydroelectric or wind-based, the latter to a lesser extent since they are more widely spread. Nowadays there a no conclusive reports by third parties enabling reasonable predictions on the potential positive or negative variation of said resources either at global or regional level.

In the case of hydraulic resources, a potential decrease in annual rainfall average could lead to a negative impact on the output of hydraulic plants, especially visible in flow plants. Additionally, climate change could affect seasonal rainfall.

- In Spain, for illustrative purposes, a drop of 5% in production would have an estimated mid-term impact on gross margin (net of taxes and rights) of approximately Euros 20 million.

- In Spain, for example, a drop of 5% in production would have an estimated impact for the Group of Euros 10 million (as a result of its stake in Neonergia).

In terms of transition risks, potential cuts to remuneration to renewable energies and a drop in wholesale marginal market prices due to a higher renewable production should be noted. To face this risks, potential technology improvements which would predictably improve the performance of facilities in the future, the inclusion of climate change risks in the assessment of new investments and alternative ways to market sale (such as PPAs or tariff agreements) should be highlighted.

Generation and Supply businesses

The long-term impact of climate change on the thermal generation business is not expected to be material, since the Group's assets in this area will be substantially reduced in the next few decades as they reach the end of their useful life, and will essentially be concentrated in Mexico.

The impact on the pure retail business is considered minor, since any possible negative impacts deriving from efficiency measures and changes in temperature could be offset by the increased growth that the electrification of the economy is expected to produce.

By way of conclusion, and in accordance with the forecast effects alluded to and the mitigating factors to hand, we estimate that the physical risks of climate change will not have a disastrous or lasting impact on the Group's consolidated figures, the Group being resilient overall, and in any case the opportunities deriving from the decarbonisation of the global economy (growth in renewables, investment in integrating smart grids, electrification of transport, etc.) outweigh the risks. In terms of transitional risks, the Group's current positioning, as a result of its focus as an investor on energy from renewable sources and networks, places it in a position of leadership to face these risks.

Apart from this we should highlight the fact that the Group continues to make progress with in-depth climate analysis with a view to improving its forecasting and establishing the most appropriate measures in order to adapt.

For further information on this risk, please refer to the Integrated Report of February 2019, as well as the "Climate Change Risk Management" section and the TCFD of the Sustainability Report for 2018.

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4.8 Legal risks

The IBERDROLA Group companies are part of a certain in-court and out-of-court disputes within the ordinary course of their activities, the final result of which, in general, is uncertain. An adverse result, or an out-of-court resolution thereof or other proceedings in the future could have a material adverse effect on our business, financial situation, operating results and cash flows. However, the Group's legal advisers consider that the outcome of the aforementioned disputes will not have a significant effect.

Notes 5.b. and 44 of the consolidated annual accounts contains a more detailed description of the most significant matters.

4.9. Risks materialised during the year

For further details, see the section E "Control systems and risk management" of the Corporate Governance Report 2018.

5. SIGNIFICANT SUBSEQUENT EVENTS TO YEAR END

Events after the reporting period are described in note 51 to the annual accounts.

6. RESEARCH AND DEVELOPMENT ACTIVITIES

IBERDROLA is now a leading multinational group which has become the utility of the future thanks to its innovative strategy, which encompasses all its business units and areas of activity. Through its constant commitment to innovation, IBERDROLA ranks as the most innovative utility in Spain and the third in Europe in the European Commission's classification.

In 2018, IBERDROLA spent more than Euros 266 million on R&D&i activities, 8% more than in the previous year. These resources were basically directed at our business areas: more renewables, more structured smart grids, and more solutions for customers and digital transformation. Plus, continuing the digital transformation, applying more intelligence to it, has been crucial.

Looking ahead, new technologies, innovation and people will be the pillars on which we will build our energy model:

- **Disruptive technologies** that are increasingly efficient, sustainable and respectful of the environment, enabling the functioning of facilities and processes to be optimised.

- **Digitisation and automation**: The IBERDROLA Group plans of investing Euros 4,800 million in digital transformation between 2018 and 2022 and will focus its investment efforts in improving operation and performance of assets and in increasing the availability of generation plants, thanks to on new technologies such as blockchain, big data, the Internet of Things, virtual reality, artificial intelligence, etc. at all levels of the company.

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- **Innovation with start-ups, entrepreneurs and suppliers** with the aim of developing new disruptive business models, promoting the exchange of know-how and exerting a pull effect on their collaborators. Among these initiatives, the International startup programme stands out.

- **Culture of innovation and talent:** IBERDROLA promotes a culture of innovation by means of knowledge transfer, attracting talent and promoting the entrepreneurial spirit: Within the University Programme, IBERDROLA collaborates with five first-class universities: the University of Salamanca, Universidad Pontificia de Comillas, Massachusetts Institute of Technology (MIT), Instituto Tecnológico de Monterrey and the University of Strathclyde. Various initiatives are developed with them: chairs, R&D projects, training of students, in-house training and young entrepreneurs. This past year also saw the launch of the Renewables Accelerator Programme, Networks 2.0 and Accelerator for Customer initiatives and of the IBERDROLA Renewables, IBERDROLA Distribution and Liberalised Businesses, with the aim of meeting the new demands both of the market and of the business itself.

The following are some of the most notable innovative initiatives classified by broad area.

6.1 Renewable energies

In 2018, Innovation activities in Renewables, similarly to previous years, have focused primarily on:

- Efficiency improvement at wind farms, photovoltaic plants and hydroelectric power stations. In this area the *Doctor PV* project stood out. It seeks to reduce costs of photovoltaic plants by means of predictive maintenance strategies, as well as the possible use of drones. We also continued to work on the European *ROMEO* project, coordinated by IBERDROLA, and the *ASPA* project, which seek to develop models and tools for the early detection of problems in accordance with artificial intelligence/big data techniques. We would highlight the launch of the "Renewables Digital Evolution Plan (2018 – 2022)", and the "Renewables Accelerator" project for the promotion of new ideas that contribute to an increase in efficiency and overall competitiveness of Renewables. In Brazil, we are developing various projects for the installation of solar energy. In Mexico, IBERDROLA constructed the photovoltaic installations of Santiago in San Luis Potosí and Hermosillo in Sonora. In the area of hydroelectric power, we would highlight the *HIDRODEMAND* project aimed at implementing operational savings and *HIDROSMART* for the development of 2 new technologies to be operated by the Basin Operation Centres.

- As regards improving the integration of energy from renewable sources, several initiatives have been carried out in the area of energy storage. In 2018 Avangrid Renewables registered as an independent Balancing Authority (BA), taking on the responsibility for balancing production and demand in real time. To do so, it will incorporate a 10MW/20MWh lithium-ion battery. We are also studying projects in the US for hybrid energy storage in batteries with photovoltaic solar power.

- As regards innovation in offshore wind projects, during 2018 the Wikinger offshore wind farm was inaugurated, and a start was made on construction of the East Anglia One offshore wind farm in the UK, with an innovative foundations based on 3-leg jackets and connection cables between 66kV arrays. In addition, activities have continued to analyze the effect of undermining on offshore foundations: HasPRO and Sodercan-SPJ.

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6.2. Clean generation technologies

During 2018, efforts in the area of generation focused on flexibility, operating efficiency and environmental protection, and the improvement of plant safety.

In the field of nuclear, notable projects include *OFF-GAS*, *RESHAND* and *FILTRABRIS*, which were developed collaboratively with *GDEST4S* in the context of IBERDROLA's Innovation Programme with Suppliers, and all of them are aimed at operational efficiency and nuclear safety.

In the area of thermal generation, and as a continuation of the *GT-CONTROLFLEX* project, the *OCTAVE* project pursues the development of diagnostic and control technologies for the combustion process to make our power stations more flexible. Both projects are key to ensuring the robustness and security of the Spanish electricity system, allowing the integration of renewables.

6.3. Retail Area - New projects and services

Innovation is essential in commercial activity, in order to offer customers the products and services best suited to their needs. Thus in 2018 IBERDROLA worked on the following:

- New initiatives to enhance the customer experience:

  Throughout 2018 we continued to launch innovative campaigns and projects focused on greater personalisation of content and offerings, a new customer app in Spain, France and Portugal and a new website. Furthermore, it is now possible to sign up for and buy products online, without first having to register.

- New products and functionalities: Energy Wallet, Smart Home, Smart Solar and Smart Mobility.

  By means of the *Energy Wallet* app in Spain and the *PowerUp* app in the UK, customers can buy power by the month at a set price, choose how to pay and share it among all their houses. All this is 100% digital (website and app), easy and quick.

  This past year we launched new *Smart Home* packs combining energy, products and services, and devices for improving energy management in the home free of charge. We also improved the functionalities of *Smart Solar*, so that an "online offer" can now be obtained on the public website thanks to an analysis of consumption curves, expected hours of sunshine and the location and orientation of the installation. The web tool allows the production of the installation to be monitored, with details of consumption, possible storage in batteries and demand from the grid.

  Within *Smart Mobility*, we would highlight the launch of the new IBERDROLA Public Charging app which allows users to book and use the charging points in IBERDROLA's network, and also the launch of the *Smart Mobility Home* app designed to control charging of domestic appliances.

  In Brazil, Neonergia has made a mobile app available to customers allowing them to check their consumption, access their bills and manage their payments; and in the US, Avangrid has launched *NYSEG Smart*, an online store where customers can seek out, compare and securely buy energy-efficient products (smart thermostats, LED lighting, EV chargers, etc.).

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6.4. Smart grids

In 2018, IBERDROLA Distribution has continued dedicating efforts to several R+D+i initiatives both at Spanish and European level:

- In Europe, we continue to take part in the *ASSURED* project, the objective of which is to develop quick charge solutions for heavy electric vehicles, and in the *INTENSIS4EU* project, which seeks a new approach in the field of smart grids and energy storage. As for the *STAR+* project, it will enable us to continue to digitise the network so as to improve efficiency and prepare IBERDROLA Distribution as a future distribution system operator (DSO).

- In Spain, IBERDROLA will continue to drive the digital transformation of the electricity distribution network of the Basque Country thanks to the *Bidelek 4.0* project. Work continues on the *LAYCA* project, which seeks to develop a system for locating breakdowns and characterising faults in medium-voltage networks. Work has started on the *ALOIS* project to develop a control and protection system for stable and sustainable island operation of distribution feeders. The *mGRIDSTORAGE* project is developing an advanced micro-grid model with storage for distribution networks. The *Caravaca BESS* project has been launched, with the aim of achieving the integration of a working battery energy storage system (*BESS*). We also continue to work in new analytical models for detecting non-technical losses. Lastly, the *CARTOLIDAR* project has improved the power-line inventory and mapped a cartography of the vegetation around power lines.

- In the UK, work continues on the *Fusion* and *LV Engine* projects, both targeted at optimising low-voltage grids which represent some of the major opportunities and challenges in the drive towards a more flexible system.

- In Brazil, we highlight the *BID MONITOR* project which is pursuing the development of a support system for decision-making in electricity sales, and the *Smart City* project for implementing innovative solutions for the automation and operation of the electricity grid. Projects on isolated micro-grids are also being developed. The *TITAM-BT* project seeks to develop equipment to help reduce fraud and ensure correct billing of customers. Lastly, we would highlight the *Qliente* project, which seeks to improve customer service by increasing efficiency and flexibility in the call centre and reducing times for restoration of service and resolving complaints.

- In the US, the outstanding project is the *Woodbridge Microgrid* in Woodbridge, Connecticut, a microgrid with a fuel cell which will be operated in island mode in the event of critical loads with the aim of backing up the grid in extreme weather conditions. The initiatives included in the *Energy Smart Community* (ESC) programme have also continued, such as the *ADMS* (advanced distribution management system). Apart from this, use has been made of drones to carry out pilot inspections of Transmission and Substation assets, with excellent result.

- 2018 saw the inauguration of '*IBERDROLA Innovation Middle East*', a technological centre aimed at rescinding to the challenges involved in digitising the energy system, from which the company will develop new innovation and technological advisory services, centring on three key areas: smart grids, integration of renewables and energy efficiency. Located in the unique Qatar Science & Technology Park, it aims to create new products and services for digital utility companies, working at the point where information and communication technologies intersect with those of energy.

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6.5 IBERDROLA Ventures – PERSEO

IBERDROLA Ventures – PERSEO is IBERDROLA's Euros 70 million start-up programme created ten years ago with the aim of promoting the creation and development of a dynamic ecosystem of start-ups and entrepreneurs in the electricity sector. The programme focuses on technologies and business models that improve the sustainability of the energy model by means of greater electrification and decarbonisation of the economy. Since its creation in 2008, more than Euros 50 million have been invested through the programme in start-ups in the energy sector worldwide:

The most notable achievements in 2018 included:

- Recognition by the European Commission in the framework of the Start-up Europe Partnership initiative, IBERDROLA being named for the second year in a row among the 12 European companies doing the best work with start-ups. IBERDROLA was the only Spanish energy company selected for its model of innovation with start-ups, also receiving the special "Start-up Procurement Award".

- More than ten pilot projects with start-ups in technological areas such as Artificial Intelligence, "Big Data", IoT and blockchain, with the aim of improving both planning and management of assets and optimising their operation and maintenance.

- In the area of investment, we would point to the investment in Atten2, a company dedicated to the development of solutions for the online monitoring of critical assets to improve their operation and maintenance. This investment represents a very significant contribution to the digitisation of assets with the aim of prolonging their useful life by means of predictive maintenance and improved operation.

7. ACQUISITION AND DISPOSAL OF TREASURY SHARES

The Group's treasury share policy establishes the following:

Treasury share transactions are considered those transactions carried out by the Company, whether directly or through any of the Group companies, the object of which are Company shares, as well as financial instruments or agreements of any type, whether or not they are traded on the stock market or other organised secondary markets, which grant the right to acquire, or the underlying security of which are, Company shares.

Treasury share transactions will always have legitimate purposes, such as, among others, to provide investors with liquidity and sufficient depth in the trading of Company shares, to execute treasury share purchase programmes approved by the board of directors or General Shareholders' Meeting resolutions, to fulfil legitimate commitments undertaken previously or any other acceptable purposes in accordance with applicable regulations. Under no circumstances shall the purpose of treasury share transactions be to interfere with the free establishment of prices. In particular, any conduct referred to in article 83.ter.1 of the Securities Market Law and article 2 of Royal Decree 1333/2005, of 11 November 2005, implementing the Securities Market Law related as regards matters of market abuse, must be avoided.

The Group's treasury share transactions shall under any circumstances be carried out on the basis of insider information.

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Treasury shares are to be managed providing with absolute transparency as regards relationships with market supervisors and regulatory organisations.

Note 20 of the consolidated annual accounts presents the movements of IBERDROLA's shares in the Group companies' portfolios in recent years. Likewise, other information on transactions in 2018 and 2017 is presented in the following table:

Treasury shares	No. of shares	Thousands of Euros Nominal value (thousands of Euros)	Thousands of Euros Treasury shares	Average price (Euros)	Total shares	% Capital
Balance at 01.01.2017	**151,224,777**	**113,419**	**868,936**	5.75	**6,362,079,000**	**2.38**
Additions	154,508,438	115,881	1,002,731	6.49	–	–
Depreciation	(219,990,000)	(164,993)	(1,280,176)	5.82	–	–
IBERDROLA scrip dividend [1]	1,896,638	1,422	–	–	–	–
IBERDROLA scrip dividend [2]	–	–	(9,379)	–	–	–
Disposals	(11,929,704)	(8,947)	(74,937)	6.28	–	–
31.12.2017	**75,710,149**	**56,782**	**507,175**	6.70	**6,317,515,000**	**1.20**
Additions	266,442,793	199,832	1,672,087	6.28	–	–
Depreciation	(198,374,000)	(148,781)	(1,245,420)	6.28	–	–
IBERDROLA scrip dividend [1]	5,117	4	(11,044)	–	–	–
IBERDROLA scrip dividend [2]	-	-	(11,044)	–	–	–
Disposals	(7,798,715)	(5,849)	(49,733)	6.38	–	–
Balance at 31.12.2018	**135,985,344**	**101,988**	**873,065**	**6.42**	**6,397,629,000**	**2.13**

Treasury shares ScottishPower	No. of shares	Thousands of Euros Nominal value (thousands of Euros)	Thousands of Euros Treasury shares	Average price (Euros)	Total shares	% Capital
01.01.2017	**1,374,405**	**1,031**	**9,580**	6.97	**6,362,079,000**	**0.02**
Additions	318,172	239	2,159	6.79	–	–
IBERDROLA scrip dividend	95,524	72	–	–	–	–
Disposals	(631,238)	(473)	(3,322)	5.26	–	–
31.12.2017	**1,156,863**	**869**	**8,417**	7.28	**6,317,515,000**	**0.02**
Additions	362,108	272	2,393	6.61	–	–
IBERDROLA flexible remuneration	144,747	109	–	–	–	–
Disposals	(613,079)	(460)	(2,734)	4.46	–	–
31.12.2018	**1,050,639**	**790**	**8,076**	**7.69**	**6,397,629,000**	**0.02**

During 2018 and 2017, treasury shares held by the IBERDROLA Group were below the legal limit at all times.

Lastly, the conditions and deadlines for the current mandate of the board of directors to acquire or transfer treasury shares are detailed below.

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- The General Shareholders' Meeting, at its meeting of April 13, 2018, agreed to expressly authorize the Board of Directors, with the power to substitute, in accordance with the provisions of article 146 of the Spanish Companies Act, for the derivative acquisition. of shares of Iberdrola, SA in the following conditions:Acquisitions may be made directly by Company or indirectly through its subsidiaries under the same terms and conditions as this agreement. The subsidiary companies which develop regulated activities as prescribed in Law 24/2013 of 26 December on the Electricity Sector and Law 34/1988 of 7 October on the Hydrocarbon Sector are excluded from this authorization.

- Acquisitions may be made by purchase transactions, swaps or any other form permitted by law.

- Acquisitions may be made up, at all times, to the maximum legal threshold.

- Such acquisitions may not be made at a price higher than the market price or lower than the par value of the shares.

- This authorization is granted for a maximum period of five years since the adoption of the agreement.

- As a result of the acquisition of shares, including those in which the Company or the person acted on its own name and behalf but on behalf of the Company it had previously required and already had in stock, resulting net equity could not be reduced under its share capital plus unavailable legal or statutory reserved, as provided in section 146.1.b) of the Spanish Companies Act.

The agreement expressly states that the shares acquired as a result of this authorization may be used for their disposal or amortization as well as for the application of the remuneration systems contemplated in the third paragraph of letter a) of article 146.1 of the Companies Law Capital, as well as the development of programs that encourage participation in the capital of the Company, such as, for example, dividend reinvestment plans, loyalty bonds or other similar instruments.

– **Stock market data**

		2018	2017
Stock market capitalisation (1)	Millions of Euros	44,899	40,811
Earnings per share continuing operations	Euros	* 0.475	* 0.458
P.E.R. (share price at year end/profit per share)	Times	* 14.77	* 14.10
Price / Carrying amount (capitalisation on carrying amount at year end) (2)	Times	* 1.227	* 1.14

(1) 6,397,629,000 and 6,317,515,000 shares as of 31 December 2018 and 2017, respectively.

(2) Capitalisation at 31 December 2018 (44,899) / equity of parent company (36,582). Capitalisation at 31 December 2017 (40,811) / Equity of parent company (35,509).

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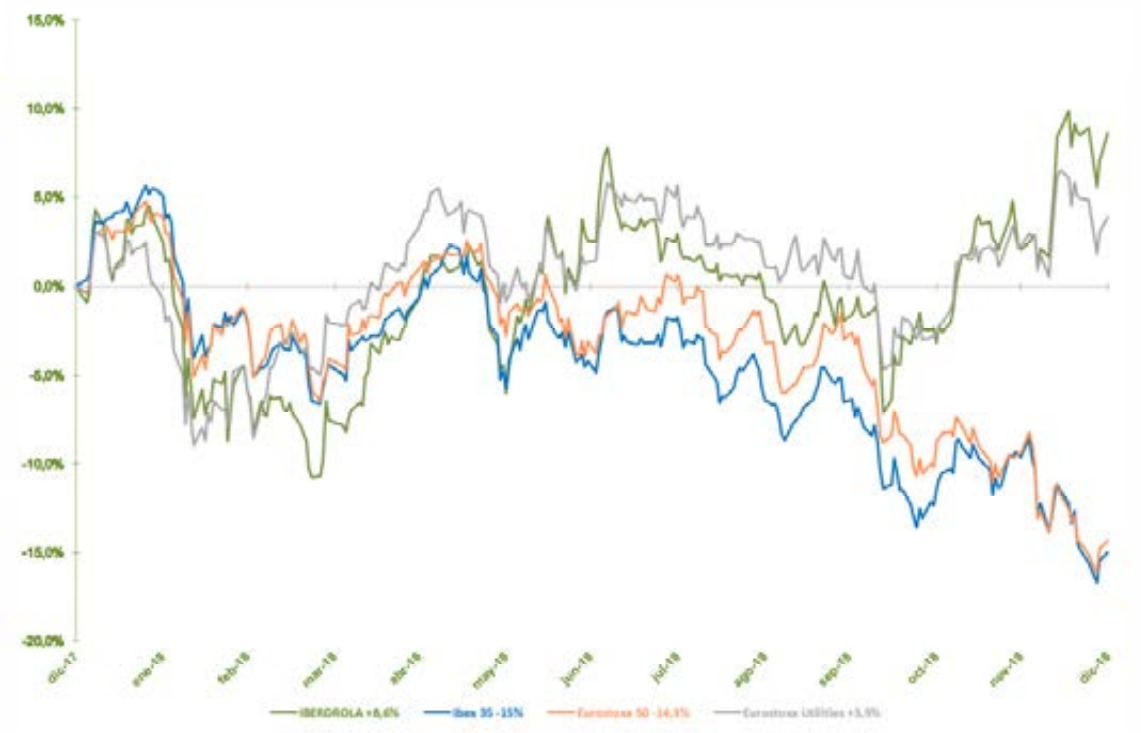
– The IBERDROLA share

Stock market performance of IBERDROLA compared to the indexes:



	2018	2017
Number of shares outstanding	6,397,629,000	6,317,515,000
Share price at period end	* 7.02	* 6.46
Average share price for the period	* 6.43	* 6.62
Average daily volume	* 18,167,584	* 20,870,406
Maximum volume (19/01/2018 - 06/04/2017)	* 62,436,659	* 122,920,322
Minimum volume (24/12/2018 - 28/08/2017)	* 4,680,119	* 4,636,525
Remuneration to shareholders (Euros)	* 0.331	* 0.317
- Gross interim dividend (29/01/2018 - 23/01/2017) (1)	* 0.140	* 0.135
- Gross complementary dividend (24/07/2018 - 07/07 and 21/07/2017) (2)	* 0.186	* 0.177
Attendance bonus	* 0.005	* 0.005
Yield shareholder (3)	4.72%	4.91%

(1)Purchase price of rights guaranteed by IBERDROLA equivalent to interim dividend in accordance with “IBERDROLA scrip dividend”.

(2) Complementary dividend in cash (24/07/2018 0.186; 07/07/2017 = Euros 0.03 and purchase price of rights guaranteed by IBERDROLA: = 21/07/2017 =0.147)

(3) Interim dividend, complementary dividend and attendance bonus for attending the General Shareholders' Meeting/share price at period end.

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8 FURTHER RELEVANT INFORMATION

8.1. Non financial information and diversity

The information required by Law 11/2018 on Non-financial information and diversity is described in the non-financial information and diversity section in this consolidated directors' report.

8.2. IBERDROLA Foundation

In 2018, the Group allocated Euros 10,277 thousand to financing the various Group foundations.

The main recipient of the funding was the IBERDROLA Foundation, which received Euros 6,604 thousand. Information on its goals and activities is available at: www.fundacioniberdrola.org. The IBERDROLA Foundation is a private, non-profit, cultural foundation, founded by the Company. Its mission is to develop initiatives which effectively contribute to improving the quality of life of people in the regions and countries in which the Group operates, especially in the areas of energy sustainability, art and culture, as well as solidarity and social initiatives. The Foundation may act independently to achieve its goals and is fully functional and autonomous. Without prejudice to its collaboration with other entities, the IBERDROLA Foundation coordinates and executes the Group's corporate social responsibility strategy, insofar as this is consistent with the purpose for which it was created and has been assigned there to it by the board of directors.

The IBERDROLA Foundation coordinates its welfare work in the United Kingdom through the Scottish Power Foundation, which was granted Euros 1,323 thousand. In the United States, this work is carried out through the Avangrid Foundation with a budget of Euros 2,211 thousand, and in Brazil through the Instituto IBERDROLA Brasil, which received Euros 140 thousand.

In 2016, the Group intends to follow a policy aimed at financing activities of interest to the general public in line with that followed in 2018 as regards amount and allocation.

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ANNUAL CORPORATE GOVERNANCE REPORT 2018

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ANNUAL CORPORATE GOVERNANCE REPORT OF LISTED COMPANIES

ISSUER IDENTIFICATION

YEAR-END DATE: 31/12/2018

Tax Identification No. (C.I.F.) A-48010615

Company Name: IBERDROLA, S.A.

Registered Office: Plaza Euskadi número 5
48009 Bilbao - Biscay - Spain

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ANNUAL CORPORATE GOVERNANCE REPORT OF LISTED COMPANIES

A CAPITAL STRUCTURE

A.1 Complete the table below with details of the share capital of the company:

Date of last change	Share capital (Euros)	Number of shares	Number of voting rights
25/07/2018	4,798,221,750.00	6,397,629,000	6,397,629,000

Remarks
On 30 January 2019, the share capital was increased to 4,890,342,750 euros divided into 6,520,457,000 shares.

Please state whether there are different classes of shares with different associated rights:

Yes □ **No X**

Class	Number of shares	Par value	Number of votes	Associated rights

Remarks
All shares are of the same class and carry the same rights.

A.2 Please provide details of the company's significant direct and indirect shareholders at year end, excluding any directors:

Name of shareholder	% of shares carrying voting rights		% of voting rights through financial instruments		% of total voting rights
	Direct	Indirect	Direct	Indirect	
QATAR INVESTMENT AUTHORITY	0.00	8.65	0.00	0.00	8.65
BLACKROCK, INC,	0.00	5.07	0.00	0.06	5.13
NORGES					

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BANK	3.03	0.00	0.30	0.00	3.33

Remarks
Data at 31/12/2018

Breakdown of the indirect holding:

Name of indirect shareholder	Name of direct shareholder	% of shares carrying voting rights	% of voting rights through financial instruments	% of total voting rights
QATAR INVESTMENT AUTHORITY	QATAR HOLDING LUXEMBURG II, S.A.R.L.	8.65	0.00	8.65
BLACKROCK INC	BLACKROCK GROUP	5.07	0.06	5.13

Remarks
According to available information, the approximate breakdown of the interests in the share capital by type of shareholder is as follows: - Foreign investors 66.27% - Domestic entities 10.25% - Domestic retail investors 23.48%

State the most significant shareholder structure changes during the year:

Name of shareholder	Date of transaction	Description of transaction
CAPITAL RESEARCH AND MANAGEMENT COMPANY	12/01/2018	Increase to above 5% of share capital
CAPITAL RESEARCH AND MANAGEMENT COMPANY	29/03/2018	Decrease to below 5% of share capital
CAPITAL RESEARCH AND MANAGEMENT COMPANY	21/05/2018	Decrease to below 3% of share capital
BLACKROCK, INC	08/02/2018	Increase to above 5% of share capital
BLACKROCK, INC	14/02/2018	Decrease to below 5% of share capital
BLACKROCK, INC	15/02/2018	Reached 5% of share capital
BLACKROCK, INC	21/02/2018	Decrease to below 5% of share capital
BLACKROCK, INC	27/02/2018	Increase to above 5% of

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		share capital
BLACKROCK, INC	27/03/2018	Decrease to below 5% of share capital
BLACKROCK, INC	02/07/2018	Increase to above 5% of share capital
BLACKROCK, INC	09/07/2018	Decrease to below 5% of share capital
BLACKROCK, INC	18/07/2018	Increase to above 5% of share capital
BLACKROCK, INC	03/08/2018	Decrease to below 5% of share capital
BLACKROCK, INC	13/09/2018	Increase to above 5% of share capital
BLACKROCK, INC	14/09/2018	Decrease to below 5% of share capital
BLACKROCK, INC	15/10/2018	The percentage of total voting rights (shares plus financial instruments) has exceeded 5% of share capital
BLACKROCK, INC	22/10/2018	The percentage of voting rights attributed to the shares has exceeded 5% of share capital
NORGES BANK	10/01/2018	Decrease to below 3% of share capital
NORGES BANK	22/01/2018	Increase to above 3% of share capital
NORGES BANK	26/01/2018	Decrease to below 3% of share capital
NORGES BANK	06/02/2018	Increase to above 3% of share capital
NORGES BANK	05/04/2018	Decrease to below 3% of share capital
NORGES BANK	12/04/2018	Increase to above 3% of share capital
NORGES BANK	28/11/2018	Decrease to below 3% of share capital
NORGES BANK	03/12/2018	Increase to above 3% of share capital

Most significant movements
The sources of the information provided are the notices sent by the shareholders to the CNMV and to the Company itself, the information contained in their respective annual reports and press releases, and the information that the Company obtains from Iberclear. Pursuant to the provisions of section 23.1 of Royal Decree

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1362/2007 of 19 October, further developing Law 24/1988 of 28 July on the Securities Market, in connection with the transparency requirements relating to the information on issuers whose securities have been admitted to trading on an official secondary market or other regulated market in the European Union, it is deemed that significant shareholders are the holders of at least 3% of voting rights.

On 10 January 2019, Norges Bank reported that its interest in the share capital of Iberdrola decreased to below 3%.

A.3 In the following tables, list the members of the Board of Directors (hereinafter "directors") with voting rights in the company:

Name of director	% of shares carrying voting rights		% of voting rights through financial instruments		% of total voting rights	% of total voting rights that can be transmitted through financial instruments	
	Direct	Indirect	Direct	Indirect		Direct	Indirect
MR JOSÉ IGNACIO SÁNCHEZ GALÁN	0.10	0.06	0.04	0.00	0.15	0.04	0.00
MS INÉS MACHO STADLER	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MR IÑIGO VÍCTOR DE ORIOL IBARRA	0.02	0.00	0.00	0.00	0.02	0.00	0.00
MS SAMANTHA BARBER	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MS MARÍA HELENA ANTOLÍN RAYBAUD	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MR ÁNGEL JESÚS ACEBES PANIAGUA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MS GEORGINA KESSEL	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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MARTÍNEZ							
MS DENISE HOLT	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MR JOSÉ W. FERNÁNDEZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MR MANUEL MOREU MUNAIZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MR XABIER SAGREDO ORMAZA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MR JUAN MANUEL GONZÁLEZ SERNA	0.00	0.01	0.00	0.00	0.00	0.00	0.00
MR FRANCISCO MARTÍNEZ CÓRCOLES	0.01	0.00	0.01	0.00	0.01	0.01	0.00
MR ANTHONY L. GARDNER	0.00	0.00	0.00	0.00	0.000	0.00	0.00

Total percentage of voting rights held by the Board of Directors	0.19

Remarks
The data reflected in this section is at 19/02/2019, the date of approval of this report. For the chairman & CEO, there is a deferral of the third delivery of shares from the 2014-2016 Strategic Bonus approved by the shareholders at the General Shareholders' Meeting in 2014 (510,596 shares). Each of the deliveries of shares is subject to confirmation by the Board of Directors, after a report from the Remuneration Committee, that the circumstances on which the performance evaluation was based remain in effect. Furthermore, pursuant to the provisions of the 2017-2019 Strategic Bonus approved at the General Shareholders' Meeting, the chairman & CEO may receive up to a maximum of 1,900,000 shares based on the performance evaluation for the 2017-2019 period, which, if awarded will be paid in three equal parts in 2020, 2021 and 2022. For the Business CEO, there is a deferral of the third delivery of shares from the 2014-2016 Strategic Bonus approved by the shareholders at the General Shareholders' Meeting in 2014 (120,931 shares). Each of the deliveries of shares is subject to confirmation by the Board of Directors, after a report from the Remuneration Committee, that the circumstances on which the performance evaluation was based remain in effect.

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Furthermore, pursuant to the provisions of the 2017-2019 Strategic Bonus, the Business CEO may receive up to a maximum of 300,000 shares based on the performance evaluation for the 2017-2019 period, which, if awarded will be paid in three equal parts in 2020, 2021 and 2022.

Breakdown of the indirect holding:

Name of director	Name of direct shareholder	% of shares carrying voting rights	% of voting rights through financial instruments	% of total voting rights	% of total voting rights that can be transmitted through financial instruments
MR JOSÉ IGNACIO SÁNCHEZ GALÁN	Royal Park 2000 SL	0.06	0.04	0.10	0.00
MR MANUEL MOREU MUNAIZ	María del Carmen Gamazo Trueba	0.00	0.00	0.00	0.00
MR JUAN MANUEL GONZÁLEZ SERNA	Grupo Sico Corporativo SL	0.01	0.00	0.01	0.00

Remarks

A.4 If applicable, state any family, commercial, contractual or corporate relationships that exist among significant shareholders to the extent that they are known to the company, unless they are insignificant or arise in the ordinary course of business, except those that are reported in Section A.6:

Name of related party	Nature of relationship	Brief description

A.5 If applicable, state any commercial, contractual or corporate relationships that exist between significant shareholders and the company and/or group, unless they are insignificant or arise in the ordinary course of business:

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Name of related party	Nature of relationship	Brief description

A.6 Describe the relationships, unless insignificant for the two parties, that exist between significant shareholders or shareholders represented on the Board and directors, or their representatives in the case of legal-person directors.

Explain, as the case may be, how the significant shareholders are represented. Specifically, state those directors appointed to represent significant shareholders, those whose appointment was proposed by significant shareholders and/or companies in its group, specifying the nature of such relationships or ties. In particular, mention the existence, identity and post of directors, or their representatives, as the case may be, of the listed company, who are, in turn, members of the Board of Directors or their representatives of companies that hold significant shareholdings in the listed company or in group companies of these significant shareholders.

Name or company name of related director or representative	Name or company name of related significant shareholder	Company name of the group company of the significant shareholder	Description of relationship/post

Remarks
There are no directors appointed on behalf of significant shareholders or directors connected thereto or proposed by them for appointment.

A.7 State whether the company has been notified of any shareholders' agreements that may affect it, in accordance with Articles 530 and 531 of the Ley de Sociedades de Capital ("Corporate Enterprises Act" or "LSC"). If so, describe these agreements and list the party shareholders:

Yes □ **No X**

Parties to the shareholders' agreement	Percentage of affected shares	Brief description of the agreement	Date of termination of agreement, if applicable

Remarks

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State whether the company is aware of any concerted actions among its shareholders. If so, provide a brief description:

Yes □ **No X**

Parties to the concerted action	Percentage of affected shares	Brief description of the agreement	Date of termination of agreement, if applicable

Remarks

If any of the aforementioned agreements or concerted actions have been modified or terminated during the year, please specify expressly:

A.8 State whether any individual or company exercises or may exercise control over the company in accordance with Article 5 of the Ley de Mercados de Valores ("Spanish Securities Market Act" or "LMV"). If so, please identify them:

Yes □ **No X**

Name

Remarks

A.9 Complete the following table with details of the company's treasury shares:

At the close of the year:

Number of direct shares	Number of indirect shares (*)	Total percentage of share capital
135,985,344		2.13

Remarks

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(*) through:

Name of direct shareholder	Number of direct shares
Total:	

Remarks

Explain any significant changes during the year:

Explain significant changes
The Company sent to the CNMV three updates to its treasury share position in 2018 as a result of a change in the number of voting rights arising from corporate transactions: • Notices of direct acquisitions of a total of 3,391,573 shares (0.053%) were provided on 2 February, coinciding with the increase in capital resulting from the "Iberdrola Flexible Dividend" programme. • Notices of direct acquisitions of a total of 61,453,601 shares (0.985%) were provided on 3 July, coinciding with the reduction in capital; and • Notices of direct acquisitions of a total of 4,322,023 shares (0.068%) were provided on 1 August, coinciding with the increase in capital resulting from the "Iberdrola Flexible Remuneration" programme. During financial year 2018 the Company also provided three more notices arising from consecutive direct acquisitions of own shares due to said acquisitions exceeding 1% of voting rights since the preceding notice: • Notices of direct acquisitions of a total of 63,704,610 shares (1.008%) were provided on 12 January. • Notices of direct acquisitions of a total of 64,747,653 shares (1.006%) were provided on 26 March; and • Notices of direct acquisitions of a total of 132,533,252 shares (2.072%) were provided on 28 December.

A.10 Provide a detailed description of the conditions and terms of the authority given to the Board of Directors to issue, repurchase, or dispose of treasury shares.

The shareholders acting at the General Shareholders' Meeting held on 13 April 2018 resolved to expressly authorise the Board of Directors, with the power of substitution, pursuant to the Companies Act (*Ley de Sociedades de Capital*), to carry out the derivative acquisition of shares of Iberdrola on the following terms:

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a) Purchases may be made by Iberdrola directly, or indirectly through its subsidiaries. Subsidiaries carrying out regulated activities are excluded pursuant to the provisions of the Electricity Industry Act (*Ley del Sector Eléctrico*) and the Hydrocarbons Act (*Ley de Hidrocarburos*).
b) Purchases shall be made by means of a purchase and sale agreement, a swap arrangement, or any other transaction permitted by law.
c) Purchases may be made up to the maximum sum permitted by law (i.e. 10% of the share capital).
d) Purchases may not be made at a higher price than that quoted on the Stock Exchange or at a price lower than the share's nominal value.
e) The authorisation was granted for a period not to exceed five years as from the approval of the resolution.
f) The acquiring company shall establish a restricted reserve in shareholders' equity equal to the amount of the shares of the controlling company recorded under assets. Such reserve shall be maintained for so long as the shares are not transferred or retired, in compliance with the provisions of the Companies Act.

The shares, if any, purchased as a result of the aforementioned authorisation could be used for either transfer or retirement or could be applied to the remuneration systems provided for in the Companies Act; added to the foregoing alternatives was the possible development of programmes fostering the acquisition of interests in the Company, such as, for example, dividend reinvestment plans, loyalty bonuses or similar instruments. Furthermore, at the General Shareholders' Meeting held on 8 April 2016, the shareholders resolved to authorise the Board of Directors to increase share capital upon the terms and within the limits set forth in section 297.1.b) of the Companies Act, with the power to exclude preemptive rights, limited to a maximum nominal amount of 20% of the share capital.

A.11 Estimated working capital:

	%
Estimated working capital	**88.88**

Remarks

A.12 State whether there are any restrictions (article of associations, legislative or of any other nature) placed on the transfer of shares and/or any restrictions on voting rights. In particular, state the existence of any type of restriction that may inhibit a takeover attempt of the company through acquisition of its shares on the market, and those regimes for the prior authorisation or notification that may be applicable, under sector regulations, to acquisitions or transfers of the company's financial instruments.

Yes X **No □**

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Description of restrictions
Those having an interest equal to or greater than 3% of the capital or voting rights of two or more companies that have the status of Principal Operator in certain markets or sectors (including the generation and supply of electricity) may not exercise rights in excess of such percentage in more than one entity. Article 29.2 of the By-Laws provides that no shareholder may cast a number of votes greater than those corresponding to shares representing 10% of the share capital. According to article 28, a shareholder may not exercise their right to vote at the General Shareholders' Meeting if the resolution to be approved is intended to: (a) relieve the shareholder of an obligation or grant the shareholder a right; (b) provide the shareholder with any kind of financial assistance, including the provision of guarantees in favour thereof; or (c) release the shareholder, if a director, from obligations arising from the duty of loyalty as provided by law. Article 50 of the By-Laws provides that the by-law restrictions against the exercise of voting rights by shareholders affected by conflicts of interest established in article 28 above and the limitation on the maximum number of votes that may be cast by a single shareholder contained in sections 2 and 4 of article 29 above shall be deprived of effect upon the occurrence of certain circumstances in the case of a takeover bid. Furthermore, section 527 of the Companies Act provides that at listed companies (*sociedades anónimas cotizada*s), the by-law provisions that directly or indirectly set, as a general rule, the maximum number of votes that may be cast by a single shareholder, by the companies belonging to the same group or by those acting in concert with the foregoing shall be of no effect when, following a takeover bid, the bidder has reached a percentage that is equal to or greater than 70% of the voting share capital, unless such bidder is not subject to equivalent breakthrough measures or has not adopted them. Pursuant to U.S. law, due to the business carried out by Avangrid, Inc. (a company belonging to the Iberdrola group) in that country, the acquisition of an interest giving rise to the holding of 10% or more of the share capital of Iberdrola will be subject to the prior approval of certain U.S. regulatory authorities.

A.13 State if the shareholders have resolved at a meeting to adopt measures to neutralise a take-over bid pursuant to the provisions of Act 6/2007.

Yes □ **No X**

If so, please explain the measures approved and the terms under which such limitations would cease to apply:

Explain the measures approved and the terms under which such limitations would cease to apply:

A.14 State if the company has issued shares that are not traded on a regulated EU market.

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Yes □ **No X**

If so, please list each type of share and the rights and obligations conferred on each.

List each type of share

B GENERAL SHAREHOLDERS' MEETING

B.1 State whether there are any differences between the quorum established by the LSC for General Shareholders' Meetings and those set by the company and if so, describe them in detail:

Yes X **No** □

	% quorum different from that contained in Article 193 LSC for general matters	% quorum different from that contained in Article 194 LSC for special resolutions
Quorum required at 1st call	0.00	66.67
Quorum required at 2nd call	0.00	60.00

Description of differences
As the only exception to the rules provided for in the Companies Act, article 21.2 of the By-Laws increases the quorum required to hold a valid meeting "in order to adopt resolutions regarding a change in the object of the Company, transformation, total split-off, dissolution of the Company, and the amendment of this section 2", in which case "shareholders representing two-thirds (2/3) of subscribed share capital with voting rights must be in attendance at the first call to the General Shareholders' Meeting, and shareholders representing sixty (60%) per cent of such share capital must be in attendance at the second call".

B.2 State whether there are any differences in the company's manner of adopting corporate resolutions and the manner for adopting corporate resolutions described by the LSC and, if so, explain:

Yes X **No** □

Describe how it is different from that contained in the LSC.

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	Qualified majority different from that established in Article 201.2 LSC for Article 194.1 LSC matters	Other matters requiring a qualified majority
% established by the company for adoption of resolutions	75.00	75.00

Describe the differences
Article 52 of the By-Laws provides that all resolutions intended to eliminate or amend the provisions contained in title IV (breakthrough of restrictions in the event of takeover bids), in article 28 (conflicts of interest), and in sections 2 to 4 of article 29 (limitation upon the maximum number of votes that a shareholder may cast) shall require the affirmative vote of three-fourths (3/4) of the share capital present in person or by proxy at a General Shareholders' Meeting.

B.3. State the rules for amending the company's Articles of Association. In particular, state the majorities required for amendment of the Articles of Association and any provisions in place to protect shareholders' rights in the event of amendments to the Articles of Association.

In addition to the provisions of section 285 *et seq.* of the Companies Act, the By-Laws of Iberdrola contain articles 21.2 (qualified quorum) and 52 (qualified majority) mentioned in sections B.1 and B.2 above.

B.4 Give details of attendance at General Shareholders' Meetings held during the year of this report and the two previous years:

	Attendance data				
			% distance voting		
Date of General Meeting	% physically present	% present by proxy	Electronic voting	Other	Total
13/04/2018	0.33	71.44	0.27	4.05	76 ,09
Of which, free float:	0.23	62.90	0.27	4.05	67.45
31/03/2017	0.39	71.92	0.17	4.71	77.19
Of which, free float:	0.32	60.43	0.17	4.71	65.63
08/04/2016	1.40	69.68	0.15	6.69	77.92
Of which, free float:	1.31	56.53	0.15	6.69	64.68

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Remarks
Absentee votes cast by the shareholders through their depositaries (without direct communication from the shareholders to the Company), which in prior reports were included in the "in person" percentage, are now included in the "Other" column, which reflects the percentage of share capital of all absentee votes issued at each Meeting through depositaries and custodians, cards received at shareholder information desks, cards received by post and the telephone channel (started in 2018). Adding all votes and proxies received through the corporate website, electronic participation reached a percentage of share capital equal to 0.52% in 2016, 0.82% in 2017 and 1.03% in 2018. Free float percentages have been calculated by dividing the shares represented in person and by proxy less those belonging to significant shareholders and directors participating at each Meeting, according to the information available in the list of attendees, by the total shares outstanding as at the date of the Meeting. For these purposes, significant interests deposited in omnibus accounts (not opened in the name of the owners of such interests) are not subtracted from the shares present in person or by proxy, except in cases in which the significant shareholder notified the Company of the shareholder's participation in the Meeting.

B.5 State whether any point on the agenda of the General Shareholders' Meetings during the year has not been approved by the shareholders for any reason.

Yes □ **No X**

Points on agenda not approved	% votes against (*)

(*) If the non-approval of the point is for a reason other than the votes against, this will be explained in the text part and "N/A" will be placed in the "% votes against" column.

B.6 State if the Articles of Association contain any restrictions requiring a minimum number of shares to attend General Shareholders' Meetings, or on distance voting:

Yes □ **No X**

Number of shares required to attend General Meetings	
Number of shares required for distance voting	

Remarks

B.7 State whether it has been established that certain decisions other than those established by law exist that entail an acquisition, disposal or contribution to another company of essential assets or other similar corporate transactions that must be subject to the approval of the General Shareholders' Meeting.

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Yes X **No □**

Explain the decisions that must be subject to the General Shareholders' Meeting, other than those established by law
Sections s), t) and u) of article 17 of the By-Laws provide that the shareholders acting at a General Shareholders' Meeting will decide the following issues, among others: s) The transfer to controlled entities of core activities that were previously carried out by the Company itself, while maintaining full control thereof. t) The acquisition, transfer, or contribution of key assets from or to another company. u) The approval of transactions having an effect equivalent to liquidation of the Company.

B.8 State the address and manner of access to the page on the company website where one may find information on corporate governance and other information regarding General Shareholders' Meetings that must be made available to shareholders through the company website.

www.iberdrola.com / corporate governance

C COMPANY ADMINISTRATIVE STRUCTURE

C.1 Board of Directors

C.1.1 Maximum and minimum number of directors established in the Articles of Association and the number set by the general meeting:

Maximum number of directors	14
Minimum number of directors	9
Number of directors set by the general meeting	14

Remarks

C.1.2 Please complete the following table on directors:

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Name of director	Representative	Director category	Position on the Board	Date first appointed to Board	Last re-election date	Method of selection to Board	Date of birth
Mr José Ignacio Sánchez Galán		Executive	Chairman & CEO	21/05/2001	27/03/2015	Resolution of General Shareholders' Meeting	
Ms Inés Macho Stadler		Other external	Vice Chair	07/06/2006	08/04/2016	Resolution of General Shareholders' Meeting	
Mr Iñigo Victor de Oriol Ibarra		Other external	Director	26/04/2006	08/04/2016	Resolution of General Shareholders' Meeting	
Ms Samantha Barber		Independent	Director	31/07/2008	08/04/2016	Resolution of General Shareholders' Meeting	
Ms María Helena Antolín Raybaud		Independent	Director	26/03/2010	27/03/2015	Resolution of General Shareholders' Meeting	
Mr Ángel Jesús Acebes Paniagua		Independent	Director	24/04/2012	27/03/2015	Resolution of General Shareholders' Meeting	
Ms Georgina Kessel Martínez		Independent	Director	23/04/2013	13/04/2018	Resolution of General Shareholders' Meeting	
Ms Denise Holt		Independent	Director	24/06/2014	27/03/2015	Resolution of General Shareholders' Meeting	
Mr José W. Fernández		Independent	Director	17/02/2015	27/03/2015	Resolution of General Shareholders' Meeting	
Mr Manuel Moreu Munaiz		Independent	Director	17/02/2015	27/03/2015	Resolution of General Shareholders' Meeting	
Mr Xabier Sagredo Ormaza		Other external	Director	08/04/2016	08/04/2016	Resolution of General Shareholders' Meeting	

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Mr Juan Manuel González Serna		Independent	Lead Independent Director	31/03/2017	31/03/2017	Resolution of General Shareholders' Meeting	
Mr Francisco Martínez Corcoles		Executive	Director	31/03/2017	31/03/2017	Resolution of General Shareholders' Meeting	
Mr Anthony L. Gardner		Independent	Director	13/04/2018	13/04/2018	Resolution of General Shareholders' Meeting	

Total number of directors	14

State if any directors, whether through resignation, dismissal or any other reason, have left the Board during the period subject to this report:

Name of director	Director type at time of leaving	Date of last appointment	Date director left	Specialised committees of which he/she was a member	Indicate whether the director left before the end of the term
Mr Braulio Medel Cámara	Independent	08/04/2016	13/04/2018	Corporate Social Responsibility Committee	Yes

Reason for leaving and other remarks
For personal reasons and in compliance with the provisions of the aforementioned succession plan set forth in Annex I to the General Corporate Governance Policy. (Self-organisation Rules of the Board of Directors).

C.1.3 Complete the following tables regarding the members of the Board and their categories:

EXECUTIVE DIRECTORS

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Name of director	Post in organisational chart of the company	Profile
Mr José Ignacio Sánchez Galán	Chairman & CEO	Salamanca, Spain, 1950 He is the chairman of the boards of directors of the country subholding companies of the Iberdrola Group in the United Kingdom (Scottish Power Limited), the United States of America (Avangrid, Inc., a NYSE-listed company) and Brazil (Neoenergia, S.A.). He is a member of the group of top utility executives of the World Economic Forum (Davos), which he has chaired, and of the Steering Committee of the European Round Table of Industrialists. Personal profile and academic training He graduated as an Industrial Engineer from the Engineering School (ICAI) of Universidad Pontificia Comillas (Madrid). He has received honorary doctorate degrees from the universities of Salamanca, Edinburgh, and Strathclyde (Glasgow). He has been on the faculty of Escuela Técnica Superior de Ingeniería (ICAI), and is currently a visiting professor at the University of Strathclyde, chairman of the Social Council of the University of Salamanca and a member of the Dean's Advisory Council of the Massachusetts Institute of Technology (MIT). In 2017 he was named Best Chief Executive Officer (CEO) within the utilities category (for the eleventh time) according to the prestigious Institutional Investor Research Group; in 2011 he was named Best CEO of European utilities and of Spanish listed companies in investors relations, according to the Thomson Extel Survey; and he has received the Award for Best CEO in Investor Relations by IR Magazine on three successive occasions (2003-2005). Furthermore, in 2017 he received the Vocento Award for Business Leadership and in 2014 he received the international Responsible Capitalism award in London. He has recently been appointed as a

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		member of the J.P. Morgan International Council. Noteworthy experience in the energy and industrial engineering sector In the industrial engineering sector, he has served as chief operating officer of Industria de Turbo Propulsores, S.A. (ITP) and as chairman of the European aerospace consortium Eurojet. He has also held various management positions at Sociedad Española del Acumulador Tudor, S.A. (now, Exide Group), engaged in the manufacture and sale of batteries. Noteworthy experience in other industries He has been chief executive officer of Airtel Móvil, S.A. (now, Vodafone España, S.A.U.) and a member of the Supervisory Board of Nutreco Holding N.V., a listed company in The Netherlands, active in the food industry. He was also founding partner and director of the Matarromera group, dedicated to viticulture and the production of wine and oil. Other information In addition to the awards mentioned, in 2018 he was named Universal Spaniard by Fundación Independiente, given the Silver Cross of Merit of the Guardia Civil (2018), and appointed as an Honorary Member of the Spanish Institute of Engineering; in 2016 he received the Medal of Honour of the Royal National Academy of Medicine; in 2014 he was distinguished by Queen Elizabeth II with the title Commander of the Most Excellent Order of the British Empire; in 2013 he was awarded the Gold Medal of the City of Salamanca; in 2011 he received the title of Lagun Onari (Friend of the Basques) bestowed by the Basque Government; in 2010 he was appointed as a member of GlobalScot, an international Scottish government network of business leaders who are most keenly committed to the economic development of Scotland; in 2009 he was awarded the Gold Medal of the Province of Salamanca and was named Consul of Bilbao by the Bilbao Chamber of Commerce, Industry and Shipping; and in 2007 he was awarded the

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		Police Merit medal.
Mr Francisco Martínez Corcoles	Business CEO	Alicante, Spain, 1956 He is currently the Business CEO (*consejero-director general de los negocios*) of the Iberdrola group, chair of Iberdrola España, S.A. and a member of the board of the country subholding company in Mexico, Iberdrola México, S.A. de C.V. He is also a member of Merit of the National Association of Engineers of the Escuela Técnica Superior de Ingeniería (ICAI). Academic training Industrial Engineer specialising in Electricity from the ICAI (Universidad Pontificia Comillas, Madrid) and Master in Business Management from IESE Business School (Universidad de Navarra). Noteworthy experience in the energy and industrial engineering sector He worked at Compañía Sevillana de Electricidad, S.A. before joining Hidroeléctrica Española, S.A. and (after the merger with Iberduero, S.A.) Iberdrola, S.A., where he has been director of the Production Market, director of the Wholesale Energy Markets Business Unit, and general director of the Liberalised Energy Business of the Group, with overall responsibility for all of the Wholesale, Retail and Energy Management businesses of the Iberdrola group. In June 2014 he was appointed Business CEO of the Iberdrola group, with overall responsibility for all of the group's businesses throughout the world. He has also held the position of chair of Elektro Holding, S.A., of Iberdrola Generación, S.A., of Iberdrola Generación México, S.A. de C.V. and of Scottish Power Generation Holdings Ltd. and has been a member of the board of Compañía Operadora del Mercado Eléctrico Español, S.A., Elcogas, S.A. and Iberdrola Ingeniería y Construcción, S.A.

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		He was also a member of the Board of Directors of the Spanish Electric Industry Association (*Asociación Española de la Industria Eléctrica*) (UNESA). Noteworthy experience in other industries He began his professional career at the Systems Division of Arthur Andersen. He has been a member of the advisory board of the International University of Bremen (Germany) and vice president of the Energy and Natural Resources Committee of the Spanish Institute of Engineering. Other information He was awarded the Javier Benjumea Prize of the Association of Engineers of ICAI in its XVII edition and the Gold Medal of the Spanish Nuclear Society.

Total number of executive directors	2
Percentage of the Board	14.29

Remarks

1.1.1.1 PROPRIETARY DIRECTORS

Name of director	**Name or company name of the significant shareholder represented or that has proposed their appointment**	**Profile**

Total number of proprietary directors	0
Percentage of the Board	0

Remarks

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INDEPENDENT DIRECTORS

Name of director	Profile
Ms Samantha Barber	Dunfermline, Scotland, 1969 She is chair of Scottish Ensemble, vice-chair of Scotland's 2020 Climate Group, and member of the Board of Scottish Water and its Remuneration Committee, of the GlobalScot Network and of the Advisory Board for the Imperial College London MBA. She also performs advisory and business coaching work. Academic training Bachelor of Arts in Applied Foreign Languages and European Politics from the University of Northumbria, Newcastle (England, United Kingdom) and Post-Graduate degree in EU Law from the University of Nancy (France). Noteworthy experience in the energy and industrial engineering sector She has been a member of the Advisory Council of Scottish Power following the integration of the Scottish company into the Iberdrola Group. Noteworthy experience in other industries She has been a consultant within the European Parliament, where she provided support to the Economic and Monetary Affairs Committee, a board member of Business for Scotland, and the chief executive of Scottish Business in the Community. She has also been a member of the Advisory Board of Breakthrough Breast Cancer and of the Board of Directors of Right Track Scotland, an organisation dedicated to advancing educational, training, and employment opportunities for youths at risk of social exclusion. She was chosen as one of the "Top 100 Women to Watch" according to the FTSE list and Cranfield University, and was a finalist and earned second place in the annual Director of the Year Awards 2012 of IoD Scotland NED.
Ms María Helena Antolín Raybaud	Toulon, France, 1966 She is vice-chair of the Board of Directors and member of the Management Committee of Grupo Antolin Irausa, S.A. She is also the president of the Spanish Association of Automotive Equipment and Component Manufacturers (*Asociación Española de Fabricantes de Equipos y Componentes para Automoción*) (Sernauto), vice president of the Excellence in Management Club (*Club de Excelencia en la Gestión*), and a board member of France Foreign Trade (*Comercio Exterior de Francia*), Spain section. Academic training

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	Degree in International Business and Business Administration from Eckerd College, St. Petersburg, Florida (United States of America), and a Master of Business Administration from Anglia University, Cambridge (United Kingdom) and from Escuela Politécnica de Valencia (Spain). Noteworthy experience in the energy and industrial engineering sector She has served as an external independent director of Iberdrola Renovables, S.A. and a member of its Related-Party Transactions Committee. She has been in charge of the corporate Industrial and Strategy Divisions of Grupo Antolin Irausa, S.A., where she has also been a director of Human Resources and the head of Total Quality for the Group.
Mr Ángel Jesús Acebes Paniagua	Ávila, Spain, 1958 He is chairman and founding partner of Grupo MA Abogados Estudio Jurídico, S.L., as well as sole director and professional partner of Doble A Estudios y Análisis, S.L.P. He is also a trustee of Fundación para el Análisis y Estudios Sociales (FAES) and of Fundación Universitaria de Ávila, UCAV. Academic training Degree in Law from Universidad de Salamanca. Noteworthy experience in the energy and industrial engineering sector As a lawyer, he has advised companies in the energy and technological/industrial sectors, among others. He also has significant knowledge of the regulatory area due to his work as a member of the Council of Ministers of the Government of Spain, a senator and a national deputy. Noteworthy experience in other industries He has served on the board of Caja Madrid Cibeles, S.A., which manages the investments of Grupo Caja Madrid in other companies with activities in the financial and insurance sectors (like Mapfre Internacional, S.A.) as well as the retail banking sector outside of Spain. After the public listing of Bankia, S.A., he was a member of the board of Banco Financiero y de Ahorros, S.A. (“BFA”), chairing its Audit and Compliance Committee. In the institutional arena, he has been Minister for Public Administrations, Minister of Justice and Minister of the Interior of the Spanish Government.
Ms Georgina Kessel Martínez	Mexico City, Mexico, 1950 She is an independent director of Fresnillo plc and of Grupo Financiero Scotiabank Inverlat, as well as the chair of the latter’s Audit Committee, a partner of Spectron E&I and a member of the Business Board of Universidad de las Américas Puebla (UDLAP). Academic training Holder of a degree in Economics from Instituto Tecnológico Autónomo de México and of a Master’s and Doctor’s degree

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	in Economics from Columbia University (New York). Noteworthy experience in the energy and industrial engineering sector She has been chair of the Energy Regulatory Commission (*Comisión Reguladora de Energía*) and Energy Secretary of the Government of Mexico. She has also been chair of the Board of Directors of Pemex (Petróleos Mexicanos) and of the Board of Directors of the Federal Electricity Commission (*Comisión Federal de Electricidad*) (CFE). She has participated in the Energy Council of the World Economic Forum and in the United Nations Organization Secretary General's advisory group (Sustainable Energy for All). Noteworthy experience in other industries She has been an adviser to the chair of the Federal Competition Commission (*Comisión Federal de Competencia*), head of the Quasi-Autonomous Non-Governmental Organisations Investment and Divestment Unit (*Unidad de Inversiones y Desincorporación de Entidades Paraestatales*) of the Office of the Secretary of Finance and Public Credit of Mexico, general manager of the National Mint of Mexico (*Casa de Moneda de México*), member of the boards of Nacional Financiera (Nafinsa) and of Banco Nacional de Comercio Exterior (Bancomext), and general manager of Banco Nacional de Obras y Servicios Públicos. In the academic field, she has been a professor in the Economics Department of Instituto Tecnológico Autónomo de México, deputy chair of the course towards a Degree in Economics, and chair of the Alumni Association. She has also been holder of the Quintana Chair for Research in International Trade and is the author of many papers and specialised articles.
Ms Denise Holt	Vienna, Austria, 1949 She is an independent director and member of the Audit Committee of HSBC UK Bank plc, chair and independent director of M&S Financial Services Ltd., member of the Board of the University of Sussex and President of Cañada Blanch Centre for Contemporary Studies of the London School of Economics and Political Science (LSE). Academic training Degrees in Spanish Philology, French Philology, and Political Sciences from the University of Bristol and Doctor of Laws from the same university (England, United Kingdom). Noteworthy experience in the energy and industrial engineering sector She has been a director of Scottish Power Renewable Energy Ltd. and of Scottish Power Energy Networks Holdings Ltd. Noteworthy experience in other industries

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	In her diplomatic career, she has been first secretary of the Embassy of the United Kingdom in Brazil, director of Human Resources, of Migration and of the Overseas Territories at the UK Foreign and Commonwealth Office, and ambassador of the United Kingdom to Mexico, Spain and Andorra. For her contribution to the British diplomatic service, she was elevated to Dame Commander of the Order of St Michael and St George (DCMG). She has also been a member of the Risk Committee of HSBC Bank plc, an independent director and member of the Quality and Safety and Remuneration Committees of the Board of Directors of Nuffield Health, chair of the Anglo-Spanish Society and of the Institute of Latin American Studies at the University of London, and has chaired the Nominations Committee of the Alzheimer's Society.
Mr José W. Fernández	Cienfuegos, Cuba, 1955 He is a partner of Gibson, Dunn & Crutcher and a member of the board of directors of the Council of the Americas and the Center for American Progress. Academic training Degree in History from Dartmouth College (New Hampshire, United States of America), and Juris Doctor from Columbia University (New York, United States of America). Noteworthy experience in the energy and industrial engineering sector He has been Assistant Secretary of State for Economic, Energy and Business Affairs for the United States of America. He has also been an independent director of Iberdrola USA, Inc. Noteworthy experience in other industries He has served on the boards of Dartmouth College, NPR Station WBGO-FM, the Middle East Institute, and Ballet Hispanico of New York and of non-governmental institutions such as Acción Internacional. He has also been the State Department's representative on the Committee on Foreign Investment in the United States. In addition, he was named one of the "World's Leading Lawyers" by Chambers Global for his M&A work, an "Expert" by the International Financial Law Review, one of the "World's Leading Privatization Lawyers" by Euromoney, and "Embajador de la Marca España" (Ambassador of the Spain Brand).
Mr Manuel Moreu Munaiz	Pontevedra, Spain, 1953 He is president of the Seaplace, S.L., sole director of H.I. de Iberia Ingeniería y Proyectos, S.L. and of Howard Ingeniería y Desarrollo, S.L., a director of Tubacex, S.A. and a member of the Spanish Committee of Lloyd's Register EMEA. He is also a professor of the Master's Programme in Oil at Universidad Politécnica de Madrid (ETSIM), of the Maritime Master's Programme of Instituto Marítimo Español and of Universidad Pontificia Comillas.

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	Academic training Doctorate in naval engineering from Escuela Técnica Superior de Ingenieros Navales (ETSIN) of the Universidad Politécnica de Madrid, and Master's degree in Oceanic Engineering from the Massachusetts Institute of Technology (MIT). Noteworthy experience in the energy and industrial engineering sector He has been a member of the Corporate Social Responsibility Committee of Iberdrola, S.A., of the Board of Directors of Iberdrola Renovables, S.A., and a director and member of the Audit and Compliance Committee of Gamesa Corporación Tecnológica, S.A. Noteworthy experience in other industries He has been a member of the board of Metalships and Docks, S.A., Neumáticas de Vigo, S.A. and Rodman Polyships, S.A., dean of the Colegio Oficial de Ingenieros Navales y Oceánicos de Madrid y de España, president of the Spanish Institute of Engineering, and a professor of the Escuela Técnica Superior de Ingenieros Navales of the Universidad Politécnica de Madrid and for the Repsol's Masters programme in oil.
Mr Juan Manuel González Serna	Madrid, Spain, 1955 He is the chairman of Cerealto SIRO Foods, a business group in the food sector, and a member of the Governing Board of the Spanish Commercial Coding Association (*Asociación Española de Codificación Comercial*) (AECOC). He is also a founding trustee and chairman of the Grupo SIRO Foundation. Academic training Degree in Law, Economics and Business Studies from the Instituto Católico de Administración y Dirección de Empresas (ICADE) of Universidad Pontificia Comillas (Madrid) and Masters in Business Administration (MBA) from the Escuela de Dirección del Instituto de Estudios Superiores de la Empresa de la Universidad de Navarra (IESE Business School) in Barcelona. Noteworthy experience in the energy and industrial engineering sector He has been an independent director of Iberdrola España, S.A.U. and of Iberdrola Renovables, S.A., as well as chair of the Appointments and Remuneration Committee of the latter company. Noteworthy experience in other industries Apart from the food sector, he also has extensive experience in the finance, venture capital and health sectors: he is a member of the advisory board of Rabobank in Spain and Europe and has been a member of the board of Banco Urquijo Sabadell Banca Privada, S.A. and of Sociedad para el Desarrollo Industrial de Castilla y León, Sociedad de Capital Riesgo, S.A. (SODICAL, now Ade Capital Social,

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	Sociedad de Capital Riesgo de Régimen Común, S.A.). He is also a member of the board of directors of the HM Hospitales Group.
Mr Anthony L. Gardner	Washington D.C., United States of America, 1963 He is a member of the board of directors of Brookfield Business Partners LP, senior adviser at the consulting firm Brunswick Group, LLP and senior counsel in the law firm Sidley Austin LLP, where he works in the International Trade and Privacy and Cybersecurity areas. He is also an adviser to the Bill and Melinda Gates Foundation and a member of the advisory boards of the Centre for European Reform, the German Marshall Fund and the European Policy Centre. Academic training He studied Government at Harvard University and International Relations at the University of Oxford. He holds a Juris Doctor degree from Columbia Law School and a Masters in Finance from London Business School. Noteworthy experience in the energy and industrial engineering sector He was an independent director of Scottish Power, Ltd and a member of that company's Audit and Compliance Committee. Noteworthy experience in other industries He was the US ambassador to the European Union from 2014 to 2017. Prior to that appointment, for six years he was the managing director at Palamon Capital Partners, a private equity firm based in London. He was also the director of one of the finance departments of Bank of America and of GE Capital, as well as director in the international acquisitions group of GE International. He has also worked as an attorney at international law firms in London, Paris, New York and Brussels. He has dedicated more than twenty years of his career to US-European affairs, as a government official, lawyer and investor. As Director for European Affairs on the National Security Council (1994-1995), he worked closely with the US Mission to the European Union to launch the Transatlantic Free Trade Agreement. He had previously worked with the Treuhandanstalt (German Privatisation Ministry) in Berlin, with the Stock Exchange Operations Committee in Paris and as secondee for the European Commission in Brussels. He is the author of "A New Era in US-EU Relations? The Clinton Administration and the New Transatlantic Agenda" and numerous articles on EU affairs.

Number of independent directors	9

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Percentage of the Board	64.29

Remarks

State whether any independent director receives from the company or any company in the group any amount or benefit other than compensation as a director, or has or has had a business relationship with the company or any company in the group during the past year, whether in his or her own name or as a significant shareholder, director or senior executive of a company that has or has had such a relationship.

In this case, include a statement by the Board explaining why it believes that the director in question can perform his or her duties as an independent director.

Name of director	Description of the relationship	Statement of the Board

1.1.1.2 OTHER EXTERNAL DIRECTORS

Name of director	Reason	Company, director or shareholder to whom the director is related	Profile
Ms Inés Macho Stadler	More than 12 years have passed since appointment.		Bilbao, Spain, 1959 She is a professor of Economics in the Economics and Economic History Department of Universidad Autónoma de Barcelona and a professor of the Barcelona Graduate School of Economics. She is also an honorary member of the European Economic Association and of the Spanish Economic Association (*Asociación Española de Economía*) as well as a member-elect of The Academy of Europe. Academic training Degree in Economics from Universidad del País Vasco, Master in Economics from l'École des Hautes Études en Sciences Sociales, and Doctor in Economics (Ph.D.) from the same academic institution and from l'École

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			Nationale de la Statistique et de l'Administration Économique (ENSAE) (Paris, France). Noteworthy experience in the energy and industrial engineering sector She has served as lead independent director (*consejera coordinadora*) of Iberdrola, S.A. and chair of its Remuneration Committee. Noteworthy experience in the energy and industrial economy sector She has been a member of the International Scientific Advisory Committee of the Basque Centre for Climate Change (bc3) and has served as chair of the Scientific Committee of the 2011 Conference of the Spanish Association for Energy Economics (*Asociación Española para la Economía Energética*). Noteworthy experience in other industries She has been president of the Spanish Economic Association, coordinator of the National Agency for Quality Evaluation and Accreditation (*Agencia Nacional de Evaluación y Prospectiva*), and representative at the European Science Foundation, as well as a member-elect of the Council of the European Economic Association and a member of the Executive Committee of the European Association for Research in Industrial Economics. She has been a member of the Advisory Board of the Research Service of Caja de Ahorros y Pensiones de Barcelona, "la Caixa". She has taught at universities in Germany, Belgium, Brazil, Denmark, France, Portugal and Spain.
Mr Iñigo Victor de Oriol Ibarra	More than 12 years have passed since appointment.	IBERDROLA	Madrid, Spain, 1962 He is a member of the board of Empresa de Alumbrado Eléctrico de Ceuta, S.A. Academic training Bachelor of Arts in International Business from Schiller International University (Madrid), a graduate of the Executive Corporate Management Programme of IESE Business School, and Certified European Financial Analyst (CEFA) from Instituto Español de Analistas Financieros. Noteworthy experience in the energy

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			and industrial engineering sector He has been chair of Electricidad de La Paz, S.A. (Bolivia), of Empresa de Luz y Fuerza Eléctrica de Oruro, S.A. (Bolivia), and of Iberoamericana de Energía Ibener, S.A. (Chile), as well as a member of the board of Neoenergia, S.A. (Brazil) and of Empresa Eléctrica de Guatemala, S.A. He has also been a member of the Remuneration Committee of Iberdrola, S.A., director of Corporate Governance for the Americas of Iberdrola, S.A., director of Management Control at Amara, S.A., and a financial analyst in the Financial Division and the International Division of Iberdrola, S.A. Noteworthy experience in other industries He has been chair of Empresa de Servicios Sanitarios de Los Lagos, S.A. (ESSAL) in Chile.
Mr Xabier Sagredo Ormaza	He is chair of the Board of Trustees of Bilbao Bizkaia Kutxa Fundación Bancaria, the principal shareholder of Kutxabank, S.A.	KUTXABANK	Portugalete, Spain, 1972 He is chair of the Board of Trustees of Bilbao Bizkaia Kutxa Fundación Bancaria-Bilbao Bizkaia Kutxa Banku Fundazioa, of BBK Fundazioa and of Fundación Eragintza. He is also a trustee of Biocruces Sanitary Research Institute, of the Bilbao Museum of Fines Arts and of the Guggenheim Foundation, at which he also serves as member of the Executive Committee. In addition, he is a member of the Orkestra Basque Institute of Competitiveness and of the Board of Directors of the Management Council of Universidad de Deusto, and is a visiting professor at various institutions. Academic training Degree in Economics and Business from Universidad del País Vasco, with a major in Finance, and holder of postgraduate degrees in various areas. Noteworthy experience in the energy and industrial engineering sector He has been a director of Iberdrola Generación, S.A. and a member of its Audit and Compliance Committee. He has also been a director of Iberdrola Distribución Eléctrica, S.A., at which he has held the position of chair of the Audit and Compliance Committee.

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			Noteworthy experience in other industries He has been the director of the Expansion and Assets area of the credit institution Ipar Kutxa, managing director of the concessionaire Transitia, and a member of the Board of the Bilbao Port Authority. In addition, he has been chair and vice-chair of the Board of Directors of Caja de Ahorros Bilbao Bizkaia Kutxa, Aurrezki Kutxa eta Bahitetxea (BBK), and chair of its Audit Committee.

Total number of other external directors	3
Percentage of the Board	21.43

Remarks

State any changes in status that have occurred during the period for each director:

Name of director	Date of change	Previous Status	Current status
Ms Inés Macho Stadler	07/06/2018	Independent	Other external

Remarks
Twelve years have passed since appointment.

C.1.4 Complete the following table with information relating to the number of female directors at the close of the past 4 years, as well as the category of each:

	Number of female directors				% of directors for each category			
	Year t	Year t-1	Year t-2	Year t-3	Year t	Year t-1	Year t-2	Year t-3
Executive	-	-	-	-	-	-	-	-
Proprietary	-	-	-	-	-	-	-	-
Independent	4	5	5	5	44	50	50	50
Other external	1				6			
Total:	5	5	5	5	35.71	35.71	35.71	35.71

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Remarks
The Board of Directors has proposed to the shareholders at the General Shareholders' Meeting to be held on 29 March 2019 the appointment of Sara de la Rica Goiricelaya in order to fill the vacancy occurring due to the end of the term of Ángel Jesús Acebes Paniagua. If such proposal is approved, the percentage of women on the Board of Directors will increase to 50% of the external directors.

C.1.5 State whether the company has diversity policies in relation to the Board of Directors of the company on such questions as age, gender, disability and training and professional experience. Small and medium-sized enterprises, in accordance with the definition set out in the Accounts Audit Act, will have to report at least the policy they have implemented in relation to gender diversity.

(i) Yes X No □ Partial policies □

Should this be the case, describe these diversity policies, their objectives, the measures and way in which they have been applied and their results over the year. Also state the specific measures adopted by the Board of Directors and the appointments and remuneration committee to achieve a balanced and diverse presence of directors.

In the event that the company does not apply a diversity policy, explain the reasons why.

Description of policies, objectives, measures and how they have been implemented, including results achieved
The Company's Corporate Governance System, and particularly the Board of Directors Diversity and Director Candidate Selection Policy, entrusts the Appointments Committee with the duty to ensure that when new vacancies are filled or new directors are appointed, the selection procedures are free from any implied bias entailing any kind of discrimination and, in particular, that such procedures do not hinder the selection of female directors. The goals thereof include ensuring that female directors continue to account for at least 30% of the Board of Directors by the year 2020. Five of the fourteen members of the Board of Directors are currently women. One of them holds the position of vice chair of the Board of Directors and another three chair three of the four consultative committees. On 7 June 2006, the Board of Directors appointed Ms Inés Macho Stadler as independent director on an interim basis to fill a vacancy; such appointment was ratified by the shareholders at the General Shareholders' Meeting held on 29 March 2007, where the shareholders

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also approved her re-election for a five-year period. On 22 September 2009, Ms Inés Macho Stadler was appointed as lead independent director (*consejera coordinadora*), in which position she was replaced by Mr Juan Manuel González Serna. On 21 June 2018 Ms Inés Macho Stadler was appointed vice chair of the Board of Directors.

At its meeting of 31 July 2008, the Board of Directors resolved to appoint Ms Samantha Barber as an independent director on an interim basis to fill a vacancy; such appointment was ratified by the shareholders at the General Shareholders' Meeting held on 20 March 2009. Ms Barber has also chaired the Sustainable Development Committee since 24 April 2012.

The shareholders at the General Shareholders' Meeting held on 26 March 2010 approved the proposed appointment of Ms María Helena Antolín Raybaud, with the classification of external independent director.

On 23 April 2013, Iberdrola's Board of Directors approved the interim appointment of Ms Georgina Kessel Martinez as an external independent director, which appointment was subsequently ratified by the shareholders at the General Shareholders' Meeting held on 28 March 2014. Furthermore, Ms Kessel Martínez was appointed chair of the Audit and Risk Supervision Committee on 17 February 2015.

On 24 June 2014, the Board of Directors approved the interim appointment of Ms Denise Holt as an external independent director. This appointment was ratified by the shareholders at the General Shareholders' Meeting held on 27 March 2015.

The Appointments and Remuneration Committee was split into two separate committees on 27 March 2015. The appointment of Ms María Helena Antolín Raybaud and of Ms Inés Macho Stadler as chairs of the Appointments Committee and the Remuneration Committee, respectively, was approved for these purposes.

The Board of Directors has proposed to the shareholders at the General Shareholders' Meeting to be held on 29 March 2019 the appointment of Sara de la Rica Goiricelaya in order to fill the vacancy occurring due to the end of the term of Ángel Jesús Acebes Paniagua. If such proposal is approved, the percentage of women on the Board of Directors will increase to 50% of the external directors.

It should also be noted that the Board of Directors, at its meeting held on 19 December 2017, approved a Board of Directors Diversity and Director Candidate Selection Policy, the new name of the former Director Candidate Selection Policy, which is intended to cause the composition of the Board of Directors to reflect a maximum diversity of skills and viewpoints with special emphasis on issues such as age, gender, disability, training and professional experience. This Policy is available on the corporate website (www.iberdrola.com) where the Activities Report of the Board and of the Committees thereof can also be found. Among other issues, this Report details the professional skills

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and experience of the directors and is a good example of the application of the Policy.

C.1.6 Describe the means, if any, agreed upon by the appointments committee to ensure that selection procedures do not contain hidden biases which impede the selection of female directors and that the company deliberately seeks and includes women who meet the target professional profile among potential candidates and which makes it possible to achieve a balance between men and women:

Explanation of means
The *Board of Directors Diversity and Director Candidate Selection Policy* ensures that the proposed appointments of directors are based on a prior analysis of the needs of the Board of Directors. In particular, the candidates must be respectable and qualified persons, widely recognised for their expertise, competence, experience, qualifications, training, availability and commitment to their duties. They must be irreproachable professionals, whose professional conduct and background is aligned with the principles set forth in the Directors' Code of Ethics and the corporate values contained in the Mission, Vision and Values of the Iberdrola group. In the selection of candidates, it also endeavours to ensure a diverse and balanced composition of the Board of Directors overall, such that decision-making is enriched and multiple viewpoints are contributed to the discussion of the matters within its purview. To this end, the selection process shall promote a search for candidates with knowledge and experience in the main countries and sectors in which the group does or will do business. The directors must also have sufficient knowledge of the Spanish and English languages to be able to perform their duties. In turn, the Board has entrusted to the Appointments Committee the responsibility of ensuring that when new vacancies are filled or new directors are appointed, the selection procedures are free from any implied bias entailing any kind of discrimination and, in particular, from any bias that might hinder the selection of female directors.

In the event that there are few or no female directors in spite of any measures adopted, please explain the reasons that justify such a situation:

Explanation of reasons
Not applicable

C.1.7 Describe the conclusions of the appointments committee regarding verification of compliance with the selection policy for directors; in particular, as it relates to the goal of ensuring that the number of

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female directors represents at least 30% of the total membership of the Board of Directors by the year 2020.

The Remuneration Committee believes that IBERDROLA is developing the Diversity Policy in a fully consistent manner and that the objectives for 2020 were met significantly in advance, as shown in section C.1.4 of this Report.

C.1.8 If applicable, please explain the reasons for the appointment of any proprietary directors at the request of shareholders with less than a 3% equity interest:

Name of shareholder	Reason

State whether the Board has failed to meet any formal requests for membership from shareholders whose equity interest is equal to or higher than that of others at whose request proprietary directors have been appointed. If this is the case, please explain why the aforementioned requests were not met:

Yes □ **No X**

Name of shareholder	Explanation

C.1.9 State the powers delegated by the Board of Directors, as the case may be, to directors or Board committees:

Name of director or committee	Brief description
Mr José Ignacio Sánchez Galán	The chairman & CEO, as an individual decision-making body, has all the powers that may be delegated under the law and the By-Laws.
Executive Committee	All the powers inherent to the Board of Directors, except for those powers that may not be delegated pursuant to law or the Corporate Governance System.

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C.1.10 Identify any members of the Board who are also directors, representatives of directors or officers in other companies in the group of which the listed company is a member:

Name of director	Name of group member	Position		Does the director have executive powers?
Mr José Ignacio Sánchez Galán	SCOTTISH POWER LTD.	Chair		No
Mr José Ignacio Sánchez Galán	AVANGRID, INC.	Chair		No
Mr José Ignacio Sánchez Galán	NEOENERGIA, S.A.	Chair		No
Mr Francisco Martínez Córcoles	IBERDROLA ESPAÑA, S.A.	Chair		No
Mr Francisco Martínez Córcoles	IBERDROLA MÉXICO, S.A. DE C.V.	Director		No

Remarks

C.1.11 List any directors or representatives of legal person-directors of your company who are members of the Board of Directors of other companies listed on official securities markets other than group companies, and have communicated that status to the Company:

Name of director	Name of listed company	Position
MS GEORGINA KESSEL MARTÍNEZ	GRUPO FINANCIERO SCOTIABANK INVERLAT, S.A. DE C.V.	Director
MS GEORGINA KESSEL MARTÍNEZ	FRESNILLO, PLC	Director
MR MANUEL MOREU MUNAIZ	TUBACEX, S.A.	Director

Remarks

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C.1.12 State whether the company has established rules on the number of boards on which its directors may hold seats, providing details if applicable, identifying, where appropriate, where this is regulated:

Yes X **No □**

Explanation of the rules and identification of the document where this is regulated
Pursuant to the Regulations of the Board of Directors, individuals or legal entities serving as directors in more than five companies, of which no more than three may have shares trading on domestic or foreign stock exchanges, may not be appointed as directors. Positions within holding companies are excluded from the calculation. Furthermore, companies belonging to the same group shall be deemed to be a single company.

C.1.13 State total remuneration received by the Board of Directors:

Board remuneration in financial year (thousand euros)	16,987
Amount of vested pension interests for current members (thousand euros)	0
Amount of vested pension interests for former members (thousand euros)	0

Remarks
This amount includes the remuneration received (5,434 thousand euros) by all of their directors for their performance as such during financial year 2018 (fixed remuneration, attendance fees and other items) as well as salaries, annual variable remuneration and the shares received by the executive directors in payment of the second period of the 2014-2016 Strategic Bonus, all of which is duly described in the Annual Director Remuneration Report.

C.1.14 Identify senior management staff who are not executive directors and their total remuneration accrued during the year:

Name	Position
Mr José Sainz Armada	CFO
Mr Juan Carlos Rebollo Liceaga	Administration and Control Director
Mr Pedro Azagra Blázquez	Corporate Development Director
Mr Santiago Martínez Garrido	Director of Legal Services
Ms Sonsoles Rubio Reinoso	Director of Internal Audit

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Total senior management remuneration (thousand euros)	10,344

Remarks
The amount of the fixed and variable remuneration of the directors of the Iberdrola group (150 people) is 47,310 thousand euros. This figure does not include the total of the shares delivered in payment of the long-term incentives.

C.1.15 State whether the Board rules were amended during the year:

Yes x **No □**

Description of changes
A new Title I has been introduced regarding the principles that should govern the conduct of the Board of Directors, in order to include within the guidelines for their conduct the effective engagement of shareholders and other stakeholders, satisfaction of the corporate interest, commitment to the social dividend and conformance of the work of the Board of Directors and all of its members to the Company's Code of Ethics. In particular, the Board of Directors' commitment to the Sustainable Development Goals (SDGs) approved by the United Nations and to the fight against climate change has been made explicit. There has also been an update of references to the Corporate Social Responsibility Committee, which in October 2018 became the Sustainable Development Committee, and other technical improvements have been made in order to clarify the powers of the Board of Directors and of the lead independent director, as well as to simplify and improve the consistency of the regulation of the committees.

C.1.16 Specify the procedures for selection, appointment, re-election and removal of directors: the competent bodies, steps to follow and criteria applied in each procedure.

1. APPOINTMENT AND RE-ELECTION OF DIRECTORS

The appointment, re-election, and removal of directors is within the purview of the shareholders at the General Shareholders' Meeting.

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Vacancies that occur may be filled by the Board of Directors on an interim basis until the next General Shareholders' Meeting.

The Appointments Committee must advise the Board of Directors regarding the most appropriate configuration thereof and of its committees as regards size and equilibrium among the various classes of directors existing at any time. This is in any event based on the conditions that candidates for director must meet pursuant to the Board of Directors Diversity and Director Candidate Selection Policy.

The following may not be appointed as directors or as individuals representing a corporate director:

a) Domestic or foreign companies competing with the Company in the energy industry or other industries, or the directors or senior officers thereof, or such persons, if any, as are proposed by them in their capacity as shareholders.
b) Individuals or legal entities serving as directors in more than five companies, of which no more than three may have shares trading on domestic or foreign stock exchanges.
c) For purposes of the provisions of the preceding paragraph, positions within holding companies are excluded from the calculation. Furthermore, companies belonging to the same group shall be deemed to be a single company.
d) Persons who, during the two years prior to their appointment, have occupied high-level positions in Spanish government administrations that are incompatible with the simultaneous performance of the duties of a director of a listed company under Spanish national or autonomous community law, or positions of responsibility with entities regulating the energy industry, the securities markets, or other industries in which the Group operates.

Individuals or legal entities that are under any other circumstance of disqualification or prohibition governed by provisions of a general nature, including those that have interests in any way opposed to those of the Company or the Group.

The Board of Directors and the Appointments Committee, within the scope of their powers, shall endeavour to ensure that the candidates proposed are respectable and qualified persons, widely recognised for their expertise, competence, experience, qualifications, training, availability, and commitment to their duties.

It falls upon the Appointments Committee to propose the independent directors, as well as to report upon the proposals relating to the other classes of directors.

If the Board of Directors deviates from the proposals and reports of the Appointments Committee, it shall give reasons for so acting and shall record such reasons in the minutes.

2. EVALUATION OF DIRECTORS

The Board of Directors annually evaluates: (i) its operation and the quality of its

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work; (ii) the performance of their duties by the chairman of the Board of Directors & CEO and by the Business CEO, based on the report submitted thereto by the Appointments Committee; and (iii) the operation of its committees, in view of the report submitted thereto by such committees. For such purpose, the chairman of the Board of Directors shall organise and coordinate the aforementioned evaluation process with the chair of each committee. The following section reports on the evaluation process during financial year 2018.

3. REMOVAL OF DIRECTORS

Directors shall serve in their position for a term of four (4) years, so long as the shareholders acting at the General Shareholders' Meeting do not resolve to remove them and they do not resign from their position.

The Appointments Committee shall inform the Board of Directors regarding proposed removals due to breach of the duties inherent to the position of director or due to a director becoming affected by supervening circumstances of mandatory resignation or withdrawal. In addition, the Committee may propose the removal of directors in the event of disqualification, structural conflict of interest, or any other reason for resignation or withdrawal, pursuant to law or the Company's Corporate Governance System.

The Board of Directors may propose the removal of an independent director before the passage of the period provided for in the By-Laws only upon sufficient grounds, evaluated by the Board of Directors after a report from the Appointments Committee, or as a consequence of takeover bids, mergers, or other similar corporate transactions resulting in a significant change in the structure of the Company's share capital, as recommended by the Good Governance Code of Listed Companies.

C.1.17 Explain how the annual evaluation of the Board has given rise to significant changes in its internal organisation and to procedures applicable to its activities:

Description of changes
The Iberdrola group has an on-going commitment to the development of its corporate governance. Along these lines, Iberdrola evaluates the operation of its governance bodies on an annual basis, and based on the conclusions obtained, identifies the principal areas of work for the coming year. More than 98% of the work areas defined in the evaluation process from the prior year were met during 2018. Specifically, significant advancements were made in the following areas: Composition of the governance bodies: - Appointment of Mr Juan Manuel González Serna as lead independent director (*consejero coordinador*). - Appointment of Ms Inés Macho Stadler as vice-chair of the Board of Directors. - Staggered renewal of the Board of Directors, with the appointment of Mr Anthony L. Gardner, who has a profile aligned with the

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needs specified in the renewal planning matrix for the Board of Directors.
- Strengthening of the checks-and-balances system with the appointment of CEOs at the country subholding companies.

Operation:
- Preparation of an orientation programme for new directors.
- Implementation within the Audit and Risk Supervision Committee of the recommendations contained in Technical Guide 3/2017 on audit committees at public-interest entities.
- Allocation of new talent management and promotion powers to the Appointments Committee.
- Approval of a new *Director Remuneration Policy* at the 2018 General Shareholders' Meeting.
- Preparation of a comparative analysis of the remuneration of the executive directors with the support of an external adviser.
- Inclusion of the SDGs approved by the UN in more than 30 corporate policies and rules of the Corporate Governance System.

Stakeholder engagement:
- Contact by the lead independent director with shareholders of the Company.
- Continuous analysis of the main issues raised by the shareholders and other stakeholders.
- Expansion of the information published regarding shareholder engagement, describing the main issues discussed with the shareholders at the corporate governance roadshows.
- Iberdrola's joining the *Task force on Climate Related Financial Disclosure* initiative.

Describe the evaluation process and the areas evaluated by the Board of Directors with the help, if any, of external advisors, regarding the function and composition of the board and its committees and any other area or aspect that has been evaluated.

Description of the evaluation process and evaluated areas
The Board of Directors evaluates its performance on an annual basis. The evaluation of the chairman & CEO was led by the lead independent director. The process concluded at the meeting of the Board of Directors held on 19 February 2019, which approved the results of the evaluation of financial year 2018 and the Continuous Improvement Plan for financial year 2019. In order to align the Company with best international practices, it was decided to hire PricewaterhouseCoopers Asesores de Negocios, S.L. ("PwC") as an external adviser in the evaluation process. The evaluation process verifies compliance with legal provisions and the Company's Corporate Governance System. It also includes a comparative analysis covering more than 20 domestic and international companies and monitors the most advanced corporate governance trends. In addition, it evaluates the achievement of the areas of work identified in the evaluation from the prior year. The evaluation also serves as an instrument to perfect corporate governance practices, as it allows for identification of opportunities for

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improvement that are specified in the Continuous Improvement Plan. The conclusions of the evaluation process reflect compliance with the indicators relating to mandatory legal rules and regulations and an alignment of more than 95% with the comparative analysis, with the latest international trends and with the implementation of the areas for improvement identified during prior years.
The Continuous Improvement Plan 2019 deriving from the evaluation process focuses on continuing to advance in three areas, principally:

- Strengthening supervision in critical areas, like the monitoring of factors that could eventually involve major changes in strategy, performance or the environment in which the Company competes.
- Continuing to adopt best international practices on the operation of consultative committees.
- Reviewing new developments arising from the CNMV's draft Technical Guide on Nomination and Remuneration Committees and identifying actions for greater implementation thereof.

C.1.18 Describe, in those years in which the external advisor has participated, the business relationships that the external advisor or any group company maintains with the company or any company in its group.

Iberdrola has been assisted by an outside consultant for the last 9 years. In 2017 and 2018, business relations with PwC came to an aggregate of 10.7 million euros and 11.2 million euros, respectively. The amount of billing by PwC for advising the Board of Directors and the Office of the Secretary thereof in 2018 was 500,000 euros.

C.1.19 State the situations in which directors are required to resign.

Directors must submit their resignation from the position and formally resign from their position upon the occurrence of any of the instances of disqualification from or prohibition against performing the duties of director provided by law or by Iberdrola's Corporate Governance System.

In this connection, the Regulations of the Board of Directors provide that the directors must submit their resignation to the Board of Directors in the following cases:

a) When, due to supervening circumstances, they are involved in any circumstance of disqualification or prohibition provided by law or the Corporate Governance System.
b) When, as a result of any acts or conduct attributable to the director, serious damage is caused to the value or reputation of the Company or there is a risk of criminal liability for the Company or any of the companies of the group.
c) When they cease to deserve the respectability or to have the capability, expertise, competence, availability or commitment to their duties required to be a director of the Company.
In particular, when the activities carried out by the director, or the companies directly or indirectly controlled by the director, or the individuals or legal entities that are shareholders of or related to any of them, or the individual representing a corporate director, may

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compromise the competence of the director. d) When they are seriously reprimanded by the Board of Directors because they have breached any of their duties as directors, by resolution adopted by a two-thirds majority of the directors. e) When their continuance in office on the Board of Directors may for any reason, either directly, indirectly, or through persons related thereto, jeopardise the faithful and diligent performance of their duties in furtherance of the corporate interest. f) When the reasons why the director was appointed cease to exist and, in particular, in the case of proprietary directors, when the shareholder or shareholders who proposed, requested, or decided the appointment thereof totally or partially sell or transfer their equity interest, with the result that such equity interest ceases to be significant or sufficient to justify the appointment. g) When an independent director unexpectedly falls under supervening circumstances that prevent the director from being considered as such pursuant to the provisions of law. The resignation provisions set forth under f) and g) above shall not apply when, after a report from the Appointments Committee, the Board of Directors believes that there are reasons that justify the director's continuance in office, without prejudice to the effect that the new supervening circumstances may have on the classification of the director.

C.1.20 Are qualified majorities other than those established by law required for any specific decision?

Yes X **No □**

If so, please describe any differences.

Description of differences
The Regulations of the Board of Directors require a majority of at least two-thirds of the directors present at the meeting in person or by proxy to approve the amendment thereof. The serious reprimand of a director for having breached any of the duties entrusted thereto as director under the Regulations of the Board of Directors requires a majority of two-thirds of the directors.

C.1.21 Explain whether there are any specific requirements, other than those relating to directors, to be appointed as chairman of the Board of Directors.

Yes □ **No X**

Description of requirements

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C.1.22 State whether the Articles of Association or the Board Rules establish any limit as to the age of directors:

Yes □ **No X**

	Age limit
Chairman	
CEO	
Directors	

Remarks
Each of the non-executive directors has undertaken to tender their resignation to the Board of Directors at the first meeting it holds after they reach seventy years of age or twelve years as a director of the Company.

C.1.23 State whether the Articles of Association or the Board Rules establish any term limits for independent directors or other more stringent requirements in addition to those established by law:

Yes □ **No X**

Additional requirements and/or maximum number of term limits	

C.1.24 State whether the Articles of Association or Board Rules establish specific rules for granting proxies to other directors at Board meetings, how they are to be delegated and, in particular, the maximum number of proxies that a director may have, as well as if there is any limit regarding the category of director to whom a proxy may be granted beyond the limitations imposed by law. If so, please briefly describe the rules.

Pursuant to the By-Laws, all of the directors may cast their vote and give their proxy in favour of another director, provided, however, that non-executive directors may only do so in favour of another non-executive director. The Regulations of the Board of Directors require that directors attend the meetings of the Board of Directors. When directors are unable to attend in person for well-founded reasons, they shall endeavour to give a proxy to another director, to whom they shall give any appropriate instructions, but may not grant a proxy in connection with matters in respect of which they are involved in a conflict of interest.

The proxy granted shall be a special proxy for the Board meeting in question and may be communicated by any means allowing for the receipt thereof.

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There is no maximum number of proxies provided per director.

C.1.25 State the number of meetings held by the Board of Directors during the year, and if applicable, the number of times the Board met without the chairman present. Meetings where the chairman sent specific proxy instructions are to be counted as attended.

Number of Board meetings	8
Number of Board meetings without the chairman	

Remarks

State the number of meetings held by the coordinating director with the other directors, where there was neither attendance nor representation of any executive director:

Number of meetings	1

Remarks
Pursuant to the provisions of art. 45 of the By-Laws, the lead independent director coordinates, meets with and reflects the concerns of the non-executive directors, and also directs the periodic evaluation of the chairman of the Board of Directors and leads any process for the succession thereof. In the exercise of these powers, the lead independent director has had meetings with the non-executive directors and, in particular, contacted all of the independent directors, who unanimously resolved to propose the re-election of the chairman & CEO.

Please specify the number of meetings held by each committee of the Board during the year:

Number of meetings held by the Executive Committee	15
Number of meetings held by the Audit and Risk Supervision Committee	12
Number of meetings held by the Appointments Committee	6
Number of meetings held by the Remuneration Committee	6
Number of meetings held by the Sustainable Development Committee	7

Remarks
The Appointments Committee adopted resolutions in writing and without a meeting on three occasions. The Remuneration Committee adopted resolutions in writing and without a meeting on two occasions.

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C.1.26 State the number of meetings held by the Board of Directors during the year and information regarding the attendance of its members:

Number of meetings with the attendance of at least 80% of the directors	8
% personal attendance of total votes during the year	100.00
Number of meetings with all directors attending in person or by proxy with specific instructions	8
% of votes cast in person and by proxy with specific instructions of all votes cast during the year	100.00

Remarks
The attendance of each and every one of the directors at the meetings of the Board of Directors and its committees during financial year 2018 is detailed in the Annex to this Report.

C.1.27 State if the individual and consolidated financial statements submitted to the Board for preparation were previously certified:

Yes X **No □**

Identify, if applicable, the person/s who certified the individual and consolidated financial statements of the company for preparation by the Board:

Name	**Position**
Mr José Ignacio Sánchez Galán	Chairman & CEO
Mr Juan Carlos Rebollo Liceaga	Administration and Control Director

Remarks
The Iberdrola Group has established a certification process by which those responsible for financial information in the different areas of the Company certify that: (i) the financial information they deliver to Iberdrola for purposes of consolidation does not contain any material errors or omissions and provides a fair view of the results and the financial condition within their area of responsibility, and (ii) they are responsible for establishing the ICFRS within their area of responsibility and have found, upon evaluation, that the system is effective. The text of these

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certifications is inspired by the form of certification established in section 302 of the U.S. Sarbanes-Oxley Act. The culmination of the process is a joint certification that the chairman & CEO and the director of Administration and Control submit to the Board of Directors. The process is carried out by means of electronic signature in a software application which manages the areas of responsibility and time periods and which serves as a repository of all the documentation generated, allowing for periodic review by the supervision and control bodies of the Group.

C.1.28 Explain any measures established by the Board of Directors to prevent the individual and consolidated financial statements prepared by the Board from being submitted to the General Shareholders' Meeting with a qualified audit opinion.

The Regulations of the Audit and Risk Supervision Committee provide that it shall have the following duties, among others: - Supervise the process of preparing and presenting regulated financial information relating to the Company, both individual and consolidated with its subsidiaries, reviewing compliance with legal requirements, the proper delimitation of the scope of consolidation and the correct application of accounting standards, and submit recommendations or proposals to the Board of Directors to safeguard the integrity thereof. - Establish appropriate relationships with the statutory auditor to receive information regarding matters that might entail a threat to the independence thereof, for examination by the Committee, and any other information related to the development of the audit procedure, as well as such other communications as are provided for in the laws on statutory audit and in other legal provisions on auditing. The Committee must receive written confirmation from the statutory auditors on an annual basis of their independence in relation to the Company or entities directly or indirectly related thereto, as well as a detailed breakdown of information on additional services of any kind provided to and the corresponding fees received from such entities by such statutory auditors or by persons or entities related thereto, pursuant to the legal provisions governing the auditing of accounts. - On an annual basis, prior to the audit report, issue a report that will express an opinion on whether the independence of the statutory auditors is compromised, which shall be made available to the shareholders upon the terms set forth in the Regulations for the General Shareholders' Meeting. This report shall contain a reasoned assessment of the provision of each and every one of the additional services other than the legal audit referred to in the preceding point, considered individually and as a whole, and in relation to the rules on independence or the legal provisions regarding the statutory audit. - Report in advance to the Board of Directors regarding the financial information that the Company must disclose on a regular basis because of its status as a listed company; the Committee shall make sure that the interim accounts are prepared in accordance with the same accounting standards as the annual accounts and, for such purpose, it shall consider the appropriateness of a limited review by the statutory auditor. - Review the contents of the audit reports on the accounts and of the	

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reports on the limited review of interim accounts, if any, as well as other mandatory reports to be prepared by the statutory auditor, prior to the issuance thereof, in order to avoid qualified reports. - Evaluate the results of each audit of accounts and supervise the responses of the senior officers to the recommendations thereof. - Act as a channel of communication between the Board of Directors and the statutory auditors, causing them to hold an annual meeting with the Board of Directors to report thereto on the work performed and the accounting status and risks of the Company. In turn, the Regulations of the Board of Directors provide that: - The Board of Directors shall meet with the statutory auditors at least once per year in order to receive information regarding the work performed and regarding the accounting status and risks of the Company. - The Board of Directors shall use its best efforts to definitively prepare the accounts such that there is no room for qualifications by the statutory auditors. However, if the Board of Directors believes that its opinion must prevail, it shall provide a public explanation of the content and scope of the discrepancy. Pursuant to the above-cited rules, the Audit and Risk Supervision Committee reports on the economic/financial information of the Company throughout the financial year and prior to the approval thereof by the Board of Directors and its submission to the National Securities Market Commission (*Comisión Nacional del Mercado de Valores*). The reports of the Committee, which the chair thereof presents to the full Board of Directors, are mainly intended to disclose such aspects, if any, as may give rise to qualifications in the audit report of Iberdrola and its consolidated group, making the appropriate recommendations to avoid any such qualifications. Accordingly, the Committee submitted to the Board of Directors the following reports regarding the annual and half-yearly financial reports and the interim management statements of the Company for financial year 2018: - Report dated 23 April 2018 on the Interim Management Statement for the first quarter of 2018. - Report dated 23 July 2018 on the economic/financial information for the first half of 2018. - Report dated 22 October 2018 on the Interim Management Statement for the third quarter of 2018. - Report dated 18 February 2019 regarding the annual accounts of Iberdrola and its consolidated group for financial year 2018. As disclosed in the information about Iberdrola posted on the website of the National Securities Market Commission (www.cnmv.es), the audit reports on the individual and consolidated annual accounts prepared by the Board of Directors have historically been issued without qualifications.	

C.1.29 Is the secretary of the Board also a director?

Yes □ **No** x

If the secretary is not a director, please complete the following table:

Name of the secretary	Representative
Mr Julián Martínez-Simancas	

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Remarks

C.1.30 State, if any, the concrete measures established by the entity to ensure the independence of its external auditors, financial analysts, investment banks, and rating agencies, including how legal provisions have been implemented in practice.

MECHANISMS TO PRESERVE THE INDEPENDENCE OF THE AUDITOR.
The Regulations of the Audit and Risk Supervision Committee and the Statutory Auditor Contracting and Relations Policy, contained within the Company's Corporate Governance System, provide that:

- The relations of the Committee with the statutory auditor of the Company shall respect the independence thereof, in accordance with the provisions of the Corporate Governance System.
- The Audit and Risk Supervision Committee must discuss with the statutory auditor any circumstance that might give rise to a threat to the independence thereof and evaluate the effectiveness of the protective measures adopted, as well as understand and evaluate the set of relationships between the Iberdrola group and the statutory auditor and its network that entail the provision of non-audit services or any other type of relationship.
- The Committee shall ask the statutory auditor to provide an annual certification of independence of the firm as a whole and of the members of the team participating in the process of auditing the annual accounts of the Iberdrola group from the Company or entities directly or indirectly connected thereto, as well as a detailed breakdown of information regarding additional services (other than auditing) of any kind provided by the statutory auditor or by persons connected thereto, pursuant to the law on statutory audit. In addition, the statutory auditor shall include in such certification a statement in which it reports on compliance with the application of the internal procedures of quality assurance and protection of independence that have been implemented.
- The statutory auditor shall provide to the Committee annual information regarding the profiles and the track record of the persons making up the audit teams of the Company and of the Iberdrola group, stating the changes in the composition of such teams compared to the immediately preceding financial year.
- On an annual basis and prior to the issuance of the audit report, the Committee shall issue a report setting forth an opinion on the independence of the statutory auditor. This report must contain an assessment of the possible impact on the independence of the statutory auditor of each and every one of the additional services (other than the legal

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audit) of any kind provided by the statutory auditor or by persons connected thereto, considered individually and as a whole.

- The Committee shall monitor the quality assurance and independence safeguarding internal procedures implemented by the statutory auditor.
- The Committee shall not submit a proposal to the Board of Directors, and the Board of Directors shall not submit a proposal to the shareholders at the General Shareholders' Meeting, for appointment as statutory auditor of firms for which it has evidence that they are affected by any circumstance of lack of independence, prohibition or disqualification pursuant to the legal provisions governing the audit of accounts, and in any event if the fees that the Company intends to pay it for any and all services are greater than five percent of its total domestic income during the last financial year.
- The Committee shall receive information on the hiring by any of the companies of the Iberdrola group of professionals coming from the statutory auditor.

The Audit and Risk Supervision Committee has also established a restrictive policy on the services provided by the statutory auditor to the Iberdrola group that are susceptible to being authorised.
As regards 2018:

- Iberdrola's statutory auditor, "KPMG Auditores, S.L" ("KPMG") appeared on fifteen occasions before the Audit and Risk Supervision Committee and on one occasion before the Board of Directors to report on various matters relating to the audit process. During these appearances, the statutory auditor did not report issues that might put its independence at risk.
- On 19 February 2018 KPMG sent to the Committee written confirmation of its independence with regard to the audit of the economic/financial information for financial year 2017.
- On 19 July 2018 KPMG sent to the Committee written confirmation of its independence with regard to the limited review of the economic/financial information until 30 June 2018.
- On 18 February 2019 KPMG sent to the Committee written confirmation of its independence with regard to the audit of the economic/financial information for financial year 2018.
- In the letters described above, the statutory auditor represents that it has implemented internal policies and procedures designed to reasonably ensure that KPMG and its personnel maintain their independence when so required by applicable legal provisions.
- The hiring of the statutory auditor for services other than auditing is approved in advance by the Committee. Furthermore, prior to approval thereof, the director of the Audit Area, and if necessary the audit committee and internal audit division of the group company receiving the services, must state that the provision thereof does not generate threats to the independence of the statutory

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auditor. In requests for services directed by the Committee, the statutory auditor must confirm that there are no restrictions on independence for the performance of the work in question.

- In its statement of independence of 18 February 2019, KPMG reported that it had no evidence that any member of the teams participating in the audit of the financial statements for financial year 2018 had joined as an employee of Iberdrola or of its related companies.
- On 18 February 2019 the Committee submitted its report to the Board of Directors regarding the independence of the Company's statutory auditor. The Committee concluded that the statutory auditor performed its audit work with independence from Iberdrola or entities related thereto.

MECHANISMS TO PRESERVE THE INDEPENDENCE OF FINANCIAL ANALYSTS, INVESTMENT BANKS, AND RATING AGENCIES.

The principles which form the basis of the relations of the Company with financial analysts, investment banks, and rating agencies are contained in the Policy regarding Communication and Contacts with Shareholders, Institutional Investors, and Proxy Advisors and are transparency, non-discrimination, truthfulness, and trustworthiness of the information supplied. The Finance and Resource Division, through the Investor Relations Division, manages their requests for information and requests submitted by institutional or retail investors (in the case of retail investors, through the Office of the Shareholder). The Finance and Resource Division gives mandates to investment banks. The Development Division gives the appropriate advisory mandates to investment banks within the scope of its activities, in coordination with the Finance and Resource Division.

The independence of financial analysts is protected by the Investor Relations Division, which ensures the objective, fair, and non-discriminatory treatment thereof.

To actualise the principles of transparency and non-discrimination, always in strict compliance with regulations regarding the Securities Market, the Company has a number of communication channels:

- Personalised assistance for analysts, investors, and rating agencies.
- Publication of the information relating to quarterly results and other specific events, such as those relating to the submission of the Business Prospects or to corporate transactions.
- E-mail through the corporate website (accionistas@iberdrola.com) and a toll-free line for shareholders (+34 900 100 019).
- In-person and broadcasted presentations.
- Release of announcements and news.
- Visits to Company facilities.

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C.1.31 State whether the company changed its external auditor during the year. If so, please identify the incoming and outgoing auditor:

(ii) Yes ☐
No x

Outgoing auditor	Incoming auditor

Remarks

If there were any disagreements with the outgoing auditor, please provide an explanation:

Yes ☐ **No x**

Explanation of disagreements

C.1.32 State whether the audit firm provides any non-audit services to the company and/or its Group and, if so, the fees paid and the corresponding percentage of total fees invoiced to the company and/or Group:

Yes ☐ **No** X

	Company	Group Companies	Total
Amount invoiced for non-audit services (thousand euros)			
Amount invoiced for non-audit services/Amount for audit work (in %)			

Remarks

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C.1.33 State whether the auditors' report on the financial statements for the preceding year contains a qualified opinion or reservations. If so, please explain the reasons given to the shareholders at the General Meeting by the chairman of the audit committee to explain the content and extent of the aforementioned qualified opinion or reservations.

Yes □ **No X**

Explanation of reasons

C.1.34 State the number of consecutive years the current audit firm has been auditing the financial statements of the company and/or group. Furthermore, state the number of years audited by the current audit firm as a percentage of the total number of years that the financial statements have been audited:

	Individual	Consolidated
Number of consecutive years	2	2

	Individual	Consolidated
Number of years audited by the current audit firm/number of fiscal years the company or its group has been audited (by %)	7.69%	7.69%

Remarks

C.1.35 State whether there is a procedure whereby directors have the information necessary to prepare the meetings of the governing bodies with sufficient time and provide details if applicable:

Yes x **No** □

Explanation of procedure
Section 16 of the General Corporate Governance Policy provides that "the Company has a programme to provide directors with information and updates in response to the need for

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professionalisation, diversification and qualification of the Board of Directors. In order to improve their knowledge of the group, presentations are made to the directors regarding the businesses thereof. In addition, a portion of each meeting of the Board of Directors tends to be dedicated to a presentation on economic, legal or political/social issues of importance to the group. The directors have access to a specific application, the directors' website, that facilitates performance of their duties and the exercise of their right to receive information. This website includes information deemed appropriate for preparation of the meetings of the Board of Directors and the committees thereof in accordance with the agenda, as well as training materials intended for the directors and presentations made to the Board of Directors. In addition, the directors shall be given access through the directors' website to the minutes of the meetings of the Board of Directors and the committees thereof, as well as to any other information that the Board of Directors decides to include". Pursuant to the Regulations of the Board of Directors, there shall be an inclusion on the directors' website of such information as is deemed appropriate for preparation of the meetings of the Board of Directors and the committees thereof, in accordance with the agenda included in the calls to meeting, as well as access to materials relating to director training programmes. In addition, the Regulations of the Board of Directors provide that a director is specifically required to "properly prepare the meetings of the Board of Directors and, if applicable, the meetings of the Executive Committee or of the committees of which the director is a member, for which purposes the director must diligently become apprised of the running of the Company and the matters to be discussed at such meetings".

C.1.36 State whether the company has established rules whereby directors must provide information regarding and, if applicable, resign, in circumstances that may damage the company's standing and reputation. If so, provide details:

Yes x **No □**

Explain the rules
The General Corporate Governance Policy sets out the obligations and duties of the directors, including, as a statement of the duty of loyalty, the duty to submit their resignation to the Board of Directors in the event of supervening disqualification, lack of competence, prohibition against holding office as a director, and other instances

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provided for in the Company's Corporate Governance System.

As provided by the Regulations of the Board of Directors, the director must inform the Company of any judicial, administrative or other proceedings instituted against the director which, because of their significance or characteristics, may seriously reflect upon the reputation of the Company. In particular, if a director is subject to investigation or an order for further criminal prosecution upon indictment, or if an order for the commencement of an oral trial will be issued against the director for the commission of any of the crimes contemplated in section 213 of the Companies Act, such director shall give notice thereof to the Company, through the chairman of the Board of Directors. In such instance, the Board of Directors shall review this circumstance as soon as practicable and, following a report of the Appointments Committee, shall adopt the decisions it deems fit taking into account the interests of the Company.

In addition, the director must inform the Company of any fact or event that may be relevant to the holding of office as a director.

Directors must also submit their resignation to the Board of Directors and formally resign from their position in the events set forth in the Regulations of this body, particularly:

a) When, due to supervening circumstances, they are involved in any circumstance of disqualification or prohibition provided by law or the Corporate Governance System.
b) When, as a result of any acts or conduct attributable to the director, serious damage is caused to the value or reputation of the Company or there is a risk of criminal liability for the Company or any of the companies of the Group.
c) When they cease to deserve the respectability or to have the capability, expertise, competence, availability, or commitment to their duties required to be a director of the Company.
d) In particular, when the activities carried out by the director, or the companies directly or indirectly controlled by the director, or the individuals or legal entities that are shareholders of or related to any of them, or the individual representing a corporate director, may compromise the competence of the director.
e) When they are seriously reprimanded by the Board of Directors because they have breached any of their duties as directors, by resolution adopted by a two-thirds majority of the directors.
f) When their continuance in office on the Board of Directors may for any reason, either directly, indirectly, or through persons related thereto, jeopardise the faithful and diligent performance of their duties in furtherance of the corporate interest.
g) When the reasons why the director was appointed cease to exist and, in particular, in the case of proprietary directors, when the shareholder or shareholders who proposed,

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requested, or decided the appointment thereof totally or partially sell or transfer their equity interest, with the result that such equity interest ceases to be significant or sufficient to justify the appointment.

h) When an independent director unexpectedly falls under supervening circumstances that prevent the director from being considered as such pursuant to the provisions of law.

In any of the aforementioned instances, the Board of Directors shall request the director to resign from such position and, if applicable, shall propose the director's removal from office to the shareholders at the General Shareholders' Meeting.

By way of exception, the resignation provisions set forth in letters f) and g) above shall not apply if the Board of Directors believes that there are reasons that justify the director's continuance in office, after a report of the Appointments Committee, without prejudice to the effect that the new supervening circumstances may have on the classification of the director.

C.1.37 State whether any member of the Board of Directors has notified the company that he or she has been tried or notified that legal proceedings have been filed against him or her, for any offences described in Article 213 of the LSC:

Yes X **No □**

Name of director	Criminal charge	Remarks
Mr Ángel Jesús Acebes Paniagua	Alleged crime of false accounting as an independent director of Bankia, S.A.	Commencement of oral criminal trial ordered against various directors of Bankia, S.A., including Mr Acebes Paniagua, on 17 November 2017 by Central Investigative Court (*Juzgado Central de Instrucción*) number 4 of the National High Court (*Audiencia Nacional*).

State whether the Board of Directors has examined the case. If so, explain in detail the decision taken as to whether the director in question should continue in his or her post or, if applicable, describe any actions taken by the Board up to the date of this report, or which it intends to take.

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(iii) Yes X
No □

Decision/Action taken	Explanation
It was considered that Mr Ángel Acebes met the criteria set out in the Regulations of the Board of Directors to continue holding the position of director.	Both the Office of the Public Prosecutor (*Ministerio Fiscal*) and the Fund for the Orderly Restructuring of the Banking Sector (*Fondo de Reestructuración Ordenada Bancaria*) (FROB) requested dismissal of the case against him.

C.1.38 Detail any material agreements entered into by the company that come into force, are modified or are terminated in the event of a change in control of the company following a public takeover bid, and their effects.

Not applicable

C.1.39 Identify individually for directors, and generally in other cases, and provide detail of any agreements made between the company and its directors, officers or employees providing severance payments or golden parachutes in the event of resignation or unfair dismissal or termination of employment due to a takeover bid or any other type of transaction.

Number of beneficiaries	31
Type of beneficiary	Executive directors and officers
Description of agreement	1. EXECUTIVE DIRECTORS Pursuant to the provisions of his contract, the chairman & CEO has the right to receive a severance payment in the event of termination of his relationship with the Company, provided that such termination is not the consequence of a breach attributable thereto or exclusively due to his own decision to withdraw. The amount of the severance payment is three times annual salary. In the case of the Business CEO, the severance is two times annual salary. Furthermore, in consideration for the executive directors' non-compete commitment for a period of between one and two years, they shall be entitled to severance pay equal to the remuneration for such period.

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	2. OFFICERS Some employment contracts with officers of Iberdrola include specific severance clauses. The purpose of such clauses is to obtain an effective and sufficient level of loyalty for the management of the Company and thus avoid a loss of experience and knowledge that might jeopardise the achievement of strategic objectives, more so for positions deemed to decisively contribute to the creation of value due to the responsibilities entailed thereby. The amount of the severance pay is determined based on length of service and the reasons for the officer's withdrawal from office, up to a maximum of five times annual salary. Notwithstanding the foregoing, the Senior Officer Remuneration Policy provides since 2011 that the limit on the amount of the severance pay under new contracts with senior officers shall be two times their annual salary.

State if these contracts have been communicated to and/or approved by management bodies of the company or of the Group. If they have, specify the procedures, events and nature of the bodies responsible for their approval or for communicating this:

	Board of Directors	**General Shareholders' Meeting**
Body authorising the severance clauses	X	

	YES	**NO**
Are these clauses notified to the General Shareholders' Meeting?	X	

Remarks

C.2 **Committees of the Board of Directors**

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C.2.1 Provide details of all committees of the Board of Directors, their membership, and the proportion of executive, proprietary, independent and other external directors that comprise them:

EXECUTIVE COMMITTEE

Name	Position	Category
Mr José Ignacio Sánchez Galán	Chair	Executive
Ms Inés Macho Stadler	Member	Other external
Mr Ángel Jesús Acebes Paniagua	Member	Independent
Mr Manuel Moreu Munaiz	Member	Independent
Ms Samantha Barber	Member	Independent

% of executive directors	20
% of independent directors	60
% of other external directors	20
Remarks	

Explain the duties exercised by this committee, other than those that have already been described in Section C.1.10, and describe the rules and procedures it follows for its organisation and function. For each one of these functions, briefly describe its most important actions during the year and how it has exercised in practice each of the functions attributed thereto by law, the Articles of Association or other corporate resolutions.

The Executive Committee is assigned all the powers of the Board of Directors, except for those powers that may not be delegated pursuant to legal or by-law restrictions. The chairman of the Board of Directors and the chief executive officer, if any, are members in all cases. The secretary of the Board of Directors acts as secretary of the Committee.

The Executive Committee shall meet as many times as deemed necessary by the chair thereof. It shall also meet when so requested by a minimum of two of the directors forming part thereof.

Resolutions of the Committee shall be adopted by absolute majority of its members who are present at the meeting in person or by proxy.

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The duties of this Committee consist of making proposals to the Board of Directors regarding strategic decisions, investments and divestitures that are significant for the Company or the group, assessing their conformity to the budget and the strategic plans and analysing and monitoring business risks. It also provides assistance to the Board of Directors in the ongoing supervision of compliance with the principles governing the organisation and coordination of the group and the strategic goals thereof.

The most relevant activities performed during the financial year by this Committee are described in the Activities Report of the Board of Directors and of the Committees thereof, available at www.iberdrola.com.

AUDIT AND RISK SUPERVISION COMMITTEE

Name	Position	Category
Ms Georgina Kessel Martínez	Chair	Independent
Ms Denise Holt	Member	Independent
Mr José W. Fernández	Member	Independent
Mr Xabier Sagredo Ormaza	Member	Other external

% of independent directors	75.00
% of other external directors	25.00

Remarks

Explain the duties exercised by this committee, describe the rules and procedures it follows for its organisation and function. For each one of these functions, briefly describe its most important actions during the year and how it has exercise in practice each of the functions attributed thereto by law, in the Articles of Association or other corporate resolutions.

The Audit and Risk Supervision Committee is an internal informational and consultative body.

A majority of its members shall be independent, and at least one of them shall be appointed taking into account the knowledge and experience thereof in the areas of accounting, audit, and risk management.

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The Board of Directors shall appoint a chair of the Committee from among the independent directors forming part thereof, as well as its secretary, who need not be a director.

The members of the Audit and Risk Supervision Committee shall be appointed for a maximum term of four years and may be re-elected on one or more occasions for terms of the same maximum length. The chair shall hold office for a maximum period of four years, after which period the director who has held office as such may not be re-elected until the passage of at least one year from ceasing to act as such.

A valid quorum shall be established with the attendance at the meeting, in person or by proxy, of a majority of its members, and resolutions shall be adopted by an absolute majority of votes of the members present at the meeting in person or by proxy.

The duties of the Committee are provided and are further developed in the Regulations of the Board of Directors, as well as in the Regulations of the Audit and Risk Supervision Committee.

The most relevant activities performed during the financial year by this Committee are described in the Activities Report of the Board of Directors and of the Committees thereof, available at www.iberdrola.com.

Identify the directors who are member of the audit committee and have been appointed taking into account their knowledge and experience in accounting or audit matters, or both, and state the date that the Chairperson of this committee was appointed.

Name of directors with experience	Ms Georgina Kessel Martínez
Date of appointment of the chairperson	17/12/2015

Remarks

APPOINTMENTS COMMITTEE

Name	Position	Category
Ms María Helena Antolín Raybaud	Chair	Independent

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Mr Iñigo Victor de Oriol Ibarra	Member	Other external
Mr Ángel Jesús Acebes Paniagua	Member	Independent

% of independent directors	66.67
% of other external directors	33.33

Remarks

Explain the duties exercised by this committee, describe the rules and procedures it follows for its organisation and function. For each one of these functions, briefly describe its most important actions during the year and how it has exercise in practice each of the functions attributed thereto by law, in the Articles of Association or other corporate resolutions.

The Appointments Committee is an internal informational and consultative body.

A majority of the members of the Appointments Committee must be classified as independent. The Board also appoints the chair thereof from among the independent directors forming part thereof, as well as its secretary, who need not be a director.

The members of the Appointments Committee shall be appointed for a maximum term of four years and may be re-elected on one or more occasions for terms of the same maximum length.

A valid quorum shall be established with the attendance at the meeting, in person or by proxy, of a majority of its members, and resolutions shall be adopted by an absolute majority of votes of the members present at the meeting in person or by proxy.

The duties of the Committee are further developed in the Regulations of the Board of Directors, as well as in the Regulations of the Appointments Committee.

The most relevant activities performed during the financial year by this Committee are described in the Activities Report of the Board of Directors and of the Committees thereof, available at www.iberdrola.com.

REMUNERATION COMMITTEE

Name	Position	Category

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Mr Juan Manuel González Serna	Chair	Independent
Ms Inés Macho Stadler	Member	Other external
Mr Manuel Moreu Munaiz	Member	Independent

% of independent directors	66.67
% of other external directors	33.33

Remarks

Explain the duties exercised by this committee, describe the rules and procedures it follows for its organisation and function. For each one of these functions, briefly describe its most important actions during the year and how it has exercised in practice each of the functions attributed thereto by law, the Articles of Association or other corporate resolutions.

The Remuneration Committee is an internal informational and consultative body.

A majority of the members of the Remuneration Committee must be classified as independent. The Board also appoints the chair thereof from among the independent directors forming part thereof, as well as its secretary, who need not be a director.

The members of the Remuneration Committee shall be appointed for a maximum term of four years and may be re-elected on one or more occasions for terms of the same maximum length.

A valid quorum shall be established with the attendance at the meeting, in person or by proxy, of a majority of its members, and resolutions shall be adopted by an absolute majority of votes of the members present at the meeting in person or by proxy.

The duties of the Committee are further developed in the Regulations of the Board of Directors, as well as in the Regulations of the Remuneration Committee.

The most relevant activities performed during the financial year by this Committee are described in the Activities Report of the Board of Directors and of the Committees thereof, available at www.iberdrola.com.

SUSTAINABLE DEVELOPMENT COMMITTEE

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Name	Position	Category
Ms Samantha Barber	Chair	Independent
Mr Anthony L. Gardner	Member	Independent
Mr Iñigo Victor de Oriol Ibarra	Member	Other external

% of independent directors	66.67
% of other external directors	33.33

Remarks

Explain the duties exercised by this committee, describe the rules and procedures it follows for its organisation and function. For each one of these functions, briefly describe its most important actions during the year and how it has exercised in practice each of the functions attributed thereto by law, the Articles of Association or other corporate resolutions.

The Sustainable Development Committee is an internal informational and consultative body.

A majority of the members of the Sustainable Development Committee must be classified as independent. The Board of Directors shall appoint a chair of the Committee from among the members forming part thereof, as well as its secretary, who need not be a director.

The members of the Sustainable Development Committee shall be appointed for a maximum term of four years and may be re-elected on one or more occasions for terms of the same maximum length.

A valid quorum shall be established with the attendance at the meeting, in person or by proxy, of a majority of its members, and resolutions shall be adopted by an absolute majority of votes of the members present at the meeting in person or by proxy.

The duties of the Committee are set out in the Regulations of the Board of Directors, as well as in the Regulations of the Sustainable Development Committee.

The most relevant activities performed during the financial year by this Committee are described in the Activities Report of the Board of Directors and of the Committees thereof, available at www.iberdrola.com.

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C.2.2 Complete the following table with information regarding the number of female directors who were members of Board committees at the close of the past four years:

	Number of female directors			
	Year t Number %	Year t-1 Number %	Year t-2 Number %	Year t-3 Number %
Executive Committee	2/40	2/40	1/20	1/20
Audit and Risk Supervision Committee	2/50	2/50	2/50	2/50
Appointments Committee	1/33	1/33	1/33	1/33
Remuneration Committee	1/33	1/33	1/33	1/33
Sustainable Development Committee	1/33	1/33	1/33	1/33

Remarks

C.2.3 State, where applicable, the existence of any regulations governing Board committees, where these regulations may be found, and any amendments made to them during the year. Also state whether any annual reports on the activities of each committee have been voluntarily prepared.

Each of the Committees has its own regulations, available at www.iberdrola.com, where one can also find the Activities Report of the Board of Directors and of the Committees thereof. The main amendments to their regulations during the year were the following:

- At the meeting of the Board of Directors held on 23 October 2018, the name of the Corporate Social Responsibility Committee was changed to Sustainable Development Committee. The Regulations of the Corporate Social Responsibility Committee were therefore amended to be called Regulations of the Sustainable Development Committee. The change included the strengthening of the powers of the committee with respect to monitoring the Iberdrola group's contribution to the achievement of the Sustainable Development Goals (SDGs) approved by the United Nations.

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- At the same meeting, there was an amendment of the Regulations of the Appointments Committee in order to expand the powers of the Appointments Committee regarding talent management and promotion, mainly in relation to the executive directors and senior management. This committee was also assigned the duty of informing itself regarding the implementation of measures adopted at the Group level to recruit, retain, manage and promote talent, and particularly regarding the programmes for training and monitoring officers.

- Finally, the Regulations of the Audit and Risk Supervision Committee have been successively amended to clarify the powers of the Audit and Risk Supervision Committee with respect to the monitoring of investigations regarding financial and accounting improprieties, as well as the approval of the Basic Internal Audit Regulations and the General Framework for Relations of Coordination and Information among the Audit Committees of Iberdrola, S.A. and its group.

D RELATED-PARTY AND INTRAGROUP TRANSACTIONS

D.1 Describe, if applicable, the procedure and competent bodies for approval of related-party and intragroup transactions.

The Regulations of the Board of Directors provide that:

1. Any transaction by the Company or the companies forming part of its Group with directors, with shareholders that directly or indirectly own a shareholding interest that is equal to or greater than that legally regarded as significant at any time or that have proposed or caused the appointment of any of the directors of the Company, or with the respective related persons ("Related-Party Transactions"), shall be subject to the approval of the Board of Directors, or in urgent cases, of the Executive Committee, following a report from the Appointments Committee.
2. In the event that authorisation has been granted by the Executive Committee due to the urgency of the matter, the Executive Committee shall give notice thereof to the Board of Directors at its next meeting in order for it to be ratified.
3. The authorisation of Related-Party Transactions must be approved by the shareholders at the General Shareholders' Meeting in the instances provided by law, and particularly if it relates to a transaction having a value of more than ten per cent of the corporate assets.
4. As an exception, Related-Party Transactions with any of the listed companies of the Group (as is the case of Avangrid, Inc.) or with the subsidiaries thereof shall not be subject to the provisions of article 43, provided that they have corporate governance rules similar to those of the Company.
5. The execution of a Related-Party Transaction puts the director engaging in said transaction or who is related to the person engaging in the transaction in a conflict of interest, for which reason the provisions of article 39 of the Regulations of the Board of Directors shall apply, to the

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extent applicable.

6. The Board of Directors, through the Appointments Committee, shall ensure that Related-Party Transactions are carried out under arm's length conditions and with due observance of the principle of equal treatment of shareholders in the same situation. In the case of transactions to be carried out by companies of the Group, the scope of authorisation of the Board of Directors, or that of the Executive Committee, if applicable, referred to in the preceding sections, shall be limited to the verification of compliance with such particulars.

7. In the case of customary and recurring Related-Party Transactions in the ordinary course of business, it shall be sufficient for the Board of Directors to give prior generic approval of the kind of transaction and of the conditions for performance thereof, following a report from the Appointments Committee.

8. If a Related-Party Transaction entails the successive performance of different transactions, of which the second and subsequent transactions are mere acts of execution of the first transaction, the provisions of article 43 shall only apply to the first transaction carried out.

9. The authorisation shall not be required in connection with transactions that simultaneously satisfy the following three conditions: that they are conducted under contracts whose terms and conditions are standardised and apply on an across-the-board basis to a large number of customers; that they are conducted at prices or rates established generally by the party acting as supplier of the goods or services in question, and that the amount thereof does not exceed one per cent of the consolidated annual income of the Group.

10. The Company shall report Related-Party Transactions in the Half-Yearly Financial Report and in the Annual Corporate Governance Report, in the cases and to the extent provided by law. Likewise, the Company shall include in the notes accompanying the annual accounts information regarding the transactions by the Company or by the companies of the Group with the directors and with those persons who act for the account of the latter when such transactions are conducted other than in the ordinary course of the Company's business or other than under normal arm's length conditions.

    To this end, the directors must give written notice to the secretary of the Board of Directors, on a semi-annual basis, within the first week of January and July of each year, regarding the Related-Party Transactions that they have engaged in. If they are not carried out, the directors shall so report. The secretary of the Board of Directors shall send a notice to the directors on a semi-annual basis requesting the appropriate information that must be sent to the Company.

11. The notice must include the following information: the nature of the transaction; the date on which the transaction originated; the conditions and periods for payment; the name of the person who carried out the transaction and the relationship, if any, with the director; the amount of the transaction; and other aspects, such as pricing policies, guarantees given and received, and any other feature of the transactions that allows for a proper assessment thereof, particularly such information as allows for verification that it has been carried out on arm's length conditions and in compliance with the principle of equal treatment.

12. The secretary of the Board of Directors shall prepare a register of Related-Party Transactions. The information set forth in such register shall be

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made available to the Compliance Unit when it so requests, and shall also periodically be made available to the Audit and Risk Supervision Committee through the Management of the Internal Audit Area.

D.2 Describe any transactions which are significant, either because of the amount involved or subject matter, entered into between the company or entities within its group and the company's significant shareholders:

Name of significant shareholder	Name of company or entity within the group	Nature of the relationship	Type of transaction	Amount (thousand euros)
QATAR INVESTMENT AUTHORITY	IBERDROLA, S.A.	Corporate	Dividends and other distributed profits	2,766
QATAR INVESTMENT AUTHORITY	IBERDROLA Group	Corporate	Other	344

Remarks
Transactions by shareholders exercising a significant influence on participation in the entity's financial and operating decisions, with significant influence being understood as having a member of the Board of Directors, are deemed to be related-party transactions. Shareholders who are able to exercise the proportional representation system due to their interest in the capital of the Company are also considered to have such influence. As of the date of this report, only Qatar Investment Authority meets this condition, for which reason the amounts reflected in the period refer to transactions with this shareholder. The amounts set forth as "profits and other dividends paid" correspond to the cash dividend distributed by the Company and to the free-of-charge allocation rights stemming from the two increases in share capital by means of a scrip issue approved by the shareholders at the General Shareholders' Meetings, which were sold to the Company at a guaranteed fixed price pursuant to the terms and conditions of such increases.

D.3. Describe any transactions which are significant, either because of the amount involved or subject matter, entered into between the company or entities within its group and the directors or officers of the company:

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Name of director or manager	Name of the related party	Relationship	Type of transaction	Amount (thousand euros)

Remarks

D.4 Report any material transactions carried out by the company with other entities belonging to the same group, provided that these are not eliminated in the preparation of the consolidated financial statements and do not form part of the company's ordinary business activities in terms of their purpose and conditions.
In any event, note any intragroup transaction conducted with entities established in countries or territories which are considered tax havens:

Name of entity within the group	Brief description of the transaction	Amount (thousand euros)

Remarks
Transactions with subsidiaries and companies in which the Company has an interest that have not been eliminated in the process of consolidation were made in the ordinary course of business of the Company, were carried out under arm's-length conditions, and are of little significance to accurately reflect the assets, financial condition and results of operations of the Company.

D.5 Describe significant transactions conducted with other related parties that have not been reported in the previous sections.

Name of the related party	Brief description of the transaction	Amount (thousand euros)
GAMESA GROUP	ACQUISITION OF ASSETS	218,602
GAMESA GROUP	PROCUREMENT	1,702
GAMESA GROUP	RECEIPT OF SERVICES	37,602

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GAMESA GROUP	SALES	1,376

Remarks

D.6 Describe the mechanisms in place to detect, determine and resolve potential conflicts of interest between the company and/or its group and its directors, senior management or significant shareholders.

Pursuant to the Regulations of the Board of Directors, a conflict of interest shall be deemed to exist in those situations provided by law, particularly when the interests of the director, either for their own or another's account, directly or indirectly conflict with the interest of the Company or of companies within the Group and their duties to the Company. An interest of a director shall exist when a matter affects the director or a person related thereto or, in the case of a proprietary director, when it also affects the shareholder or shareholders that proposed or caused the appointment thereof or persons directly or indirectly related thereto.

Such article contains a list of persons deemed to be related for such purposes, distinguishing between an individual and a corporate director.

Conflicts of interest shall be governed by the following rules:

a) Communication: once a director becomes aware of being in a situation of conflict of interest, the director must give written notice of the conflict to the Board of Directors, in the person of the secretary thereof. The secretary shall periodically submit a copy of the notices received to the Appointments Committee, in the person of the secretary thereof.

   The notice shall contain a description of the situation giving rise to the conflict of interest, with a statement as to whether it is a direct conflict or an indirect conflict through a related person, in which case the latter person must be identified.

   The description of the situation must include, as applicable, the subject matter and the principal terms of the transaction or the planned decision, including the amount thereof or an approximate financial assessment thereof. If the situation giving rise to the conflict of interest is a Related-Party Transaction (as this term is defined in article 43), the notice shall also identify the department or person of the Company or of any of the companies of the Group with which the respective contacts were made.

   Any question as to whether a director might be involved in a conflict of interest must be forwarded to the secretary of the Board of Directors, and the director must refrain from taking any action until it is resolved.

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b) Abstention: if the conflict arises from an operation, transaction, or circumstance that requires any kind of operation, report, decision, or acceptance, the director must refrain from taking any action until the Board of Directors studies the case and adopts and informs the director of the appropriate decision.

To this end, the director shall leave the meeting during the deliberation and voting on those matters in which the director is affected by a conflict of interest, and shall not be counted in the number of members attending for purposes of the calculation of a quorum and majorities. At each meeting of the Board of Directors and of the committees thereof, the secretary reminds the directors, before dealing with the agenda, of the abstention rule established in this article.

c) Transparency: whenever required by law, the Company shall report any cases of conflict of interest in which the directors have been involved during the financial year in question and of which the Company is aware by reason of notice given thereto by the director affected by such conflict or by any other means.

However, if the conflict of interest situation is, or may reasonably be expected to be, of a structural and permanent nature, it shall be deemed that there is a loss of the competence required to hold office. In this regard, the Regulations of the Board of Directors provide that a loss of competence is grounds for resignation, removal and cessation of the director.

Conflicts of interest with officers are subject to the same rules of communication, abstention and transparency.

Furthermore, transactions between companies forming part of the group with significant shareholders or shareholders that have proposed the appointment of any of the directors and their respective related persons are also dealt with in the Regulations of the Board of Directors mentioned in section D.1. They must be carried out on arm's-length conditions and be previously approved by the Board of Directors. Thus, approval by the shareholders at a General Shareholders' Meeting shall be required if the value of the transaction exceeds 10% of the corporate assets, and all transactions shall be reported in the Annual Corporate Governance Report and in the Annual Financial Report.

The Code of Ethics, which dedicates a specific section to conflicts of interest, applies to all professionals within the group, regardless of rank.

D.7 Is there more than one company in the group listed in Spain?

Yes □ **No X**

Identify the other companies that are listed in Spain and their relationship to the company:

Identity and relationship with other listed group companies

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State if the respective areas of activity and business relationships between the listed companies have been defined publicly and precisely, as well as between the subsidiary and other members of the group;

Yes □ **No** □

Describe the business relationship between the parent and subsidiary listed companies as well as between the subsidiary and other members of the group

Identify measures taken to resolve potential conflicts of interest between the listed subsidiary and the other group companies:

Measures taken to resolve potential conflicts of interest

E RISK MANAGEMENT AND CONTROL SYSTEMS

E.1. Explain the scope of the company's Risk Management and Control System, including tax compliance risk.

The *General Risk Control and Management Policy* and the *Risk Policies* in further development thereof apply to all companies over which the Company has effective control, within the limits established in the legal provisions applicable to the companies of the Group that carry out Regulated activities in the various countries in which it has a presence.

These policies are implemented by means of a comprehensive risk control and management system, supported by a Risk Committee of the group and based upon a proper definition and allocation of duties and responsibilities at the operating level and upon supporting procedures, methodologies and tools, suitable for the various stages and activities within the system, including:

a) The establishment of a structure of risk policies, guidelines, limits and indicators, as well as of the corresponding mechanisms for the approval, implementation and monitoring thereof, which effectively contributes to risks being managed in accordance with the Company's risk appetite.

b) The ongoing identification of significant risks and threats, taking into account their possible impact on key management objectives and the accounts (including contingent liabilities and other off-balance sheet risks).

c) The analysis of such risks, both at each corporate business or function and taking into account their combined effect on the group as a whole.

d) The measurement and control of risks following homogeneous procedures and standards common to the entire group.

e) The analysis of risks associated with new facilities, as an essential element in risk/return-based decision-making.

f) The maintenance of a system for internal monitoring of compliance with policies, guidelines and limits, by means of appropriate procedures and systems, including the contingency plans needed to mitigate the impact of the materialisation of risks.

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g) The periodic monitoring and control of profit and loss account risks in order to control the volatility of the annual income of the group.

h) The ongoing evaluation of the suitability and efficiency of applying the system and the best practices and recommendations in the area of risks for eventual inclusion thereof in the model.

i) The audit of the system by the Internal Audit Division.

The foregoing is undertaken in accordance with the following main principles of conduct:

a) Integrate the risk/opportunity vision into the Company's management, through a definition of the strategy and the risk appetite and the incorporation of this variable into strategic and operating decisions.

b) Segregate functions, at the operating level, between areas that assume risks and areas responsible for the analysis, control and monitoring of such risks, ensuring an appropriate level of independence between them.

c) Guarantee the proper use of risk-hedging instruments and the maintenance of records thereof as required by applicable law.

d) Inform regulatory agencies and the principal external players, in a transparent fashion, regarding the risks facing the group and the operation of the systems developed to monitor such risks, maintaining suitable channels of communication.

e) Ensure compliance with the Corporate Governance System and the update and continuous improvement thereof, in order to incorporate the best international practices as to transparency and good governance, and implement the monitoring and measurement thereof.

f) Act at all times in compliance with the law and the Company's Corporate Governance System and, specifically, with due observance of the values and standards reflected in the *Code of Ethics* and the principles and good practices reflected in the *Corporate Tax Policy*, under the principle of "zero tolerance" for the commission of unlawful acts and situations of fraud set forth in the *Crime Prevention Policy* and in the *Anti-Corruption and Anti-Fraud Policy*.

The listed country subholding companies (like Avangrid, Inc.) and those with significant interests held by other partners (like Neoenergia, S.A.) have their own risk policies approved by their competent bodies pursuant to their own special framework of strengthened autonomy, which are aligned with those of the group.

At those companies in which the Company has an interest but which do not belong to the group, the Company shall promote principles, guidelines, and risk limits consistent with those established in the *General Risk Control and Management Policy* and in its supplemental *Risk Policies* and shall maintain appropriate channels of information to ensure a proper understanding of risks.

Iberdrola believes that its comprehensive risk control and management system operates on a comprehensive and continuous basis, strengthening such management by business unit or activity, subsidiaries, geographic areas and corporate-level support areas.

E.2. Identify the bodies within the company responsible for creating and executing the Risk Management and Control System, including tax compliance risk.

1. BOARD OF DIRECTORS

In the area within its purview, and with the support of the Audit and Risk Supervision Committee, it must use develop all of its capabilities in order for the significant risks to all the activities and businesses of the group to be adequately identified, measured, managed and controlled, and to establish through the *General Risk Control and Management Policy* the mechanisms and basic principles for appropriate management of the risk/opportunity ratio. By virtue thereof, it defines the risk strategy and profile of the group and approves the *Risk Policies*.

2. EXECUTIVE COMMITTEE

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In order to conform the impact of the risks to the established appetite, the Executive Committee of the Board of Directors, upon the proposal of affected business or corporate divisions and after a report from the group's Risk Committee, annually reviews and, if appropriate, approves the specific guidelines regarding the risk limits provided for in the *Corporate Risk Policies*. In the case of the *Treasury Share Policy*, the Executive Committee can also approve limits additional to those provided for in this policy.

3. AUDIT AND RISK SUPERVISION COMMITTEE.

As a consultative body of the Board of Directors, it has the following powers, among others, relating to the internal risk control and management systems:

- Directly supervise the Corporate Risk Division and maintain an appropriate relationship therewith and with the audit and compliance committees of the other companies of the group.
- Continuously review the internal risk control and management systems, such that the principal risks are properly identified, managed and reported.
- Supervise the effectiveness of the internal risk control and management systems, formulating proposals for improvement.
- Obtain information regarding any significant deficiency in internal control that the statutory auditor detects while carrying out its audit work.
- Ensure that the group's risk control and management system identifies at least:
  - the various risk factors that the Company faces;
  - the establishment and review of the risk map and levels that are deemed acceptable;
  - the means identified in order to mitigate the potential impact any of the identified risks in the event they transpire; and
  - the internal control and information systems to be used in order to control and manage such risks.
- Promote (within the limits of its purview) a culture in which risk is a factor that is taken into account in the decisions of the Company.
- Identify and evaluate emerging risks, like those arising from technological, climactic, social and regulatory risks, as well as existing alert mechanisms, periodically evaluating the effectiveness thereof.
- Receive annual visits from the heads of the businesses of the group in order for them to report on the trends of their respective businesses and the risks associated therewith.
- Report in advance on the risks of the group to be included in the Company's *Annual Corporate Governance Report*.
- Receive information from the Company's tax director regarding the tax standards applied by the Company during the financial year, and particularly regarding the level of compliance with the *Corporate Tax Policy*.

4. BOARDS OF DIRECTORS AND AUDIT AND COMPLIANCE COMMITTEES OF COUNTRY SUBHOLDING AND HEAD OF BUSINESS COMPANIES

The country subholding companies adopt the risk policies of the group and define the application thereof, approving guidelines on specific risk limits based on the nature and particularities of the businesses in each country. The Audit and Compliance Committees of such companies shall report to the Board of Directors on the internal risk control and management systems.

The management decision-making bodies of the head of business companies of each country must approve the specific risk limits applicable to each of them and implement the control systems necessary to ensure compliance therewith.

In the case of the head of real estate business company, Iberdrola Inmobiliaria, S.A. (Sociedad Unipersonal), the Audit and Compliance Committee thereof shall report to the Board of Directors regarding the internal risk control and management systems.

Pursuant to their special framework of strengthened autonomy, Avangrid, Inc. and Neoenergia, S.A. have

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their own risk policies, which are aligned with those of the group.

5. GROUP RISK COMMITTEE

The Risk Committee of the Iberdrola group is a technical committee that is chaired by the CFO and that performs executive duties in the customary management of risks as well as provides advice to the governance bodies of the group.

The committee meets at least once a month, with the participation of the group's Risk Management Directors, the risk directors of the businesses and corporate areas that have such a figure, the Internal Audit Division and the Administration and Control Division.

The committee reviews the evolution of the various risks and issues the *Quarterly Risk Report of the group*, which includes the main risk positions, the report on compliance with the risk limits and indicators, and the update of the key risks map.

The group's Risk Committee is supplemented by the Credit Risk and Market Risk committees, which report to the former, and which meet on a monthly basis to discuss and decide on credit and market (financial and commodities) risks.

E.3. State the primary risks, including tax compliance risks, and those deriving from corruption (with the scope of these risks as set out in Royal Decree Law 18/2017), to the extent that these are significant, which may affect the achievement of business objectives

The group is subject to various risks inherent in the different countries, industries and markets in which it does business and in the activities it carries out, which may prevent it from achieving its objectives and successfully implementing its strategies.

In the section "Principal risks and uncertainties" of the Management Report of the *Annual Financial Report* for financial year 2018, there is a detailed description of the principal risks associated with the activities of the main businesses of the group, as well as the risks of the corporation.

Due to the universal and dynamic nature thereof, the comprehensive risk system allows for the consideration of new risks that could affect the group as a consequence of changes in the environment or revisions of objectives and strategies, as well as updates based on the monitoring, verification, review and supervision activities that are performed on a continuous basis.

Pursuant to the definitions established by the *General Risk Control and Management Policy*, risks at the group level are classified as follows:

a) **Corporate Governance Risks**: the Company accepts the need to achieve the fulfilment of the corporate interest and the sustained maximisation of the economic value of the Company and its long-term success, in accordance with the group's corporate interest, culture and corporate vision, taking into account the legitimate public and private interests that converge in the conduct of all business activities, particularly those of the various Stakeholders and communities and regions in which the Company and its employees act.

b) **Market Risks**: understood as the exposure of the group's results and net worth to changes in prices and other market variables, such as exchange rates, interest rates, commodity prices (electricity, gas, CO_2 emission allowances, other fuel, etc.), prices of financial assets, and others.

c) **Credit Risks**: defined as the possibility that a counterparty fails to perform its contractual obligations, thus causing an economic or financial loss to the group. Counterparties can be end customers, counterparties in financial or energy markets, partners, suppliers or contractors.

d) **Business Risks**: defined as the uncertainty regarding the performance of key variables inherent in the various activities of the group through its businesses, such as the characteristics of demand, weather conditions and the strategies of different players.

e) **Regulatory and Political Risks**: are those arising from regulatory changes made by the various regulators, such as changes in compensation of regulated activities or in the required conditions of supply, or in environmental or tax regulations, including risks relating to political changes that might affect legal security and the legal framework applicable to the businesses of the group in each

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jurisdiction, nationalisation or expropriation of assets, the cancellation of operating licences and the termination of government contracts.

f) **Operational, Technological, Environmental and Social Risks**: are those related to direct or indirect economic losses resulting from external events, inadequate internal procedures, technical failures, human error and/or fraud, including those associated with climate change, information technologies, cybersecurity and the risk of technological obsolescence.

g) **Reputational Risks:** potential negative impact on the value of the Company resulting from conduct on the part of the Company that is below the expectations created among various stakeholders, as defined in the *Stakeholder Relations Policy*.

Iberdrola has a Compliance System made up of a set of substantive rules, formal procedures and significant actions intended to ensure that conduct is in accordance with ethical principles and applicable law, preventing, avoiding and mitigating the risk of conduct that is improper or contrary to ethics or the law by professionals of Iberdrola within the organisation. The bodies and divisions directly entrusted with the implementation and further development thereof also form part of this system.

Elements of the system include the *Code of Ethics* (which is applicable to all professionals of the group, board members and suppliers) and the Compliance Unit, a collective permanent and internal body linked to the Sustainable Development Committee of the Board of Directors of Iberdrola, which, among other things, spreads a preventive culture based on the principle of "zero tolerance" towards the commission of illegal acts or improper conduct. The system has been designed following the best domestic and international practices in the area of compliance, fraud prevention and the fight against corruption. For more details on these risks, please see the section "Risk Evaluation" (205-1) of the *2018 Sustainability Report*, as well as the *Integrated Report* and other sections of this *Annual Corporate Governance Report*.

E.4. State whether the entity has a risk tolerance level, including tolerance for tax compliance risk.

The Company's Board of Directors reviews and approves the risk tolerance level that is acceptable for the group on an annual basis. The *General Risk Control and Management Policy*, together with the policies that further develop and supplement it, qualitatively and quantitatively establish the annually accepted risk appetite, in a sufficiently detailed manner, both at the group level and at the level of each of its principal businesses and corporate functions.

By way of complement, the Administration and Control Division, after considering such limits and guidelines, in order to verify the risk globally assumed in the annual profit and loss account, engages in a comprehensive probability analysis of the global risk remaining for the financial year at the time of approving the annual budget.

In addition, all new multi-annual plans are accompanied by their corresponding analysis of associated risk.

The *General Risk Control and Management Policy* is further developed and supplemented through the following policies, which are also subject to approval by the Company's Board of Directors, and which include the following risk limits and indicators:

Corporate Risk Policies:

- *Corporate Credit Risk Policy*
- *Corporate Market Risk Policy*
- *Operational Risk in Market Transactions Policy*
- *Insurance Policy*
- *Investment Policy*
- *Financing and Financial Risk Policy*

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- *Treasury Share Policy*
- *Risk Policy for Equity Interests in Listed Companies*
- *Information Technologies Policy*
- *Cybersecurity Risk Policy*
- *Reputational Risk Framework Policy*
- *Procurement Policy*

Risk policies for the various businesses of the group:

- *Risk Policy for the Networks Businesses of the Iberdrola Group*
- *Risk Policy for the Renewable Energy Businesses of the Iberdrola Group*
- *Risk Policy for the Liberalised Businesses of the Iberdrola Group*
- *Risk Policy for the Real Estate Business*

The *General Risk Control and Management Policy*, as well a summary of the risk policies in further implementation thereof, are available on the corporate website.

The limits and indicators of the risk policies should be consistent with the annual budget and the objectives set forth in the multi-annual investment plans. The numeric values of the limits and indicators set forth in the various policies are probabilistic in nature (like VaR and EBITDA at risk) or deterministic in nature, and are expressed in monetary units, indices or benchmarks based on which volumetric risks and/or values are generated, including:

- limits on the maximum overall credit risk exposure by type of counterparty;
- limitations on market risk proportional to the volume of activity of each business;
- strict overall limit on the discretional trading of energy;
- limitations on operational risk through preventative maintenance programmes and assurance programmes; and
- strict limitations on activities not associated with the main energy business.

The *Corporate Tax Policy* establishes the limits on tax risk by setting the tax strategy, the principles of conduct and the good tax practices assumed by the Company.

As described above, the Iberdrola group has a risk tolerance level (acceptable risk level) established at the corporate level, which is annually approved by the Board of Directors and its Executive Committee. The group's Risk Committee, the Operating Committee, the Audit and Risk Supervision Committee, the businesses, the corporate functions, the Administration and Control Division and the Risk Management Division also participate in the process.

E.5. State which risks, including tax compliance risks, have materialised during the year.

The activities of the Iberdrola Group during 2018 have been subject to various risk factors occurring in the countries and markets in which it operates, and on a global basis have not had a significant impact on the results for the financial year, thanks to the diversification of activities, markets and geographic areas in which the group is present, which has allowed for the negative effects of some businesses to be offset with favourable behaviour in others.

During the financial year, the group was negative affected by events described below, although they have been offset by the following positive events:

- The recovery in 2018 of average prices in the international markets for coal (+14%), natural gas (+32%), CO_2 trading rights (+171%) and oil (+37%), with the resulting positive impact on final electricity prices.

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- The recovery of hydroelectric production in Spain in 2018 to levels close to those of an average year, with a 70% increase in production over 2017.
- The publication in November by the National Markets and Competition Commission (*Comisión Nacional de los Mercados y la Competencia*) (the "**CNMC**") of a proposed methodology for calculating the financial remuneration rate for transmission and distribution and renewable generation for the upcoming regulatory period (2020-2025), with rates as at the date of publication of 5.58% and 7.09%, respectively.
- The approval of Royal Decree-Law 1/2019, of 11 January, on urgent measures to adapt the powers of the CNMC to the requirements of EU law, which transfers to this body powers to determine remuneration for the transmission and distribution of electricity and gas beginning with the upcoming regulatory period (2020).
- The publication by the Ministry for Ecological Transition at the end of the year of a draft law that, among other things, proposes that renewables facilities before Royal Decree-law 9/2013 maintain their current remuneration (7.389%) for the next two regulatory periods, of 6 years each.
- The approval in April 2018, on terms favourable to the group, of 5-year remuneration frameworks for the Brazilian distributors Companhia de Electricidade do Estado do Bahía, S.A. (Coelba) and Companhia Energética do Rio Grande do Norte, S.A. (Cosern), with a WACC of 8.09%. The remuneration frameworks will neutralise the main uncertainties associated with network subsidiaries of the group in the coming years;

The risks that have materialised include:

- The adverse regulatory and market environment faced by the retail electricity and gas business in the United Kingdom, with the entry into force of a system for setting maximum prices for customers under the "Standard Variable Tariff" mode.
- During financial year 2018 updates were made to the provisions recorded in relation to pending arbitrations commenced at the end of certain of the projects of Iberdrola Ingeniería y Construcción S.A (Sociedad Unipersonal).

Finally, it should be noted that activities during financial year 2019 and later will be affected by the following risk factors:

- The potential impact of a progressive withdrawal of the monetary stimulus programme of the European Central Bank, with the resulting risk of interest rate increases.
- Uncertainty regarding the final outcome of the exit of the United Kingdom from the European Union, and its impact on the macroeconomic conditions of the country and on the pound/euro exchange rate.
- Uncertainties arising from potential trade wars resulting from the protectionist policies introduced by the new government administration of the United States of America.
- The evolution of commodities and electricity prices in the various countries in which the group operates.
- The annual change in hydraulic or wind resources for the production of electricity at the renewable generation plants of the group.
- Increased competition in the unrestricted market in Spain as a result of the entry of significant new players.
- The final review of the parameters to establish remuneration in Spain for the regulated networks and renewable generation businesses, which will enter into force on 1 January 2020.
- The effects of potential changes that may be implemented in the Spanish electricity market and the potential establishment of a scheduled closing of the nuclear plants and coal plants.
- The capacity for implementation of major current investment plans, especially new offshore wind projects, in terms of cost and timing.

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- The opportunities/risks that might arise as a result of changes in government in Mexico and Brazil after the general elections held in 2018.
- The risks associated with cybersecurity.

The risks associated with the conventional generation business in the United Kingdom have ceased after the divestment by the group of its assets in this segment through the sale of "Scottish Power Generation, Ltd." to the Drax group.

E.6. Explain the response and monitoring plans for all major risks, including tax compliance risks, of the company, as well as the procedures followed by the company in order to ensure that the board of directors responds to any new challenges that arise.

The Comprehensive Risk System, together with the control and management policies of the Company that implement them, including the group's Risk Committee and the Company's Operating Committee, have allowed for the identification of risks and new threats sufficiently in advance, as well as for establishing appropriate mitigation plans.

The Company's Operating Committee meets on an approximately weekly basis.

The group's Risk Committee, which reviews the evolution of the various risks, meets on a monthly basis, and on a quarterly basis issues the *Quarterly Risk Report of the Group*, which includes the main risk positions, the report on compliance with policies and limits approved, and the update of the key risks map.

On at least a quarterly basis, the Audit and Risk Supervision Committee of the Board of Directors supervises the evolution of the Company's risks:

- It reviews the group's Quarterly Risk Report submitted by the group's Risk director.
- It coordinates and reviews the Risk Report submitted on a regular basis (at least half-yearly) by the audit and compliance committees of the country subholding and head of business companies of the group.
- On at least a half-yearly basis, it prepares a Risk Report for the Board of Directors.

F. INTERNAL RISK MANAGEMENT AND CONTROL SYSTEMS RELATED TO THE PROCESS OF PUBLISHING FINANCIAL INFORMATION (ICFR)

Describe the mechanisms comprising the System of Internal Control over Financial Reporting (ICFR) of your company.

F.1. Control environment

Report on at least the following, describing their principal features:

F.1.1. The bodies and/or departments that are responsible for (i) the existence and maintenance of an adequate and effective ICFR; (ii) their implementation; and (iii) their supervision.

Iberdrola's Board of Directors is ultimately responsible for implementing and maintaining a proper and effective internal control over financial information ("**ICFR**") system. The Boards of Directors of the country subholding companies and head of business companies also have this responsibility within their various purviews.

The heads of the country subholding companies and of the head of business companies, together with their respective heads of control, as well as the directors of the global corporate areas, are in turn responsible for the design and implementation of the ICFR system. This responsibility is explicitly set forth

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in the certifications that said persons sign on a half-yearly basis in relation to the financial information for their respective areas of responsibility.

Pursuant to article 31.6.d of the *Regulations of the Board of Directors*, the Audit and Risk Supervision Committee (hereinafter, "**ARSC**") is responsible for supervising the effectiveness of the internal control of the Company and of its group, as well as the risk management systems thereof. Article 31.6.f also provides that the duties of the ARSC include that of supervising the process of preparing and presenting mandatory financial information and submitting recommendations or proposals to the Board of Directors to protect the integrity of this information. The ARSC relies on the Internal Audit Area to carry out these responsibilities. Any audit committees at the country subholding and head of business companies have these powers within their respective purviews.

F.1.2. State whether the following are present, especially if they relate to the creation of financial information:

- **Departments and/or mechanisms in charge of: (i) design and review of corporate structure; (ii) clear definition of lines of responsibility and authority with an adequate distribution of tasks and functions; and (iii) assurance that adequate procedures exist for proper communication throughout the entity.**

The Board of Directors of Iberdrola defines the organisational structure at the first level. The heads of these top-level organisations, together with the Human Resources and General Services Division, implement the deployment within their respective purviews.

Each top-level division prepares a proposed organisational structure, including a description of the mission, duties and responsibilities of the various organisations deployed, which must subsequently be validated by the Human Resources and General Services Division, as well as by the Finance and Resources Division.

The main responsibility for preparing financial information lies with the corporate Administration and Control Division. This division proposes the structure of heads of Control of the country subholding and head of business companies and deals with coordinating and supervising the conduct thereof.

- **Code of conduct, the body approving this, degree of dissemination and instruction, including principles and values, (state if there is specific mention of transaction recording and creation of financial information), a body charged with analysing breaches and proposing corrective actions and sanctions.**

The Iberdrola group has a *Code of Ethics* that was first approved by the Board of Directors in financial year 2002, and that is regularly reviewed and updated. In its latest revision, in October 2018, the *Code of Ethics* included within its scope of application the directors of Iberdrola, who until then had been governed by the now-repealed *Directors' Code of Ethics*, which contemplated principles and rules analogous to those of the *Code of Ethics.*

According to article A.2.1 thereof, "*the principles and guidelines for conduct contained in the Code of Ethics apply to all directors, including natural persons who appoint corporate directors to represent them in the performance of their duties, to professionals and to suppliers of the companies of the Group, regardless of their rank, their geographical location or functional reporting, or the Group company to which they provide their services*".

The *Code of Ethics* is communicated and disseminated among the professionals of the Iberdrola group in accordance with the plan approved annually for this purpose by the Compliance Unit, which provides for various initiatives in the area of training (both on-line and in-person) and communication, addressed to the various groups of employees based on their exposure to Compliance risks.

The *Code of Ethics,* which includes informational transparency among its general ethical principles and principles on relations with Iberdrola's Stakeholders, expressly states the following in article B.6.:

"1. *The Group shall provide true, proper, useful and consistent information regarding its programmes and actions. The transparency of the information required to be disclosed is a basic principle that must govern*

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the conduct of all directors, professionals and suppliers of the Group.

2. The economic/financial information of the Group (especially the annual accounts) shall faithfully reflect its economic and financial position and its net worth, in accordance with generally accepted accounting principles and applicable international financial reporting standards. For such purposes, no directors, professional or supplier shall conceal or distort the information set forth in the accounting records and reports of the Group, which shall be complete, accurate and truthful.

3. A lack of honesty in the communication of information, whether internally within the Group (to professionals, subsidiaries, departments, internal bodies, management decision-making bodies, etc.) or outside the Group (to auditors, shareholders and investors, regulatory entities, the media, etc.) is a breach of the Code of Ethics. This includes delivering incorrect information, organising it in an incorrect manner or seeking to confuse those who receive it".

The Compliance Unit, which is a collective permanent and internal body linked to the Sustainable Development Committee (previously called the Corporate Social Responsibility Committee) of Iberdrola, controls the effective operation of the Company's Compliance System, with powers in the area of regulatory compliance. The duties of the Unit include ensuring the application of the *Code of Ethics* and of the other rules of the group in the compliance area, and the spread of a preventive culture based on the principle of "zero tolerance" towards the commission of unlawful acts. It also approves the *General Compliance System Framework of the Iberdrola group*, which contains the basic principles of structure and operation of the group's Compliance System as well as the duties and responsibilities of the various bodies involved. The Unit also evaluates and prepares an annual report on the effectiveness of the Compliance System of the Company and of the other companies of the group. The report is submitted to the Sustainable Development Committee, which issues its opinion and forwards it to the Board of Directors.

The Compliance Unit is also in charge of determining whether a professional of Iberdrola, S.A. has engaged in activities that violate the provisions of law or the *Code of Ethics*, and if applicable, for tasking the Human Resources and General Services Division to apply disciplinary measures in accordance with the offences and penalties system set forth in the collective bargaining agreement to which the professional belongs or in applicable labour law. The Compliance divisions of the other companies of the group perform this same function at each of them.

Pursuant to article F.6.1 thereof, directors, professionals of the companies of the group and the suppliers thereof expressly accept the rules of conduct established in the *Code of Ethics* that are applicable thereto.

Pursuant to article F.6.2, professionals who hereafter join or become part of the group and suppliers contracting with companies of the group shall also expressly accept the rules of conduct to which they are subject as set forth in sections D (for professionals of the group) and E (for suppliers), respectively, of the *Code of Ethics*. For this purpose, a literal extract of the corresponding section in each case is attached to their respective contracts.

Likewise, directors shall receive a complete copy of the *Code of Ethics,* for which they shall deliver a signed receipt.

- **Whistleblower channel, that allows notifications to the audit committee of irregularities of a financial and accounting nature, in addition to potential breaches of the code of conduct and unlawful activities undertaken in the organisation, reporting, as the case may be, if this is of a confidential nature.**

Iberdrola has various reporting mailboxes based on the sender: (i) ethics mailboxes for the professionals of the group; (ii) the mailbox available to shareholders and investors; and (iii) the suppliers' mailbox, accessible from the Employee Portal, from the OLS "On Line Shareholders" system or their mobile app, and from the Supplier Portal, respectively. These channels allow for communicating and complaining of any conduct that may involve the commission of an improper act or an act in violation of legal provisions or of the rules of conduct laid down in the *Code of Ethics* or to ask questions regarding any issue with respect to Compliance.

One need not identify oneself in order to send a complaint through these mailboxes (complaints may be anonymous), and if one does so Iberdrola guarantees absolute confidentiality with respect to both the information provided and the personal data of the reporting party. The group naturally states its commitment to not retaliate against any employee making a complaint, unless there is bad faith on the party of the complaining party.

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No complaints regarding financial information were received during financial year 2018.

- **Training and periodic refresher programmes for staff involved in the preparation and revision of financial information, as well as assessment of the ICFR (Internal Control System for Financial Information), that covers at least accounting rules, audits, internal control and risk management.**

Training is key in the Iberdrola's human resources policy and is an essential element form adjusting new employees to Iberdrola and the proper performance of their jobs, as well as to keep the group's employees updated regarding any changes that occur within the group itself as well as the environment within which it does business.

Therefore, the group has local training centres in each of the countries in which it is present, and since 2016 has had an international corporate campus in San Agustín del Guadalix (Madrid), where training of all kinds is provided, by both internal professionals and by agencies, universities, companies and external experts.

Specifically, the personnel directly or indirectly involved in the preparation and review of financial information and in the evaluation of the ICFR system, based on their different responsibilities, receive regular training on accounting standards, internal control and risk management, which is intended to give them the knowledge needed for the optimal performance of their duties as well as to anticipate, to the extent possible, the proper conformance of the group to future rules and to best practices. Most of these courses are provided by outside entities: business schools, universities and consultants specialising in economic/financial matters.

In addition, and on a general basis, these professionals regularly take coursework to improve their qualifications in the use of the computer-based tools required to perform their duties, mainly excel and database management.

They also attend various conferences, symposia and seminars in the areas of accounting, tax and internal audit, at both the domestic and international level.

Furthermore, in order to pool best practices and analyse the challenges facing the group in these areas, various meetings between the professionals of these areas from the different countries and subholding companies are organised on an annual basis. Specifically, in 2018 there were the "XI Global Internal Audit Days", the "VI-Global Tax Meeting", the "II Finance & Treasury Global Meeting" and the annual "XI Global Control Committee", which analyses the most significant issues affecting the function, like new accounting rules, with special attention on reviewing and evaluating the group's ICFR system.

In addition, although not considered specific training activities, the Accounting Practices Division, which reports directly to the director of Administration and Control, which is responsible for defining and updating the accounting policies, publishes a quarterly bulletin that is broadly distributed among the group regarding new accounting developments with respect to International Financial Reporting Standards ("IFRS"), which includes updates on standards (standards entering into effect, drafts issued, standards issued, standards approved by the European Union and pending approval, as well as expected future standards) and accounting questions asked internally, together with the conclusions with respect thereto.

F.2. Assessment of financial information risks

Report on at least the following:

F.2.1. The main characteristics of the risk identification process, including error and fraud risk, as regards:

- **Whether the process exists and is documented.**

The process of identifying risks of error in financial information is one of the most important steps within the methodology for performing the internal control over financial information at Iberdrola, documenting

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both the objectives and performance thereof as well as its results.

The methodology starts with an analysis of the consolidated financial information of the Iberdrola group and of the various country subholding companies, in order to select the most significant accounting headings and notes, pursuant to quantitative (materiality) and qualitative (business risk and third-party visibility) standards. The headings and notes selected area grouped into management cycles or large processes in which the selected information is generated. The cycles are analysed and a description of each of them is prepared as a means for identifying the potential risks of error in the financial information in relation to attributes like integrity, presentation, valuation, cut-off, recording and validity. The risks identified are subject to a process of prioritisation, selecting the most significant ones applying professional judgement regarding a number of indicators (existence of documented processes and controls, existence of systems that automate the process, whether there have been any incidents in the past, whether the process is known and mature or if judgement must be used to make estimates). The risks of fraud are not subject to explicit identification, although they are taken into account to the extent that they can generate material errors in the financial information.

Once the most significant risks have been selected, the controls required for the mitigation or management thereof are selected and designed, with these controls being subject to monitoring and documentation, as well as systematic review by the Internal Audit Area.

The selected risks are reviewed at least annually within the framework of the assessment of the effectiveness of the internal control system performed by those responsible for it. This review is intended to update the risks to the changing circumstances in which the Company operates, especially given changes in the organisation, computer systems, regulation, products or the status of the markets.

- **If the process covers all of the objectives of financial information, (existence and occurrence; completeness; valuation; delivery; breakdown and comparability; and rights and obligations), whether it is updated and with what frequency.**

As mentioned above, the cycles or large processes in which financial information is generated are reviewed at least on an annual basis to identify potential risks of error in relation to attributes like validity (existence and approval), integrity, valuation, presentation, cut-off and recording.

- **The existence of a process for identifying the scope of consolidation, taking into account, among other factors, the possible existence of complex company structures, shell companies, or special purpose entities.**

The scope of consolidation is identified on a monthly basis, and is obtained as a product of an updated map of companies, with express identification of the changes that have occurred each period.

The scope of this review is the totality of all companies in which Iberdrola or any of its subsidiaries has an interest, regardless of the significance thereof.

Furthermore, following the provisions of section 529 of the *Companies Act*, the *Regulations of the Board of Directors* provides the purview of the Board of Directors includes, among other things, approving the creation or acquisition of equity interests in special purpose entities or entities registered in countries or territories that are considered to be tax havens, as well as any other transactions or operations of a similar nature that, due to their complexity, might diminish the transparency of the group. In any event, the making of such decision requires a prior report of the ARSC, as provided in Iberdrola's *Regulations of the Audit and Risk Supervision Committee.*

Pursuant to specific internal procedures in effect (conforming to the current corporate governance model), the initiative relating to the creation or acquisition of an interest in a special purpose entity or an entity domiciled in a tax haven is within the purview of the Management of the group or of the country subholding company or head of business company or subsidiary thereof that intends to create or acquire a company of this nature. In the event that such transactions are carried out by listed country subholding companies of the group or by subsidiaries thereof, the audit and compliance committee or similar body of such listed country subholding company shall be responsible for issuing the relevant report.

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- **If the process takes into account the effects of other types of risk (operational, technological, financial, legal, tax, reputational, environmental, etc.) to the extent that they affect the financial statements.**

The process of identifying risks of error in financial information takes into account the effects of other types of risk (operational, technological, financial, legal, tax, reputational, environmental, etc.) to the extent that they affect the financial statements, which risks are evaluated and managed by various corporate units like the Risk Division or the Legal Division, among others. However, there is no express identification of such other types for the identification of financial information risks.

- **The governing body within the company that supervises the process.**

The governing body that supervises the process is the ARSC, which is supported by the Management of the Internal Audit Area in the performance of this duty.

F.3. Control activities

State whether the company has at least the following, describing their main characteristics:

F.3.1. Review and authorisation procedures for financial information published by the stock markets and a description of the ICFR, indicating those responsible, as well as documentation describing the flow of activity and controls (including those relating to the risk of fraud) of the various types of transactions which may materially affect the financial statements, including financial closing procedures and the specific review of judgements, estimates, valuations and relevant forecasts.

On 24 July 2018, Iberdrola's Board of Directors approved a *Group Financial Information Preparation Policy* that applies to all companies of the group, and which further develops the process for preparing the consolidated financial information and clearly defines the powers vested in the ARSC and the audit and compliance committees of the other companies of the group.

"*Consolidated financial information*" means the information appearing in the consolidated annual accounts, in the *Interim Management Statements* corresponding to the results of Iberdrola and its consolidated group for the first and third quarter, and in the *Half-Yearly Financial Report*.

The policy provides that the financial information required for the preparation of the "*consolidated financial information*" must be prepared in accordance with the accounting standards established in the *Accounting Policies Handbook* and the models approved by Iberdrola's Administration and Control Division.

The policy provides which management decision-making body of each company shall be responsible for preparing the financial information relating to its respective company that may be required to prepare the "*consolidated financial information*". By analogy, the management decision-making bodies of the country subholding companies shall be responsible for approving the "*financial information for consolidation*" within which the information regarding the company itself and that of the subsidiaries forming part of its subgroup are included.

Thus, the management decision-making bodies of the country subholding companies, following a report from their respective audit and compliance committees, and based on the information received from their subsidiaries, shall prepare and approve the financial information for consolidation corresponding to each subgroup, and once such information has been verified by their external auditor within the context of its review of the consolidated financial information, shall send it to Iberdrola's Administration and Control Division prior to the date indicated thereby, in order to prepare the consolidated financial information and submit it for formulation or approval by Iberdrola's Board of Directors, as appropriate, after a report from its ARSC.

Furthermore, the process or structure of certification of the financial information, which is formally carried out on a half-yearly basis, coinciding with the interim and annual close, reflects the form in which the financial information is generated within the group.

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In this structure, the heads of the country subholding companies and the heads of the head of business companies, together with their respective heads of control, as well as the heads of the global corporate areas, certify both the reliability of the financial information regarding their areas of responsibility (which is the information they provide for consolidation at the group level) and the effectiveness of the internal control system established to reasonably guarantee such reliability. Finally, the chairman & CEO, as the top responsible executive, and the Corporate Administration and Control Director, who is responsible for the preparation of the financial information, certify to the Board of Directors the reliability of the consolidated annual accounts and the *Half-Yearly Financial Report.*

The ARSC, with the support of the Management of the Internal Audit Area, supervises the entire process of certification, submitting to the Board of Directors the conclusions obtained from this analysis at the meetings during which the accounts are formally prepared.

As regards the description of the ICFR system to be published in the securities markets, the procedure for the review and approval thereof is the same as the one used for all disclosures of an economic and financial nature in the *Annual Corporate Governance Report.*

The documentation of the internal control over financial information system includes high-level descriptions of the cycles for generating the selected relevant financial information, as well as detailed descriptions of the prioritised risks of error and of the controls designed for the mitigation or management thereof. The description of the controls includes the evidence obtained for the implementation thereof, which is necessary for their review.

Each of the accounting close processes at the businesses is considered a cycle, and the same occurs with the group of accounting close activities at the corporate level, with the process of global consolidation and with the process of preparing the notes. This means that all of these activities are subject to the methodological process described in the section relating to risks.

Furthermore, the specific review of critical accounting opinions, estimates, valuations and relevant projections is subject to specific controls within the model, as these types of issues involve the identification of risks of error in the various cycles in which they are made. The evidence of the specific controls is the support for such reviews in many cases.

Independently of the process of certification followed in the countries, businesses and corporate areas, the ARSC, once again with the support of the Internal Audit Division, performs a quarterly global review of the financial information, ensuring that the half-yearly financial reports and quarterly management statements are prepared using the same accounting standards as the annual financial reports, and verifying the proper definition of the scope of consolidation, as well as the correct application of generally accepted accounting principles and international financial reporting standards.

F.3.2. Internal IT control policies and procedures (access security, change controls, their operation, operational continuity, and segregation of duties, among others) which support relevant processes within the company and relate to the creation and publication of financial information.

The controls considered to mitigate or manage the risks of error in financial reporting include some relating to the most significant software applications, like the controls relating to user access permissions or those relating to the integrity of the transfer of information between applications, of the transaction, and of change management.

In addition, the Iberdrola group has internal control guidelines or regulations and procedures regarding IT systems in relation to the acquisition and development of software, the acquisition of systems infrastructure, the installation and testing of software, change management, management of service levels, management of third-party services, security of the systems and access thereto, incident management, transaction management, continuity of operations and the segregation of functions.

These guidelines and procedures (which in some cases are different based on geographic area or type of solution, and are in a process of progressive homogenisation) are applied to all IT systems that support the relevant process of generation of financial information, and to the infrastructure required for the operation thereof.

The Iberdrola group also has an Information Technologies Policy that contemplates the management of risks associated with the use, ownership, operation, participation, influence and adoption of specific information technology or the processes for the management and control thereof.

Thus, there is a model of general controls integrated within the risk management model that allows for a global evaluation of the risks related to information technology.

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Both the risk model and the IT controls are based on and aligned with good market practices, like COBIT5 and COSO. The evolution thereof over the long term is maintained by including the new needs arising from the changing regulatory compliance framework that applies to the IT systems and services, as well as the recommendations and guidelines of auditors and relevant third parties.

As part of the general IT controls model, there is a regular evaluation of the effectiveness of the information technology controls in the area of financial systems, adopting the appropriate measures if any incident is detected.

On an annual basis, the heads of the IT systems of the Iberdrola group certify the effectiveness of the internal controls established regarding financial information. This certification covers all systems declared to be within the scope of the external financial auditing, as well as others deemed to be relevant, by the corresponding business organisations within the group.

For financial year 2018, the total number of systems covered by the IT controls system was 58, on which there was homogeneous application of 20 controls, most of which are evaluated and applied by the Systems Division, and in some cases by other business organisations. The frequency of the evaluation is annual or biannual, depending on the nature of the control; and it is performed using a principle of sampling of all of the relevant evidence in each case. The entire process of evaluating the IT controls is supported by a GRC system and is supervised annually by the Internal Audit Division.

F.3.3. Internal control policies and procedures intended to guide the management of activities subcontracted to third parties, as well as those aspects of assessment, calculation or evaluation entrusted to independent experts, which may materially affect financial statements.

In general terms, the Iberdrola group does not have significant functions subcontracted to third parties with a direct impact on financial information. The evaluations, calculations or assessments entrusted to third parties that could materially affect the financial statements are considered to be activities relevant to the generation of financial information leading to the identification of any priority risks of error, which involves the design of associated internal controls. These controls cover the internal analysis and approval of fundamental assumptions to be used, as well as the review of the evaluations, calculations or assessments made by outside parties, by comparing them to the calculations made internally.

F.4. Information and communication

State whether the company has at least the following, describing their main characteristics:

F.4.1. A specifically assigned function for defining and updating accounting policies (accounting policy area or department) and resolving doubts or conflicts arising from their interpretation, maintaining a free flow of information to those responsible for operations in the organisation, as well as an up-to-date accounting policy manual distributed to the business units through which the company operates.

The Accounting Practice Division, which reports directly to the Administration and Control director, is responsible for defining and updating the accounting policies, as well as for resolving questions or conflicts arising from the interpretation thereof. It maintains fluid communication with the heads of operation of the organisation, and particularly with the heads of the accounting functions.

It publishes a quarterly bulletin that is broadly distributed within the group regarding new accounting developments deriving from the IFRS, which includes updates on standards (standards entering into effect, drafts issued, standards issued, standards approved by the European Union and pending approval, as well as expected future standards) and accounting questions asked internally, together with the conclusions with respect thereto.

The Accounting Practice Division is also responsible for keeping the accounting practices handbook of the group continuously updated and ensuring the appropriate dissemination thereof.

The accounting handbook is continuously updated. For this purpose, the Accounting Practice Division analyses whether the new developments or changes in the accounting area have an effect on the group's

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accounting policies, as well as the date of entry into force of each of the standards. When a new provision, or new interpretations thereof, are identified having an effect on the accounting policies of the group, it is included in the handbook, and also communicated to the parties responsible for preparing the financial information of the group through the quarterly bulletins mentioned above, and the application supporting the handbook is also updated.

The updated version of the handbook is available in an application on the internal network of the group. This application is also accessible by users via remote access and can be connected to e-mail. Any change or upload of a document of the handbook generates an e-mail notice to all users.

F.4.2. Measures for capturing and preparing financial information with consistent formats for application and use by all of the units of the entity or the group, and which contain the main financial statements and notes, as well as detailed information regarding ICFR.

The mechanism for capturing and preparing the information supporting the main financial statements of the Iberdrola group is mainly based on the use of a unified management consolidation tool (called BPC), which is accessible from all geographic areas, that is currently deployed through the group.

A large part of the information supporting the breakdowns and notes is included in the consolidation tool, with the rest being captured by homogeneously formatted spreadsheets, called reporting packets, that are prepared for the half-yearly and yearly close.

F.5. Supervision of system performance

Describe at least the following:

F.5.1. The activities of the audit committee in overseeing ICFR as well as whether there is an internal audit function that has among its mandates support of the committee and the task of supervising the internal control system, including ICFR. Additionally, describe the scope of ICFR assessment made during the year and the procedure through which the person responsible prepares the assessment reports on its results, whether the company has an action plan describing possible corrective measures, and whether its impact on financial reporting is considered.

The activities for supervising the ICFR by the ARSC mainly include: (i) monitoring of compliance with the process of certification by the various parties responsible for the financial information; (ii) the review, with the support of the Management of the Internal Audit Area, of the design and operation of the internal control system, to evaluate the effectiveness thereof; and (iii) regular meetings with the external auditors, internal auditors and senior management to review, analyse and comment on the financial information, the boundary of companies that it covers and the accounting criteria applied, as well as any significant weaknesses in internal control that have been identified.

It should be mentioned that the parties responsible for preparing the financial information of each country subholding company, each head of business company and each corporate area must engage in an annual process, coordinated by the Internal Control Division, of reviewing the design and operation of the internal control system within their area of responsibility in order to evaluate the effectiveness thereof.

There is thus an analysis of whether changes in the risks identified and prioritised should be included based on the changing circumstances in which the group acts (changes in organisation, systems, processes, products, regulation, etc.). There is also an analysis of whether the design of the controls to mitigate or manage the risks that may have changed is appropriate, as well as whether they have operated satisfactorily in accordance with their design.

The conclusions from this annual review process, with respect to both the deficiencies identified (which are classified as serious, medium or mild, based precisely on their potential impact on the financial information) and the action plans to fix them, are presented at an annual specialised meeting chaired by the Administration and Control director, and at which the Management of the Internal Audit Area is also present. Conclusions are made at this meeting regarding the effectiveness of the internal control system within each of the different areas of responsibility, and globally for the entire group.

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Thereafter, the most significant conclusions regarding the review are submitted to the ARSC within the framework of the regular meetings it holds with the Administration and Control director.

Apart from what is described in the preceding paragraphs, the Internal Audit Area, in support of the ARSC, undertakes an independent review of the design and operation of the internal control system, identifying deficiencies and preparing recommendations for improvement. The Internal Audit Area reports hierarchically to the chairman of Iberdrola's Board of Directors, and functionally to the ARSC, and pursuant to the Basic Internal Audit Regulations has the main duties of assisting this committee in the exercise of its powers and objectively and independently supervising the effectiveness of the group's internal control system, which is made up of a set of risk management and control mechanisms and systems.

Based thereon, the Management of the Internal Audit Area engages in ongoing monitoring of the action plans agreed to with the various organisations to correct the deficiencies detected and to implement the suggestions for improvement agreed to with the organisations.

The period that the Management of the Internal Audit Area plans for in-depth review of the entire internal control system is five years.

Specifically, 34 cycles were reviewed during financial year 2018. These are cycles corresponding to the companies Avangrid, Inc., Scottish Power Ltd., Iberdrola España, S.A. (Sociedad Unipersonal) and Neoenergia, S.A., as well as corporate cycles.

In addition, on a half-yearly basis, coinciding with the half-yearly and yearly close, the Management of the Internal Audit Area performs a review of the operation of the internal controls that are considered to be most critical.

The combination of regular reviews, together with the half-yearly reviews of the most critical controls, allows the Management of the Internal Audit Area to perform an evaluation of the internal control system (both design and operation) and issue an opinion regarding the effectiveness of the internal controls established to ensure the reliability of the financial information, which it submits to the ARSC within the framework of their regular meetings.

F.5.2. If there is a procedure by which the account auditor (in accordance with the contents of the Normas Técnicas de Auditoría (NTA) - "Auditing Standards"), internal auditor and other experts may communicate with senior management and the audit committee or senior managers of the company regarding significant weaknesses in internal control identified during the review of the annual accounts or any others they have been assigned. Additionally, state whether an action plan is available for correcting or mitigating any weaknesses found.

In general terms, the procedure for discussion regarding significant internal control weaknesses that have been identified is based on regular meetings by the various agents.

Thus, the ARSC holds meetings, both at the half-year and yearly close, with the external auditors, with the internal auditors, and with the management responsible for preparing the financial information, in order to discuss any relevant aspect of the preparation process and of the resulting financial information.

Specifically, as established in its Regulations (scope of powers), Iberdrola's ARSC has, among other powers, that of obtaining information regarding any significant deficiency in internal control that the statutory auditor detects while carrying out its audit work. For these purposes, the statutory auditor appears before such Committee on an annual basis to present recommendations in connection with the internal control weaknesses identified during the review of the annual accounts. Any weaknesses noted by the statutory auditor are continuously monitored by the Committee with the support of the Management of the Internal Audit Area. Management responsible for preparing the consolidated accounts also holds meetings with the external auditors and with the internal auditors, at both the half-yearly and yearly close, in order to discuss any significant issues relating to the financial information.

F.6. Other relevant information.

Iberdrola has a financial information internal control system or model that is intended to reasonably guarantee the reliability of the financial information. The development of the model, which began in 2006,

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was not the result of a legal requirement but rather the conviction, by both the Board of Directors and the Company's senior management, that within a context of growth and internationalisation as was already forecast for the group, an explicit and auditable internal control system would contribute to maintaining and improving its control environment and the quality of the financial information, while at the same time increasing the confidence of investors due to its effects on the transparency, reputation and good governance of Iberdrola and of the companies making up the group.

The ICFR system has two main sides: certification, and internal control itself.

Certification is a process by which those responsible for financial information in the different areas of the Company certify that: (i) the financial information they deliver to Iberdrola for purposes of consolidation does not contain any material errors or omissions and provides a fair view of the results and the financial condition of the Company within their area of responsibility, and (ii) they are responsible for establishing the ICFR system within their area of responsibility and have found, upon evaluation, that the system is effective. The text of these certifications is inspired by the form of certification established in section 302 of the U.S. Sarbanes-Oxley Act.

The culmination of the half-yearly process is a joint certification that the chairman & CEO and the Administration and Control director submit to the Board of Directors for purposes of approval of the Half-Yearly Financial Report or the formulation of the annual accounts.

The other side of the model, that of internal control itself, is inspired by the leading framework described in the "Internal Control Integrated Framework" report of the "Committee of Sponsoring Organizations of the Treadway Commission (COSO)", and is mainly focused on providing a reasonable level of security in achieving the goal of reliability of financial information.

The methodology used by Iberdrola for the development and continuous update of internal control has the following stages or steps: (i) analysis and selection of significant financial information; (ii) the grouping thereof within cycles or large processes in which it is generated; (iii) the identification, evaluation and prioritisation of the risks of error in financial information within the selected cycles; (iv) the design and operation of controls to mitigate or manage the selected risks; and (v) the monitoring and update of the foregoing steps to continuously adapt the model to the circumstances of the business activity.

One of the main characteristics of the design of the model is that it attempts to ensure the quality of the financial information during each month of the year, and is not only limited to the periods corresponding to the annual or half-yearly close.

This characteristic is strengthened with the use of a specific software application internally developed by the group, which allows for the monitoring of the status of the controls at all times.

Another important characteristic of the model is that it extends the culture of internal control to all of the organisations, both corporate and business, that significantly contribute to the generation of financial information, by personally assigning responsibility in the implementation and documentation of controls.

All significant documentation regarding Iberdrola's ICFR system, including both the process of certification and the internal control itself, is stored in this software application.

The people responsible for implementing the controls input into the software application evidence showing the performance thereof, and evaluate the results obtained, classifying them as satisfactory or unsatisfactory. This allows for monitoring of the internal control situation in real time, permitting quick action regarding any deficiencies detected.

Additionally, on an annual basis, the various heads of control at the country subholding and head of business companies, as well as the heads of the corporate areas, review the design and operation of the ICFR system, as a systematic process for adjustment thereof to the changing circumstances of the business activity.

The annual review is coordinated by the Internal Control Division, which is also tasked with administering the software application and with coordinating the development of the ICFR system within the various businesses and corporate areas of the group.

Furthermore, the Management of the Internal Audit Area, which is responsible for supervising internal control in support of the ARSC, undertakes an independent review of the design and operation of the ICFR system, identifying deficiencies and preparing recommendations for improvement. This review is performed applying a mixed model of selecting cycles based on risk and a minimum rotation of five years.

In addition, on a half-yearly basis, the Management of the Internal Audit Area undertakes an independent review of the effectiveness of the internal controls established to ensure the reliability of the financial information. It also reviews the process of certification of the financial information on a half-yearly basis. The conclusions from these reviews are submitted to the ARSC, which, if applicable, makes them its own

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and forwards them to the Board of Directors.

Based on materiality standards, the current scope of the ICFR system covers the entire Iberdrola group. More than 1,600 people from the group use the software application, both to document the evidence showing the implementation of more than 2,950 controls —which mitigate or manage more than 1,150 risks of error in the financial information deemed priority— and to monitor, analyse, adjust and evaluate the ICFR system.

In addition, the approximately 80 department heads who participate in the process of certifying the correctness of the information for which they are responsible do so using an electronic signature directly within the software application.

All of the above allows for the final result of the certification process, which is supported by the situation of internal control itself, to be reviewed by Iberdrola's Board of Directors as one of the major guarantees of reliability in connection with the formulation of the annual and interim financial information of the group.

F.7. External auditor's report

Report on:

F.7.1. If the ICFR information submitted to the markets has been subject to review by the external auditor, in which case the entity shall include its report as an attachment. If not, reasons why should be given.

The information on the ICFR system sent to the markets has not been subject to review by the external auditor consistent with the fact that the other information contained in the Annual Corporate Governance Report is only subject to review by the external auditor in relation to the accounting information contained in said Report. Furthermore, it is believed that externally reviewing the information on the ICFR system sent to the markets would in a certain way be redundant, taking into account the review of internal control that the external auditor must perform in accordance with technical auditing standards within the context of the statutory audit of accounts.

G EXTENT OF COMPLIANCE WITH CORPORATE GOVERNANCE RECOMMENDATIONS

Specify the company's level of compliance with recommendations from the Good Governance Code of Listed Companies.
In the event that a recommendation is not followed or only partially followed, a detailed explanation should be included explaining the reasons in such a manner that shareholders, investors and the market in general have enough information to judge the company's actions. General explanations are not acceptable.

1. **That the Articles of Association of listed companies do not limit the maximum number of votes that may be cast by one shareholder or contain other restrictions that hinder the takeover of control of the company through the acquisition of shares on the market.**

Complies | Explanation | X

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Article 29.2 of the By-Laws provides that "No shareholder may cast a number of votes greater than those corresponding to shares representing ten (10%) per cent of share capital, even if the number of shares held exceeds such percentage of the share capital. This limitation does not affect votes corresponding to shares with respect to which a shareholder is holding a proxy as a result of the provisions of article 23 above, provided, however, that with respect to the number of votes corresponding to the shares of each shareholder represented by proxy, the limitation set forth above shall apply".

Section 3 of such article adds: "The limitation set forth in the preceding section shall also apply to the maximum number of votes that may be collectively or individually cast by two or more shareholders that are entities or companies belonging to the same group. Such limitation shall also apply to the number of votes that may be cast collectively or individually by an individual and the shareholder entity, entities, or companies controlled by such individual. A group shall be deemed to exist under the circumstances provided by law, and also when a person controls one or more entities or companies".

Iberdrola believes that the limitation on the maximum number of votes that may be cast by a single shareholder, or by several shareholders belonging to the same group or, if applicable, acting in concert, is a measure to protect shareholders at companies with dispersed share ownership, whose investment is thus guarded from any transaction that is contrary to the corporate interest. In this regard, most shareholders, especially including but not limited to small retail investors, who represent approximately one-fourth of Iberdrola's capital, have little room to manoeuvre and respond to a potential shareholder owning a non-controlling interest and not reaching the threshold requiring a takeover bid but seeking influence over the Company and whose own interest is not totally in line with the corporate interest.

It should also be noted that such voting limitation has been in effect since 16 June 1990, the date on which the General Shareholders' Meeting was held at which it was resolved, by unanimous vote of the attendees, to bring the By-Laws of the Company (then doing business as Iberduero, S.A.) into line with the consolidated text of the Companies Act approved by Royal Legislative Decree 1564/1989 of 22 December. This shows the level of corporate consensus that has existed on such voting limitation from the very beginning, which has been confirmed by the fact that such limitation has remained unchanged through various by-law amendments passed by the shareholders at General Shareholders' Meetings. In turn, it reflects the will of the shareholders to increase their bargaining power in the event of hostile offers or transactions.

In any event, article 50 of the current By-Laws establishes the instances of removal of such voting limitation in the event that the Company is the target of a takeover bid that receives the required shareholder approval, in which case the provisions of section 527 of the Companies Act prevail. Pursuant to the foregoing, it cannot be deemed that the limitation on the maximum number of votes that may be cast by a shareholder constitutes an obstacle to a takeover bid.

2. **That when the parent company and a subsidiary are listed on the stock market, both should publicly and specifically define:**

   a) **The respective areas of activity and possible business relationships between them, as well as those of the listed subsidiary with other group companies.**

   b) **The mechanisms in place to resolve any conflicts of interest that may arise.**

   Complies | X Complies Partially | Explanation | Not Applicable |

3. **That, during the course of the ordinary General Shareholders' Meeting, complementary to the distribution of a written Annual Corporate Governance Report, the chairman of the Board of Directors makes a detailed oral report to the shareholders regarding the most material aspects of corporate governance of the company, and in particular:**

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a) **Changes that have occurred since the last General Shareholders' Meeting.**

b) **Specific reasons why the company did not follow one or more of the recommendations of the Code of Corporate Governance and, if so, the alternative rules that were followed instead.**

Complies | X Complies Partially | Explanation |

4. **That the company has defined and promoted a policy of communication and contact with shareholders, institutional investors and proxy advisors that complies in all aspects with rules preventing market abuse and gives equal treatment to similarly situated shareholders.**

   And that the company has made such a policy public through its web page, including information related to the manner in which said policy has been implemented and the identity of contact persons or those responsible for implementing it.

Complies | X Complies Partially | Explanation |

5. **That the Board of Directors should not propose to the General Shareholders' Meeting any proposal for delegation of powers allowing the issuance of shares or convertible securities without pre-emptive rights in an amount exceeding 20% of equity at the time of delegation.**

   And that whenever the Board of Directors approves any issuance of shares or convertible securities without pre-emptive rights the company immediately publishes reports on its web page regarding said exclusions as referenced in applicable company law.

Complies | X Complies Partially | Explanation |

6. **That listed companies which draft reports listed below, whether under a legal obligation or voluntarily, publish them on their web page with sufficient time before the General Shareholders' Meeting, even when their publication is not mandatory:**

   a) **Report regarding the auditor's independence.**

   b) **Reports regarding the workings of the audit committee and the appointments and remuneration committee.**

   c) **Report by the audit committee regarding related-party transactions.**

   d) **Report on the corporate social responsibility policy.**

Complies | X Complies Partially | Explanation |

7. **That the company reports in real time, through its web page, the proceedings of the General Shareholders' Meetings.**

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Complies | X Explanation |

8. **That the audit committee ensures that the Board of Directors presents financial statements in the audit report for the General Shareholders' Meetings which do not have qualifications or reservations and that, in the exceptional circumstances in which qualifications may appear, that the chairman of the audit committee and the auditors clearly explain to the shareholders the content and scope of said qualifications or reservations.**

Complies | X Complies Partially | Explanation |

9. **That the company permanently maintains on its web page the requirements and procedures for certification of share ownership, the right of attendance at the General Shareholders' Meetings, and the exercise of the right to vote or to issue a proxy.**

   And that such requirements and procedures promote attendance and the exercise of shareholder rights in a non-discriminatory fashion.

Complies | X Complies Partially | Explanation |

10. **That when a verified shareholder has exercised his right to make additions to the agenda or to make new proposals to it with sufficient time in advance of the General Shareholders' Meeting, the company:**

    a) **Immediately distributes the additions and new proposals.**

    b) **Publishes the attendance card credential or proxy form or form for distance voting with the changes such that the new agenda items and alternative proposals may be voted upon under the same terms and conditions as those proposals made by the Board of Directors.**

    c) **Submits all of these items on the agenda or alternative proposals to a vote and applies the same voting rules to them as are applied to those drafted by the Board of Directors including, particularly, assumptions or default positions regarding votes for or against.**

    d) **That after the General Shareholders' Meeting, a breakdown of the results of said additions or alternative proposals is communicated.**

Complies | X Complies Partially | Explanation | Not Applicable |

11. **That, in the event the company intends to pay for attendance at the General Shareholders' Meeting, it establishes in advance a general policy of long-term effect regarding such payments.**

Complies | X Complies Partially | Explanation | Not Applicable |

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12. **That the Board of Directors completes its duties with a unity of purpose and independence, treating all similarly situated shareholders equally and that it is guided by the best interests of the company, which is understood to mean the pursuit of a profitable and sustainable business in the long term, and the promotion of continuity and maximisation of the economic value of the business.**

    And that in pursuit of the company's interest, in addition to complying with applicable law and rules and in engaging in conduct based on good faith, ethics and a respect for commonly accepted best practices, it seeks to reconcile its own company interests, when appropriate, with the interests of its employees, suppliers, clients and other stakeholders, as well as the impact of its corporate activities on the communities in which it operates and the environment.

    Complies | X Complies Partially | Explanation |

13. **That the Board of Directors is of an adequate size to perform its duties effectively and collegially, and that its optimum size is between five and fifteen members.**

    Complies | X Explanation |

14. **That the Board of Directors approves a selection policy for directors that:**

    a) **Is concrete and verifiable.**

    b) **Ensures that proposals for appointment or re-election are based upon a prior analysis of the needs of the Board of Directors.**

    c) **Favours diversity in knowledge, experience and gender.**

    That the resulting prior analysis of the needs of the Board of Directors is contained in the supporting report from the appointments committee published upon a call to the General Shareholders' Meeting submitted for ratification, appointment or re-election of each director.

    And that the selection policy for directors promotes the objective that by the year 2020 the number of female directors accounts for at least 30% of the total number of members of the Board of Directors.

    The appointments committee will annually verify compliance with the selection policy of directors and explain its findings in the Annual Corporate Governance Report.

    Complies | X Complies Partially | Explanation |

15. **That proprietary and independent directors constitute a substantial majority of the Board of Directors and that the number of executive**

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directors is kept at a minimum, taking into account the complexity of the corporate group and the percentage of equity participation of executive directors.

Complies | X Complies Partially | Explanation |

16. **That the percentage of proprietary directors divided by the number of non- executive directors is no greater than the proportion of the equity interest in the company represented by said proprietary directors and the remaining share capital.**

    This criterion may be relaxed:

    a) **In companies with a high market capitalisation in which interests that are legally considered significant are minimal.**

    b) **In companies where a diversity of shareholders is represented on the Board of Directors without ties among them.**

Complies | X Explanation |

17. **That the number of independent directors represents at least half of the total number of directors.**

    Nonetheless, when the company does not have a high level of market capitalisation or in the event that it is a high cap company with one shareholder or a group acting in a coordinated fashion who together control more than 30% of the company's equity, the number of independent directors represents at least one third of the total number of directors.

Complies | X Explanation |

18. **That companies publish and update the following information regarding directors on the company website:**

    a) **Professional profile and biography.**

    b) **Any other Boards to which the director belongs, regardless of whether the companies are listed, as well as any other remunerated activities engaged in, regardless of type.**

    c) **Category of directorship, indicating, in the case of individuals who represent significant shareholders, the shareholder that they represent or to which they are connected.**

    d) **The date of their first appointment as a director of the company's Board of Directors, and any subsequent re-election.**

    e) **The shares and options they own.**

Complies | X Complies Partially | Explanation |

19. **That the Annual Corporate Governance Report, after verification by the appointments committee, explains the reasons for the**

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appointment of proprietary directors at the proposal of the shareholders whose equity interest is less than 3%. It should also explain, where applicable, why formal requests from shareholders for membership on the Board meeting were not honoured, when their equity interest is equal to or exceeds that of other shareholders whose proposal for proprietary directors was honoured.

Complies | Complies Partially | Explanation | Not Applicable | x

20. **That proprietary directors representing significant shareholders must resign from the Board if the shareholder they represent disposes of its entire equity interest. They should also resign, in a proportional fashion, in the event that said shareholder reduces its percentage interest to a level that requires a decrease in the number of proprietary directors representing this shareholder.**

Complies | Complies Partially | Explanation | Not Applicable | x

21. **That the Board of Directors may not propose the dismissal of any independent director before the completion of the director's term provided for in the Articles of Association unless the Board of Directors finds just cause and a prior report has been prepared by the appointments committee. Specifically, just cause is considered to exist if the director takes on new duties or commits to new obligations that would interfere with his or her ability to dedicate the time necessary for attention to the duties attendant to his post as a director, fails to complete the tasks inherent to his or her post, or enters into any of the circumstances which would cause the loss of independent status in accordance with applicable law.**

The dismissal of independent directors may also be proposed as a result of a public takeover bid, merger or similar transaction entailing a change in the shareholder structure of the company, provided that such changes in the structure of the Board are the result of the proportionate representation criteria provided for in Recommendation 16.

Complies | x Explanation |

22. **That companies establish rules requiring that directors inform the Board of Directors and, where appropriate, resign from their posts, when circumstances arise which may damage the company's standing and reputation. Specifically, directors must be required to report any criminal acts with which they are charged, as well as the consequent legal proceedings.**

And that should a director be indicted or tried for any of the offences set out in company law legislation, the Board of Directors must

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investigate the case as soon as possible and, based on the particular situation, decide whether the director should continue in his or her post. And that the Board of Directors must provide a reasoned written account of all these events in its Annual Corporate Governance Report.

Complies | X Complies Partially | Explanation |

23. **That all directors clearly express their opposition when they consider any proposal submitted to the Board of Directors to be against the company's interests. This particularly applies to independent directors and directors who are unaffected by a potential conflict of interest if the decision could be detrimental to any shareholders not represented on the Board of Directors.**

    Furthermore, when the Board of Directors makes significant or repeated decisions about which the director has serious reservations, the director should draw the appropriate conclusions and, in the event the director decides to resign, explain the reasons for this decision in the letter referred to in the next recommendation.

    This recommendation also applies in the case of the secretary of the Board of Directors, despite not being a director.

    Complies | Complies Partially | Explanation | Not Applicable | X

24. **That whenever, due to resignation or any other reason, a director leaves before the completion of his or her term, the director should explain the reasons for this decision in a letter addressed to all the directors of the Board of Directors. Irrespective of whether the resignation has been reported as a relevant fact, it must be included in the Annual Corporate Governance Report.**

    Complies X Complies Partially | Explanation | Not Applicable |

25. **That the appointments committee ensures that non-executive directors have sufficient time in order to properly perform their duties.**

    And that the Board rules establish the maximum number of company Boards on which directors may sit.

    Complies | X Complies Partially | Explanation |

26. **That the Board of Directors meets frequently enough so that it may effectively perform its duties, at least eight times per year, following a schedule of dates and agenda established at the beginning of the year and allowing each director individually to propose items that do not originally appear on the agenda.**

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Complies | **X** Complies Partially | Explanation |

27. **That director absences only occur when absolutely necessary and are quantified in the Annual Corporate Governance Report. And when absences occur, that the director appoints a proxy with instructions.**

Complies | X Complies Partially | Explanation |

28. **That when directors or the secretary express concern regarding a proposal or, in the case of directors, regarding the direction in which the company is headed and said concerns are not resolved by the Board of Directors, such concerns should be included in the minutes, upon a request from the protesting party.**

Complies | Complies Partially | Explanation | Not Applicable | X

29. **That the company establishes adequate means for directors to obtain appropriate advice in order to properly fulfil their duties including, should circumstances warrant, external advice at the company's expense.**

Complies | X Complies Partially | Explanation |

30. **That, without regard to the knowledge necessary for directors to complete their duties, companies make refresher courses available to them when circumstances require.**

Complies | X Explanation | Not Applicable |

31. **That the agenda for meetings clearly states those matters about which the Board of Directors is to make a decision or adopt a resolution so that the directors may study or gather all relevant information ahead of time.**

When, under exceptional circumstances, the chairman wishes to bring urgent matters for decision or resolution before the Board of Directors which do not appear on the agenda, prior express agreement of a majority of the directors shall be necessary, and said consent shall by duly recorded in the minutes.

Complies | X Complies Partially | Explanation |

32. **That directors shall be periodically informed of changes in equity ownership and of the opinions of significant shareholders, investors and rating agencies of the company and its group.**

Complies | X Complies Partially | Explanation |

33. **That the chairman, as the person responsible for the efficient workings of the Board of Directors, in addition to carrying out his duties required by law and the Articles of Association, should prepare and submit to the Board of Directors a schedule of dates and matters to be considered; organise and coordinate the periodic**

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evaluation of the Board as well as, if applicable, the chief executive of the company, should be responsible for leading the Board and the effectiveness of its work; ensuring that sufficient time is devoted to considering strategic issues, and approve and supervise refresher courses for each director when circumstances so dictate.

Complies | **X** Complies Partially | Explanation |

34. **That when there is a coordinating director, the Articles of Association or the Board rules should confer upon him the following competencies in addition to those conferred by law: chair of the Board of Directors in the absence of the chairman and deputy chairmen, should there be any; reflect the concerns of non- executive directors; liaise with investors and shareholders in order to understand their points of view and respond to their concerns, in particular as those concerns relate to corporate governance of the company; and coordinate a succession plan for the chairman.**

Complies | X Complies Partially | Explanation | Not Applicable |

35. **That the secretary of the Board of Directors should pay special attention to ensure that the activities and decisions of the Board of Directors take into account the recommendations regarding good governance contained in this Code of Good Governance and which are applicable to the company.**

Complies | X Explanation |

36. **That the Board of Directors meets in plenary session once a year and adopt, where appropriate, an action plan to correct any deficiencies detected in the following:**

a) **The quality and efficiency of the Board of Directors' work.**

b) **The workings and composition of its committees.**

c) **Diversity of membership and competence of the Board of Directors.**

d) **Performance of the chairman of the Board of Directors and the chief executive officer of the company.**

e) **Performance and input of each director, paying special attention to those in charge of the various Board committees.**

In order to perform its evaluation of the various committees, the Board of Directors will take a report from the committees themselves as a starting point and for the evaluation of the Board, a report from the appointments committee.

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Every three years, the Board of Directors will rely upon the assistance of an external advisor for its evaluation, whose independence shall be verified by the appointments committee.

Business relationships between the external adviser or any member of the adviser's group and the company or any company within its group shall be specified in the Annual Corporate Governance Report.

The process and the areas evaluated shall be described in the Annual Corporate Governance Report.

Complies | X Complies Partially | Explanation |

37. **That if there is an executive committee, the proportion of each different director category must be similar to that of the Board itself, and its secretary must be the secretary of the Board.**

Complies | X Complies Partially | Explanation | Not Applicable |

38. **That the Board of Directors must always be aware of the matters discussed and decisions taken by the executive committee and that all members of the Board of Directors receive a copy of the minutes of meetings of the executive committee.**

Complies | X Complies Partially | Explanation | Not Applicable |

39. **That the members of the audit committee, in particular its chairman, are appointed in consideration of their knowledge and experience in accountancy, audit and risk management issues, and that the majority of its members be independent directors.**

Complies | X Complies Partially | Explanation |

40. **That under the supervision of the audit committee, there must be a unit in charge of the internal audit function, which ensures that information and internal control systems operate correctly, and which reports to the non-executive chairman of the Board or of the audit committee.**

Complies | X Complies Partially | Explanation |

41. **That the person in charge of the group performing the internal audit function should present an annual work plan to the audit committee, reporting directly on any issues that may arise during the implementation of this plan, and present an activity report at the end of each year.**

Complies | X Complies Partially | Explanation | Not Applicable |

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42. That in addition to the provisions of applicable law, the audit committee should be responsible for the following:

1. With regard to information systems and internal control:

a) Supervise the preparation and integrity of financial information relative to the company and, if applicable, the group, monitoring compliance with governing rules and the appropriate application of consolidation and accounting criteria.

b) Ensure the independence and effectiveness of the group charged with the internal audit function; propose the selection, appointment, re- election and dismissal of the head of internal audit; draft a budget for this department; approve its goals and work plans, making sure that its activity is focused primarily on material risks to the company; receive periodic information on its activities; and verify that senior management takes into account the conclusions and recommendations of its reports.

c) Establish and supervise a mechanism that allows employees to report confidentially and, if appropriate, anonymously, any irregularities with important consequences, especially those of a financial or accounting nature, that they observe in the company.

2. With regard to the external auditor:

a) In the event that the external auditor resigns, examine the circumstances which caused said resignation.

b) Ensure that the remuneration paid to the external auditor for its work does not compromise the quality of the work or the auditor's independence.

c) Insist that the company file a relevant fact with the CNMV when there is a change of auditor, along with a statement on any differences that arose with the outgoing auditor and, if applicable, the contents thereof.

d) Ensure that the external auditor holds an annual meeting with the Board of Directors in plenary session in order to make a report regarding the tasks accomplished and regarding the development of its accounting and risks faced by the company.

e) Ensure that the company and the external auditor comply with applicable rules regarding the rendering of services other than auditing, proportional limits on the auditor's

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billing, and all other rules regarding the auditor's independence.

Complies | X Complies Partially | Explanation |

43. **That the audit committee may require the presence of any employee or manager of the company, even without the presence of any other member of management.**

Complies | X Complies Partially | Explanation |

44. **That the audit committee be kept abreast of any corporate and structural changes planned by the company in order to perform an analysis and draft a report beforehand to the Board of Directors regarding economic conditions and accounting implications and, in particular, any exchange ratio involved.**

Complies | X Complies Partially | Explanation | Not Applicable |

45. **That the risk management and control policy identify, at a minimum:**

a) **The various types of financial and non-financial risks (among those operational, technological, legal, social, environmental, political and reputational) which the company faces, including financial or economic risks, contingent liabilities and other off-balance sheet risks.**

b) **Fixing of the level of risk the company considers acceptable.**

c) **Means identified in order to minimise identified risks in the event they transpire.**

d) **Internal control and information systems to be used in order to control and manage identified risks, including contingent liabilities and other off balance sheet risks.**

Complies | X Complies Partially | Explanation |

46. **That under the direct supervision of the audit committee or, if applicable, of a specialised committee of the Board of Directors, an internal control and management function should exist delegated to an internal unit or department of the company which is expressly charged with the following responsibilities:**

a) **Ensure the proper functioning of risk management and control systems and, in particular, that they adequately identify, manage and quantify all material risks that may affect the company.**

b) **Actively participate in the creation of the risk strategy and in important decisions regarding risk management.**

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c) **Ensure that the risk management and control systems adequately mitigate risks as defined by policy issued by the Board of Directors.**

Complies | X Complies Partially | Explanation |

47. **That members of the appointment and remuneration committee – or of the appointments committee and the remuneration committee if they are separate – are chosen taking into account the knowledge, ability and experience necessary to perform the duties they are called upon to carry out and that the majority of said members are independent directors.**

Complies | X Complies Partially | Explanation |

48. **That high market capitalisation companies have formed separate appointments and remuneration committees.**

Complies | X Explanation | Not Applicable |

49. **That the appointments committee consult with the chairman of the Board of Directors and the chief executive of the company, especially in relation to matters concerning executive directors.**

And that any director may ask the appointments committee to consider potential candidates he or she considers appropriate to fill a vacancy on the Board of Directors.

Complies | X Complies Partially | Explanation |

50. **That the remuneration committee exercises its functions independently and that, in addition to the functions assigned to it by law, it should be responsible for the following:**

a) **Propose basic conditions of employment for senior management.**

b) **Verify compliance with company remuneration policy.**

c) **Periodically review the remuneration policy applied to directors and senior managers, including remuneration involving the delivery of shares, and guarantee that individual remuneration be proportional to that received by other directors and senior managers.**

d) **Oversee that potential conflicts of interest do not undermine the independence of external advice rendered to the Board.**

e) **Verify information regarding remuneration paid to directors and senior managers contained in the various corporate documents, including the Annual Report on Director Remuneration.**

Complies | X Complies Partially | Explanation |

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51. **That the remuneration committee consults with the chairman and the chief executive of the company, especially in matters relating to executive directors and senior management.**

Complies | X Complies Partially | Explanation |

52. **That the rules regarding composition and workings of supervision and control committees appear in the rules governing the Board of Directors and that they are consistent with those that apply to mandatory committees in accordance with the recommendations above, including:**

a) **That they are comprised exclusively of non-executive directors, with a majority of them independent.**

b) **That their chairmen be independent directors.**

c) **That the Board of Directors select members of these committees taking into account their knowledge, skills and experience and the duties of each committee; discuss their proposals and reports; and detail their activities and accomplishments during the first plenary session of the Board of Directors held after the committee's last meeting.**

d) **That the committees be allowed to avail themselves of outside advice when they consider it necessary to perform their duties.**

e) **That their meetings be recorded and the minutes be made available to all directors.**

Complies | X Complies Partially | Explanation | Not Applicable |

53. **That verification of compliance with corporate governance rules, internal codes of conduct and social corporate responsibility policy be assigned to one or split among more than one committee of the Board of Directors, which may be the audit committee, the appointments committee, the corporate social responsibility committee in the event that one exists, or a special committee created by the Board of Directors pursuant to its powers of self-organisation, to which at least the following responsibilities shall be specifically assigned:**

a) **Verification of compliance with internal codes of conduct and the company's corporate governance rules.**

b) **Supervision of the communication strategy and relations with shareholders and investors, including small- and medium-sized shareholders.**

c) **The periodic evaluation of the suitability of the company's corporate governance system, with the goal that the company**

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promotes company interests and take into account, where appropriate, the legitimate interests of other stakeholders.

d) **Review of the company's corporate social responsibility policy, ensuring that itis orientated towards value creation.**

e) **Follow-up of corporate social responsibility strategy and practice, and evaluation of degree of compliance.**

f) **Supervision and evaluation of the way relations with various stakeholders are handled.**

g) **Evaluation of everything related to non-financial risks to the company, including operational, technological, legal, social, environmental, political and reputational risks.**

h) **Coordination of the process of reporting on diversity and reporting non-financial information in accordance with applicable rules and international benchmarks.**

Complies | X Complies Partially | Explanation |

54. **That the corporate social responsibility policy includes principles or commitments which the company voluntarily assumes regarding specific stakeholders and identifies, at a minimum:**

a) **The objectives of the corporate social responsibility policy and the development of tools to support it.**

b) **Corporate strategy related to sustainability, the natural environment and social issues.**

c) **Concrete practices in matters related to shareholders, employees, clients, suppliers, social issues, the natural environment, diversity, fiscal responsibility, respect for human rights, and the prevention of unlawful conduct.**

d) **Means or systems for monitoring the results of the application of specific practices described in the immediately preceding paragraph, associated risks, and their management.**

e) **Means of supervising non-financial risk, ethics, and business conduct.**

f) **Communication channels, participation and dialogue with stakeholders.**

g) **Responsible communication practices that impede the manipulation of data and protect integrity and honour.**

Complies | X Complies Partially | Explanation |

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55. **That the company reports, in a separate document or within the management report, on matters related to corporate social responsibility, following internationally recognised methodologies.**

Complies | X Complies Partially | Explanation |

56. **That director remuneration be sufficient in order to attract and retain directors who meet the desired professional profile and to adequately compensate them for the dedication, qualifications and responsibility demanded of their posts, while not being so excessive as to compromise the independent judgment of non-executive directors.**

Complies | X Explanation |

57. **That only executive directors receive remuneration linked to corporate results or personal performance, as well as remuneration in the form of shares, options or rights to shares or instruments whose value is indexed to share value, or long-term savings plans such as pension plans, retirement accounts or any other retirement plan.**

Shares may be given to non-executive directors under the condition that they maintain ownership of the shares until they leave their posts as directors. The foregoing shall not apply to shares that the director may be obliged to sell in order to meet the costs related to their acquisition.

Complies | X Complies Partially | Explanation |

58. **That as regards variable remuneration, the policies incorporate limits and administrative safeguards in order to ensure that said remuneration is in line with the work performance of the beneficiaries and is not based solely upon general developments in the markets or in the sector in which the company operates, or other similar circumstances.**

And, in particular, that variable remuneration components:

a) **Are linked to pre-determined and measurable performance criteria and that such criteria take into account the risk undertaken to achieve a given result.**

b) **Promote sustainability of the company and include non-financial criteria that are geared towards creating long term value, such as compliance with rules and internal operating procedures and risk management and control policies.**

c) **Are based upon balancing short-, medium- and long-term objectives, permitting the reward of continuous achievement over a period of time long enough to judge creation of sustainable**

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value such that the benchmarks used for evaluation are not comprised of one-off, seldom occurring or extraordinary events.

Complies | X Complies Partially | Explanation | Not Applicable |

59. **That a material portion of variable remuneration components be deferred for a minimum period of time sufficient to verify that previously established performance criteria have been met.**

Complies | X Complies Partially | Explanation | Not Applicable |

60. **That remuneration related to company results takes into account any reservations which may appear in the external auditor's report which would diminish said results.**

Complies | X Complies Partially | Explanation | Not Applicable |

61. **That a material portion of variable remuneration for executive directors depends upon the delivery of shares or instruments indexed to share value.**

Complies | X Complies Partially | Explanation | Not Applicable |

62. **That once shares or options or rights to shares arising from remuneration schemes have been delivered, directors are prohibited from transferring ownership of a number of shares equivalent to two times their annual fixed remuneration, and the director may not exercise options or rights until a term of at least three years has elapsed since they received said shares.**

The foregoing shall not apply to shares that the director may be obliged to sell in order to meet the costs related to their acquisition.

Complies | X Complies Partially | Explanation | Not Applicable |

63. **That contractual arrangements include a clause which permits the company to seek reimbursement of variable remuneration components in the event that payment does not coincide with performance criteria or when delivery was made based upon data later deemed to be inaccurate.**

Complies | X Complies Partially | Explanation | Not Applicable |

64. **That payments made for contract termination shall not exceed an amount equivalent to two years of total annual remuneration and that it shall not be paid until the company has verified that the director has fulfilled all previously established criteria for payment.**

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Complies | Complies Partially | x Explanation | Not Applicable |

Contracts with executive directors and senior officers signed as from 2011 provide severance pay for contractual termination equal to a maximum of two times annual salary in the event of termination of their relationship with the Company, provided that termination of the relationship is not the result of a breach attributable thereto or solely due to a voluntary decision thereof. This is the case of the Business CEO.

The Company included guarantee clauses of up to five years in contracts with its key officers in the year 2000. Subsequently, in 2001, when the current chairman & CEO joined Iberdrola, he received the treatment in effect for such officers, in order to achieve an effective and sufficient level of loyalty. As chairman & CEO, he is currently entitled to three times his annual salary.

The Board of Directors has analysed this situation, the treatment of which is necessarily collective in nature. Any reduction in the salary multiples would carry high costs for the Company, for which reason the Board of Directors believes that it is most appropriate not to change the status quo. Any proposed reduction in the salary multiples would have a higher cost for the Company, as the amount of the contingency will gradually decrease due to the passage of time, resulting in payments far smaller than any possible reduction in the agreed severance payment, taking into account the average age of the affected group and the low likelihood of the guarantees being enforced. In this regard, it should be pointed out that at year-end 2014, there were 62 officers with a right to severance pay greater than two years in case of termination. At year-end 2018, the number has decreased again to 29, without the enforcement of any guarantee clause.

H FURTHER INFORMATION OF INTEREST

1. If there is any aspect regarding corporate governance in the company or other companies in the group that has not been included in other sections of this report, but which is necessary in order to obtain a more complete and comprehensible picture of the structure and governance practices in the company or group, describe it briefly below.

2. This section may also be used to provide any other information, explanation or clarification relating to previous sections of the report, so long as it is relevant and not redundant.

   Specifically, state whether the company is subject to any corporate governance legislation other than that prevailing in Spain and, if so, include any information required under this legislation that differs from the data requested in this report.

3. The company may also state whether it voluntarily complies with other ethical or best practice codes, whether international, sector-based or other. In such a case, name the code in question and the date the company began following it. It should be specifically mentioned that the company adheres to the Code of Good Tax Practices of 20 July 2010.

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The annex contains a description of the attendance of each and every one of the directors at the meetings of the Board of Directors and its committees during financial year 2018. Proxies granted with specific voting instructions are considered to be attendances.

This Annual Corporate Governance Report was approved by the Board of Directors of the company at the meeting held on ___19/02/2019____.

State whether any directors voted against or abstained from voting on this report.

Yes □ No X

Name of director who has not voted for the approval of this report	Reasons (against, abstention, non-attendance)	Explain the reasons
Remarks		

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Annex to IAGC 2018:

SECTION C.1.26

Below is the data on attendance of each and every one of the directors at the meetings of the Board of Directors and its committees during financial year 2018. Proxies granted with specific voting instructions are considered to be attendances.

Directors	Board	Committees				
		EC	ARSC	AC	RC	SDC
MR JOSÉ IGNACIO SÁNCHEZ GALÁN	8/8	15/15	--	--	--	--
MR IÑIGO VÍCTOR DE ORIOL IBARRA	8/8	--	--	6/6	3/3	2/2
MS INÉS MACHO STADLER	8/8	15/15	--	--	6/6	--
MR BRAULIO MEDEL CÁMARA	3/3	--	--	--	--	4/4
MS SAMANTHA BARBER	8/8	15/15	--	--	--	7/7
MS MARÍA HELENA ANTOLÍN RAYBAUD	8/8	--	--	6/6	--	--
MR ÁNGEL JESÚS ACEBES PANIAGUA	8/8	15/15	--	6/6	--	--
MS GEORGINA KESSEL MARTÍNEZ	8/8	--	12/12	--	--	--
MS DENISE HOLT	8/8	--	12/12	--	--	--
MR JOSÉ W. FERNÁNDEZ	8/8	--	12/12	--	--	--
MR MANUEL MOREU MUNAIZ	8/8	15/15	--	--	3/3	5/5
MR XABIER SAGREDO ORMAZA	8/8	--	12/12	--	--	--
MR JUAN MANUEL GONZÁLEZ SERNA	8/8	--	--	--	6/6	--
MR FRANCISCO MARTÍNEZ CÓRCOLES	8/8	--	--	--	--	--
MR ANTHONY LUZZATO GARDNER	5/5	--	--	--	--	3/3

Notes:
The denominator indicates the number of meetings held during the period of the year in which the director served as such or as a member of the respective Committee.

- EC: Executive Committee.
- ARSC: Audit and Risk Supervision Committee.
- AC: Appointments Committee.
- RC: Remuneration Committee.
- SDC: Sustainable Development Committee (previously the Corporate Social Responsibility Committee).

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NON-FINANCIAL INFORMATION AND DIVERSITY 2018

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Iberdrola, S.A. and subsidiaries

Financial year 2018

Statement of Non-Financial Information

Sustainability Report 2018

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Introduction

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Iberdrola prepared its first *Sustainability Report* in 2004, thus adopting the best reporting and transparency practices. Since then, the company has become a world leader in defending a model of sustainable and environmentally-friendly growth. Continuing with its commitment, Iberdrola once again submits its ***Statement of Non-Financial Information. Sustainability Report 2018***, approved by its Board of Directors at the meeting thereof held on 19 February 2019, after a report from the Sustainable Development Committee of said Board of Directors.

Iberdrola publishes this report in order to give its Stakeholders a true and accurate view of its non-financial performance during financial year 2018, and in order for them to also understand both the group's social dividend and its contribution to the Sustainable Development Goals of the 2030 Agenda of the United Nations, in compliance with the commitments assumed in the By-Laws and in the *General Sustainable Development Policy*.

Iberdrola thus satisfies the growing demand by society in general, and shareholders and investors in particular, for companies to also explain their non-financial performance in the environmental, social and corporate governance (ESG) fields, with the understanding that good performance in these areas is an essential factor for the success of companies.

After the entry into force in 2014 of *Directive 2014/95/EU*, the Directive was transposed into the Spanish legal system in 2017 by means of *Royal Decree-law 18/2017, of 24 November*. In 2018, *Law 11/2018, of 28 December, on non-financial information and diversity* was approved. This new law expands the obligations to publish non-financial information, which includes environmental and social aspects, the management of people, diversity, respect for human rights and the fight against corruption and bribery, describing the risks, policies and results connected to these issues. This document covers the requirements arising from the entry into force of the new legal provision, forming an integral part of the company's management report.

This report has been prepared in accordance with the reporting requirements and recommendations of the *Consolidated Set of GRI Sustainability Reporting Standards 2016* (Comprehensive option) and the *Electric Utilities Sector Supplement*, both of the *Global Reporting Initiative* (GRI). As a new development, and to make the report easier to read, the report has been structured into topics instead of following the order of GRI indicators. References to the GRI indicators covered in each section have been added in the texts (e.g.: **102-7**).

Readers of the *Statement of Non-Financial Information. Sustainability Report 2018* can also refer to the *Annual Financial Report 2018* and the *Annual Corporate Governance Report 2018*, as well as the *Integrated Report. February 2019,* all of which are accessible in the "Annual Reports" section, and which contain additional useful information for a better understanding of Iberdrola's performance during the financial year and of its future prospects, based on the principles of transparency and disclosure set out in the *Stakeholder Relations Policy*.

Finally, to facilitate access to all available information, direct links are included throughout this report to both the corporate website (www.iberdrola.com) and to other pages of the group, as well as to official documents published thereon in PDF format. To open these links, click with the left button of your mouse directly on texts identified with the following format: link example.

Notes:

- The report boundary is described in chapter III. About the report in this document.
- The figures included in this translation follow the customary English convention, with figures in thousands separated by a comma (,) and decimals indicated by a full stop (.).

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Letter from the Chairman

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The Sustainability Report I have the pleasure of presenting to you is intended to summarise the most important information on the company's last 12 months. As you will find, over the course of this financial year Iberdrola has achieved major milestones that represent great progress in our plans across all countries and all areas of the group's activity, combining financial results with the sustainable creation of value for the company.

As is customary, this report is structured following the Global Reporting Initiative (GRI) guidelines, providing a detailed and transparent presentation of our performance in the financial, social and environmental spheres.

In 2018, we made significant progress in meeting our investment plan to 2022. Over 5,300 million euros of gross investment represents one of the highest levels of investment by the group in a single financial year, which has enabled us to shorten the term for achieving our goals by almost a year.

Iberdrola's activities in 2018 show that our group has the people, the technology, the resources, the experience and the knowledge required to lead state-of-the-art energy projects worldwide. A clear example of this is the Wikinger offshore wind farm, which we have inaugurated in the German Baltic Sea and to which there will soon be added the Baltic Eagle and Wikinger Süd offshore wind farms, also in German waters.

In this technological area, we have started construction in the British North Sea of what will be one of the largest wind farms in the world, East Anglia One, capable of supplying entirely emission-free energy to approximately one-and-a-half million people. And we are developing other projects in the United States (Vineyard, Kitty Hawk and Massachusetts Zone III) and in France (Saint Brieuc), which strengthen our strong commitment to offshore wind power.

We also completed other highly significant projects in 2018, such as the Western Link high-voltage direct current cable connecting Scotland and Wales, which transports energy via the longest undersea electric cable in the world, and the Santiago and Hermosillo photovoltaic power stations in Mexico, which will avoid the atmospheric emission of around 550,000 tons of CO_2 per year. In Spain, we have achieved the full digitalization of our distribution network via the STAR project, which also involved the installation of 11 million smart meters allowing for improved service and network efficiency and the integration of more renewable energies and of new electric mobility solutions.

At the same time, we have made headway in the development of major initiatives that we hope to complete in the coming years, such as the NECEC project (the new transmission line between Quebec and Massachusetts, which will supply 100% renewable energy to 1.2 million homes), the Támega hydroelectric pumping complex (one of the most significant energy projects in Portuguese history), and increased commercial activity in countries like France and Italy.

All these advances strengthen the wager that we have been making at Iberdrola for almost two decades, a commitment to make the investment in renewable energies, storage, smart grids and new customer services required to lead the sustainable and efficient energy transition that our sector requires.

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Record of results

The information included in this Report also shows that our firm commitment to a cleaner and more sustainable world is fully compatible with growing the company's operating and financial parameters and profitability.

Stimulated by the strong performance of all our businesses across all countries and by the progress of our plans, our revenue rose by 12.2% to overcome 35,000 million euros, EBITDA increased by 27.7% to 9,349 million euros and net profit grew by 7.5% in comparison with the previous year, to 3,014 million euros.

The positive performance turned in by the company during the year allowed for a proposal to the shareholders of an increase in shareholder remuneration of almost 7.7%, to 0.351 euro per share. If we add to this the performance of the share price on the financial markets, the total return on our shares in 2018 stands at 14%, compared to -11.5% for the Ibex-35 index and -11.3% for the Eurostoxx 50. This placed Iberdrola among the four largest electricity companies worldwide by market capitalisation at year-end.

Strengthening future growth

We will continue to progress in the achievement of our plans over the coming years, with the development of more renewable energies (onshore and offshore wind, photovoltaic and hydroelectric), more smart grids and new products and services for our customers.

Specifically, in Spain and within the framework of the opportunities offered by the energy transition, we are already substantially increasing and will continue to increase our renewable capacity, with the installation of new photovoltaic plants and wind farms: in Brazil, we will continue to extend our transmission and distribution grid infrastructure and to invest in clean energy; in the United Kingdom and the United States, we will move forward with our plans for transmission and distribution grids and the installation of new onshore and offshore wind farms; and in Mexico we are building plants to increase our installed combined cycle and renewables capacity, which will help to provide a more stable and secure system. We will also make a major commitment to the sale of electricity, gas and products and services in these five countries, as well as in other European countries in which we already operate.

The aim is to continue growing and to do so in the most profitable, but at the same time sustainable, manner. If anything distinguishes us at Iberdrola, it is our close link to sustainability in the broadest sense of the word, because we are convinced that it is essential to harmonise our commitment to state-of-the-art technology with improving people's daily lives and protecting the environment.

Increase in social dividend

In 2018, we reformed our corporate governance system in order to formalise and develop Iberdrola's commitment to compliance with the United Nations Sustainable Development Goals (SDGs), which have been fully integrated into the company's sustainability policies and By-Laws as part of our Social Dividend.

Of note in this regard is the fundamental contribution that our work as an electricity company makes to SDGs 7 (affordable and clean energy) and 13 (climate action), among others. In 2018, we continued to increase our emission-free installed capacity up to approximately 33,000 MW, 68% of our total capacity, and we recorded a CO_2 emission intensity of 82 grams per kilowatt-

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hour in Spain, well below that of other Spanish companies and approximately 75% less than the average for European companies.

As a socially responsible company, we also contribute actively to the other SDGs, including those relating to decent work and economic growth (SDG 8), gender equality (SDG 5), industry, innovation and infrastructure (SDG 9), sustainable cities and communities (SDG 11) and partnerships for the goals (SDG 17).

We continued to promote the creation of high-quality employment in 2018, with around 3,500 new hires and more than 1,400 recruitments of young trainees. Our workforce today amounts to 34,000 people, to whom we can add the other 390,000[1] people that Iberdrola provides with employment through its worldwide activities. And we have continued to encourage the professional development and training of our team, with more than one-and-a-half-million hours of training given (47 hours per employee, four times more than the European average) and 2,700 internal promotions.

At the same time, we have kept firm in our commitment to equality between men and women in all areas. For example, there is no gender-based salary gap at the Iberdrola group, and we are also the Ibex-35 company with the largest number of women on its Board of Directors, with 50% of the external directors being women.

We have also reinforced our commitment to the economic development of all the countries in which we operate, through our purchases from local suppliers (close to 8,000 million euros in 2018) as well as our tax contribution (7,939 million euros). Overall, for every euro of profit that Iberdrola makes, the company has generated more than 10.3 euros in the GDP of these countries[1].

Iberdrola has likewise continued to strengthen investment in innovation (with around 270 million euros invested during the financial year) for the development of new energy transition-related technologies. This has cemented our position in the main indices in this area.

2018 has also seen strong development in the work of our Foundations worldwide, which have increased their activities in areas such as social action and solidarity, art and culture, biodiversity and training, research and development of young talent in order to provide help to those who most need it, conserve and value our heritage and respond to the main challenges that society is facing. We are proud that our growth takes place within a framework of solidarity, collaboration and dialogue with disadvantaged groups.

At Iberdrola we aim to be ever closer to people. Contributing to their wellbeing and progress and preserving the planet on which we all live are the main hallmarks of our identity.

It is precisely for this reason that we have defined our purpose –a statement that summarises our main raison d'être, the motivation for our activities and the value that Iberdrola contributes to society–, which has been established as follows: "to continue building together each day a healthier, more accessible energy model, based on electricity".

This purpose is based on three fundamental pillars that constitute the updated values of the Iberdrola group: "Sustainable Energy, Integrating Force and Driving Force", which are underpinned by essential elements such as ethics, transparency, diversity, dialogue, innovation, diligence and foresight.

[1] Data from PwC report (January 2019) based on figures from 2017.

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Iberdrola is thereby deepening its commitment to achieving the Sustainable Development Goals and to the creation of value for all Stakeholders, the basis of our Social Dividend.

From this corporate perspective and naturally through our daily management, we will continue working together, with conviction and commitment, to contribute to a world that is better, more equitable and with more and better opportunities for all.

Ignacio S. Galán,
Chairman & CEO of Iberdrola

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Corporate Reputation: Recognitions, Presence in External Indexes and External Evaluations

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	Indexes or organisations	Rating or status[2]
	Dow Jones Sustainability World Index 2018	Selected in utilities sector. Member in all editions
	Global 100	Iberdrola selected
	FTSE4Good	First utility with nuclear assets selected for the index for 8 years in a row
	CDP Climate Change Index 2018	A-
	CDP Supply-Chain	A-List, the highest category
	MSCI Global Sustainability Index Series	Iberdrola selected AAA
	Euronext Vigeo Eiris index: World 120, Eurozone 120 & Europe 120	Iberdrola selected
	Sustainability Yearbook 2018	Classified as “Silver Class” in the electricity sector

[2] As at the date of approval of this report by the Board of Directors.

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	Indexes or organisations	Rating or status[2]
	MERCO 2018	mercoEmpresas: Leader among Spanish utilities: energy, gas and water.
	ET Global 800 ET Europe 300	Iberdrola selected
	2018 World's Most Ethical Companies, ranking prepared by the Ethisphere Institute	Only Spanish utility present in the ranking. Selected for the fifth consecutive year as one of the most ethical companies in the world
	Fortune Global 500	Iberdrola selected
	Stoxx Global ESG Leaders/Eurostoxx Sustainability 40/Eurostoxx ESG Leaders 50	Iberdrola selected
	InfluenceMap	Iberdrola among top 25 scoring companies
	Bloomberg Gender-Equality Index 2019	Only Spanish electrical utility included in the 2019 ranking. Selected in recognition for its equal opportunity and gender equality policies

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	Indexes or organisations	Rating or status[2]
Corporate Responsibility Prime rated by ISS-oekom	ISS-Oekom	Iberdrola classified as Prime
ecoact	EcoAct	Iberdrola classified as top utility and top 10 in the world in the 2018 sustainability reporting performance report
Forbes 2018 GLOBAL WORLD'S LARGEST PUBLIC COMPANIES 2000	Forbes	Iberdrola selected in Forbes 2018: GLOBAL World's Largest Public Companies 2000
ECPI Sense in sustainability	ECPI	Iberdrola selected in various sustainability indices
Energy Intelligence EI NEW ENERGY GREEN UTILITIES REPORT	Energy Intelligence	Iberdrola among the top three utilities in the EI New Green Utilities Report 2018

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I. About Iberdrola

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I.1. Profile of the Company

- Purpose and values
- Presence by areas of activity
- Main products and services: the Iberdrola brand
- Key operating figures
- Corporate and governance structure, ownership and legal form

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Purpose and values

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In 2018 Iberdrola began a process of articulating a unique and relevant Corporate Purpose going beyond the traditional concept of mission and vision to describe its long-term raison d'être and contribute to the cohesion, differentiation and generation of trust among all the Stakeholders.

The proposal reflects and confronts the main social trends, the major economic, social and environmental challenges and expectations of the Stakeholders, and also defines Iberdrola's role in society as an agent for change and transformation of the electricity sector.

Iberdrola's Corporate Purpose has thus been defined as follows:

"To continue building together each day a healthier, more accessible energy model, based on electricity".

This Purpose conveys:

- The Iberdrola group's commitment to what today constitutes an urgent social need: the transformation of the current energy model towards a new model that prioritises the well-being of people and the preservation of the planet.

- The Iberdrola group's commitment to a real and global energy transition based on decarbonisation and electrification of the energy sector and of the economy as a whole decidedly contributes to the fight against climate change, and at the same time favours the creation of new opportunities for economic, social and environmental development.

- The foresight of the Iberdrola group, spending more than a decade working to make this transformation a reality, driving the development of clean energy throughout the world, and continuing to invest its resources to reach the objectives of the Paris Agreement.

- The Iberdrola group's determination to continue building a more electricity-based energy model, which reduces dependency on the use of fossil fuels and generalises the use of renewable energy sources, the efficient storage of energy, smart grids and digital transformation.

- The conviction that a more electricity-based energy model is also healthier for people, whose health and well-being in the short term depend on the environmental quality of their surroundings (air, water, food, biodiversity, etc.) and, in the long term, to the success of the fight against climate change.

- The aspiration for the new energy model to also be more accessible to all, thus favouring inclusiveness, equality, equity and social development.

- The desire to continue building this new model in collaboration with all involved players: governments, institutions, companies, tertiary sector, citizens, etc., because this is a tremendous shared challenge to ensure the present and future of the societies in which we live.

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This Corporate Purpose is aligned with the social dividend strategy, the principles of Sustainable Development, Corporate Social Responsibility, and thus the 2030 Agenda - Sustainable Development Goals of the United Nations.

To attain said Purpose, the Iberdrola group condensed its corporate values into the following three concepts:

- **Sustainable energy:** because the Iberdrola group seeks to always be a model of inspiration, creating economic, social and environmental value in all of its surroundings, and with the future in mind.

  This value expresses the commitment to:

  - Responsibility
  - Ethics
  - Safety
  - Transparency

- **Integrating force:** because the Iberdrola group works with force and responsibility, combining talents, for a Purpose that is to be achieved by all and for all.

  This value expresses the commitment to:

  - Diversity
  - Dialogue
  - Empathy
  - Solidarity

- **Driving force:** the Iberdrola group makes small and large changes into reality in order to ease the life of people. And it performs this work while always seeking to continually improve, efficiently and with high self-imposed standards.

  This value expresses the commitment to:

  - Innovation
  - Simplicity
  - Agility
  - Foresight

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Presence and areas of activity

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Iberdrola and its subsidiaries and affiliates carry out their activities in almost thirty countries. However, for operational and economic/financial purposes, Iberdrola concentrates a large portion of its business activities in five principal countries: Spain, the United Kingdom, the United States, Brazil and Mexico. It also engages in activities in Germany, Portugal, Italy and France, among other countries.

The following infographic shows the group's principal areas of activity. The countries in which it operates, the activities performed in each of them and the criteria used to define the significance thereof are set forth in the "Scope of Information" section of this report.

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Main products and services: the Iberdrola brand

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The main product that Iberdrola makes available to its customers is electricity, but the group also offers a broad array of products, services and solutions in the areas of:

- Protection of the environment: renewable energy and sustainable mobility.
- Quality of electricity supply and safety of facilities.
- Distribution and sale of gas.
- Improvement in the consumer's quality of life, peace of mind and safety.
- Efficiency, digitalization and energy services.
- Assembly of electricity infrastructure.
- Comprehensive management of energy facilities and supplies.

More detailed information in this regard can be found in the "Group Structure" section of the website.

The "Iberdrola" brand

The "Iberdrola" brand is a reflection of its corporate Purpose and Values (see the Purpose section of this chapter I.1), is based on the company's strategy, which gives it credibility and strength, and conveys its commitment: the sustainable creation of value for all of its Stakeholders, contributing to the development of the communities in which we do business and to the well-being of people, providing a high-quality service and offering environmentally-friendly, efficient and innovative energy solutions.

Iberdrola knows how to identify and adjust to the needs of each of the countries in which it does business. The company has used its experience in each market to strengthen its brand value, and beyond the location of the business, it has created a brand culture based on a global/local balance. Iberdrola has the brand names listed in the table below at year-end 2018:

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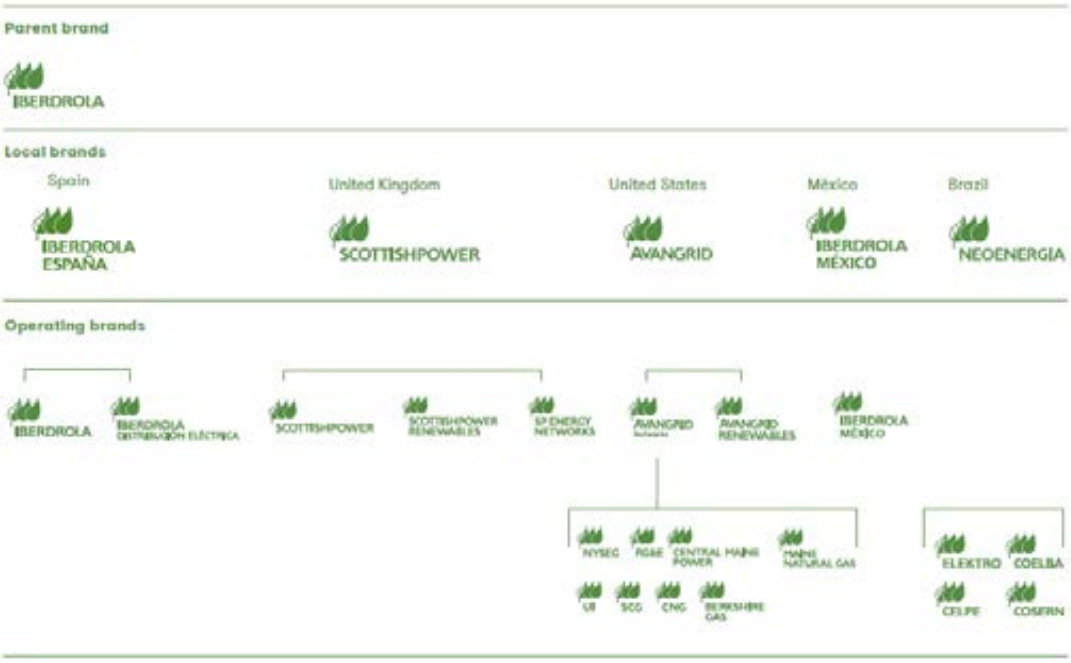

The table above shows the most important brands having the largest operational and market presence in each country. The company has other brands at the local and business level.

Key operating figures[3]

Installed capacity, output, networks and users

At year-end 2018, Iberdrola had 47,448 MW of installed capacity, 68.2% of the total corresponding to emission-free technologies.

EU1

Installed capacity by energy source (MW)	2018	2017	2016
Renewables	29,177	29,113	27,813
Onshore wind	*15,671*	*15,533*	*14,820*
Offshore wind	*544*	*544*	*194*
Hydroelectric	*12,252*	*12,513*	*12,378*
Mini-hydro	*303*	*303*	*302*
Photovoltaic solar and other	*406*	*219*	*120*
Nuclear	3,177	3,177	3,410
Combined cycle	12,885	13,985	13,637
Cogeneration	1,335	1,299	1,315
Coal	874	874	874
Total	**47,448**	**48,447**	**47,049**

Production for the year was 145,597GWh, showing growth of 5.9%:

EU2

Net energy output by source of energy (GWh)	2018	2017	2016
Renewables	61,754	50,747	56,443
Onshore wind	*36,605*	*33,878*	*32,162*
Offshore wind	*1,642*	*821*	*728*
Hydroelectric	*22,416*	*15,321*	*22,597*
Mini-hydro	*670*	*394*	*686*
Photovoltaic solar and other	*421*	*333*	*270*
Nuclear	23,536	23,254	24,381
Combined cycle	50,654	54,053	50,892
Cogeneration	8,016	6,853	6,947
Coal	1,637	2,642	3,803
Total	**145,597**	**137,549**	**142,466**

[3] Operating figures include figures corresponding to partially owned and uncontrolled companies, applying the percentage interest.

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The following table shows the net output for 2018 broken down by country and technology type. 42.4% of generation was from renewable sources, an increase during the financial year of 5 percentage points over the prior year.

2018 net output by technology and country (GWh)	Spain	United Kingdom	United States	Brazil	Mexico	Other countries
Renewables	25,973	5,146	17,261	10,099	1,095	2,180
Nuclear	23,536	0	0	0	0	0
Combined cycle	4,092	5,530	8	3,553	37,470	0
Cogeneration	2,472	0	2,713	0	2,831	0
Coal	1,637	0	0	0	0	0
Total	**57,711**	**10,675**	**19,983**	**13,652**	**41,396**	**2.180**

In 2018, 93% of production was achieved using local sources of energy[4], as shown in the following table:

2018 production with local sources of energy	(%)
Spain	86
United Kingdom	100
United States	86
Brazil	100
Mexico	100
Other countries	100
Iberdrola group average	**93**

At the end of financial year 2018, the companies of the group, as a whole, handled 30.6 million electricity supply points (30.3 in 2017). More than 90% are residential customers.

EU3 102-6

Electricity users (%)	2018	2017	2016
Residential	90.2	90.1	90.2
Industrial	0.9	1.0	1.0
Institutional	0.9	1.0	0.9
Commercial	5.9	5.8	5.8
Other	2.1	2.1	2.1
Total	**100**	**100**	**100**

Users who are producers (no.)	2018	2017	2016
Users that are also producers of electricity	87,081	72,073	83,626

[4] All renewable and non-renewable sources available in the country, as well as nuclear fuel acquired from the Spanish company Enusa, are considered local sources of energy.

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The group operates more than 1.1 million kilometres of transmission and electricity distribution lines.

The following table shows the detail by type of line. Due to the nature of the electricity systems in each country, the voltage levels used to classify lines as transmission or distribution are different. In Brazil, the United States and in the United Kingdom, transmission lines are deemed to be those with a nominal voltage equal to or greater than 30 kV; and in Spain, by law, Iberdrola does not have transmission.

EU4

Power lines[5] (Km)	2018	2017	2016
Transmission			
Overhead	17,765	48,088	48,032
Underground	1,244	1,999	987
Total	**19,009[6]**	**50,087**	**49,019**
Distribution			
Overhead	962,940	911,474	875,140
Underground	191,723	195,050	193,285
Total	**1,154,663**	**1,106,524**	**1,068,425**

During financial year 2018, the companies of the group produced electricity with a volume of 145,970 GWh, distributed 233,435 GWh of electricity, and supplied 126,341 GWh of gas.

Products or services provided	2018	2017	2016
Net electricity production (GWh)	145,970	137,549	142,466
Electric power distributed (GWh)	233,435	230,151	229,920
Gas supplies to users (GWh)	126,341	122,010	127,425

Operations (locations)

The Iberdrola group has identified more than 1,200 sites at which the company operates. In order to properly report on such a large number of them from the viewpoint of the disclosures required by the GRI Standards, rationalisation criteria have been used to address them; accordingly, the number of Iberdrola's locations of operation at year-end 2018 is deemed to be 150 for purposes of this report.

Detailed information on these locations and on the criteria used to define them can be found in Annex 1 Supplementary Information.

[5] Lengths of lines are calculated by circuit, regardless of the number of circuits for each power line. A double-circuit 5-km line is considered to be 10 km.
[6] Since 2018 subtransmission in the United States and Brazil is recorded as distribution network. Until then it was recorded as transmission network.

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Employees

The group had 34,078 employees at year-end 2018, with the following breakdown by country.

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Employees[7]	2018	2017	2016
Spain	9,822	10,296	10,395
United Kingdom	5,611	6,067	6,373
United States	6,449	6,561	6,849
Brazil	10,749	10,096	9,429
Mexico	1,112	944	874
Other countries	335	291	162
Total	**34,078**	**34,255**	**34,082**

The distribution by types of employment and contract is reflected in the following table

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Employees[8]	2018			2017			2016		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
By employment type									
Full-time	25,015	7,339	32,354	26,050	7,182	33,232	25,720	7,252	32,972
Part-time	1,102	622	1,724	179	844	1,023	205	905	1,110
By type of contract									
Permanent	25,840	7,890	33,730	26,073	7,965	34,038	25,531	8,018	33,549
Temporary	277	71	348	156	61	217	394	139	533
Total	**26,117**	**7,961**	**34,078**	**26,229**	**8,026**	**34,255**	**25,925**	**8,157**	**34,082**

Policies regarding subcontracted personnel are set out in the Creation of Employment and Salaries section of Chapter II-1 Sustainable Economic Growth.

[7] The figures in the table reflect the number of employees at year-end 2018, without distinguishing between full-time/part-time employees. To perform statistical analysis regarding labour costs, it is recommended to use the number of employees in terms of Full Time Equivalents (FTEs): 28,355 in financial year 2016, without including the consolidation of Neoenergia, 33,772 in financial year 2017 and 33,747 in financial year 2018.

[8] The boundary is defined in Chapter IV. About the Report in this document. Information by geographic area can be found in Annex 1 Supplementary Information.

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Revenue, equity and assets

The main figures relating to turnover, value of assets and liabilities and composition of consolidated property, plant and equipment are the following:

Net sales (Net revenue) (€ millions)	2018	2017	2016
Iberdrola consolidated total	**35,076**	**31,263**	**29,216**

Capital structure, broken down in terms of debt and equity (€ millions)	2018	2017	2016
Equity of controlling company	36,582	35,509	36,691
Bank borrowings, gross	37,990	37,115	32,025

Assets (€ millions)	2018	2017	2016
Iberdrola consolidated total assets	**113,038**	**110,689**	**106,706**
Gross property, plant and equipment in operation	97,911	94,928	96,585
Accumulated amortisation and provisions	(39,394)	(37,627)	(39,242)
Property, plant and equipment in operation	**58,517**	**57,301**	**57,343**
Gross property, plant and equipment in progress	7,651	6,837	6,727
Provisions	(59)	(56)	(235)
Property, plant and equipment in progress	**7,592**	**6,781**	**6,492**

Information on the key figures by geographic area can be found in Annex 1 Supplementary Information.

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Corporate and governance structure, ownership and legal form

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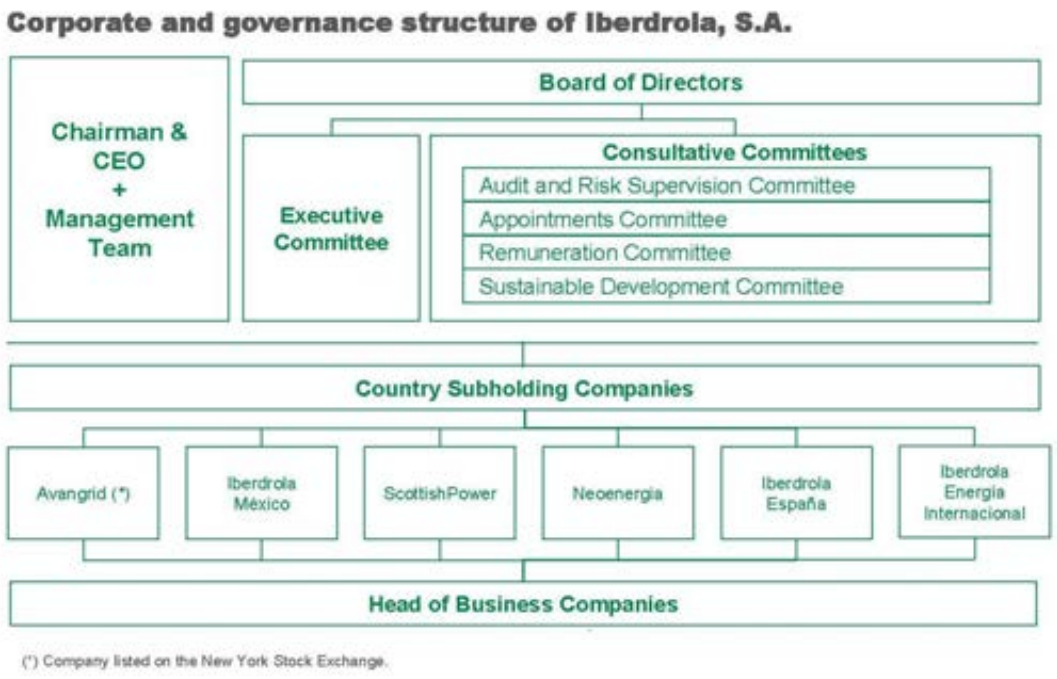
Iberdrola is a *sociedad anónima* (public limited company) organised under Spanish law.

The corporate and governance structure of the company and of the group, which forms an essential part of the company's Corporate Governance System, is reflected in the following chart:



Such corporate and governance structure of the company and of the group is defined on the grounds described below, which differentiate between the duties of day-to-day administration and effective management, on the one hand, and those of supervision and control, on the other:

a) Vesting in the company's Board of Directors of powers regarding approval of the strategic goals of the group and the definition of its organisational model, as well as supervision of compliance therewith and development thereof.

b) Assumption by the chairman & CEO, with the technical support of the Operating Committee, by the Business CEO, with overall responsibility for all the businesses of the group, and by the rest of the management team, of the duty of organisation and strategic coordination within the group.

c) The function of strategic organisation and coordination is also strengthened through country subholding companies in those countries in which the Board of Directors of the company has so decided. These entities group together equity stakes in the energy head of business companies carrying out their activities within the various countries in which the group does business. This structure is rounded out with a country subholding company that groups together certain equity interests in other entities, including the non-

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energy head of business companies, with a presence in various countries. One of the main functions of the country subholding companies is to centralise the provision of services common to the head of business companies, always in accordance with the provisions of applicable law and especially the legal provisions regarding the separation of regulated activities.

Country subholding companies have boards of directors that include independent directors and their own audit committees, internal audit areas and compliance units or divisions.

Country subholding companies are responsible for disseminating, implementing and supervising the general strategy and the basic management guidelines at the country level.

d) The group's listed country subholding companies (currently Avangrid, Inc.) have a special framework of strengthened autonomy that covers regulatory matters, related-party transactions and management.

In particular, all transactions between the listed country subholding company and the subsidiaries thereof with the other companies of the group require approval by a committee of the Board of Directors of said country subholding company made up solely of directors not linked to Iberdrola.

The special framework of strengthened autonomy is implemented in the respective contracts signed by the company with each listed country subholding company.

e) The head of business companies of the group assume decentralised executive responsibilities, enjoy the independence necessary to carry out the day-to-day administration and effective management of each of the businesses and are responsible for the day-to-day control thereof.

These head of business companies are organised through their respective boards of directors, which include independent directors where appropriate, and their own management decision-making bodies; they may also have their own audit committees, internal audit areas and compliance units or divisions.

The corporate configuration and governance principles described above make up the corporate and governance structure of the group. This structure operates jointly with the group's Business Model (see Chapter I.3. Business Model and Strategy), which entails the global integration of the businesses and aims to maximise the operational efficiency of the various business units. It also ensures the dissemination, implementation and monitoring of the general strategy and of the basic management guidelines for each of the businesses, mainly through the exchange of best practices among the various companies of the group, without reducing the decision-making autonomy of each of them.

Within the group's corporate and governance structure, the Operating Committee is an internal committee of the company, the essential function of which is to provide technical, information and management support to the chairman & CEO, in order to facilitate the development of the group's business model.

The organisational model is structured into the decentralised business units and the centralised corporate governance and control functions, which can be viewed in the "Group Structure" section of the corporate website.

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Governance structure

Board of Directors

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Iberdrola's Board of Directors is made up of 14 members:

Board of Directors[9]					
Position	Director	Status	Nationality	Date of last appointment	Ending date
Chairman & CEO	José Ignacio Sánchez Galán	Executive	Spain	21-05-2001	27-03-2019
Vice Chair	Inés Macho Stadler	Other external	Spain	07-06-2006	08-04-2020
Director	Íñigo Víctor de Oriol Ibarra	Other external	Spain	26-04-2006	08-04-2020
Director	Samantha Barber	Independent	United Kingdom	31-07-2008	08-04-2020
Director	María Helena Antolín Raybaud	Independent	Spain - France	26-03-2010	27-03-2019
Director	Ángel Jesús Acebes Paniagua	Independent	Spain	24-04-2012	27-03-2019
Director	Georgina Kessel Martínez	Independent	Mexico	23-04-2013	13-04-2022
Director	Denise Holt	Independent	United Kingdom	24-06-2014	27-03-2019
Director	José W. Fernández	Independent	United States	17-02-2015	27-03-2019
Director	Manuel Moreu Munaiz	Independent	Spain	17-02-2015	27-03-2019
Director	Xabier Sagredo Ormaza	Independent	Spain	08-04-2016	08-04-2020
Director	Juan Manuel González Serna (1)	Independent	Spain	31-03-2017	31-03-2021
Director	Francisco Martínez Córcoles	Executive	Spain	31-03-2017	31-03-2021
Director	Anthony L. Gardner	Independent	United States	13-04-2018	13-04-2022

Secretary (non-member): Julián Martínez-Simancas Sánchez.
Deputy Secretary (non-member): Santiago Martínez Garrido.
Legal Counsel (non-member): Rafael Mateu de Ros Cerezo.
(1) Juan Manuel González Serna is the lead independent director.

The composition of the Board of Directors is shown below:

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Composition of the Board of Directors	2018		2017		2016	
	no.	%	no.	%	no.	%
By gender						
Men	9	64	9	64	9	64
Women	5	36	5	36	5	36
By age group						
Up to 30 years old	0	0	0	0	0	0
Between 31 and 50 years old	2	14	2	14	3	21
Over 50 years old	12	86	12	86	11	79
Number of members	**14**	**100**	**14**	**100**	**14**	**100**

[9] As at the date of approval of this report by the Board of Directors.

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Executive Committee

102-22 102-23

The Executive Committee has all the powers inherent to the Board of Directors, except for those powers that may not be delegated pursuant to legal or by-law restrictions.

The core activities of this Committee consist of assisting the Board of Directors in the on-going supervision of the implementation of the strategy, compliance with objectives and the governance model and submitting proposals to the Board of Directors or making decisions in urgent cases regarding all strategic issues, investments and divestitures that are significant for the company or its group, assessing their alignment with the budget and the strategy of the company, and analysing and monitoring business risks, taking into consideration the environmental and social aspects thereof.

Executive Committee		
Position	**Director**	**Status**
Chairman	José Ignacio Sánchez Galán	Executive
Member	Inés Macho Stadler	Other External
Member	Ángel Jesús Acebes Paniagua	Independent
Member	Manuel Moreu Munaiz	Independent
Member	Samantha Barber	Independent

Secretary (non-member): Julián Martínez-Simancas Sánchez.

Chairman & CEO

The chairman of the Board of Directors is also the chief executive of Iberdrola. At the General Shareholders' Meeting held on 27 March 2015, the shareholders approved the re-election of the chairman & CEO by a large majority. Such proposal was supported by two reports: one prepared by a prestigious independent expert (PricewaterhouseCoopers Asesores de Negocios, S.L.) and the other by the Board of Directors itself. It was also favourably reported upon by the former Appointments and Remuneration Committee.

The initiative for such proposal was led by the lead independent director at the time, who called the independent directors to a meeting on 15 December 2014. At such meeting, it was unanimously resolved to submit the proposal to the Board of Directors and to ask PricewaterhouseCoopers Asesores de Negocios, S.L. to prepare a report thereon. In light of the unanimous opinion of the independent directors, of the report of the Appointments and Remuneration Committee and of the content of the independent expert's report, the Board submitted the corresponding proposed resolution to the shareholders at the General Shareholders' Meeting on the basis of:

- The demonstrated capability and competence of the candidate to hold such position and the specific provisions of the Corporate Governance System of the company, whose decentralised governance model requires a leadership that necessarily entails a high level of professional commitment and a level of depth, presence and involvement in such person's work that means that whoever takes on such duties will be considered an "executive" of the company.
- The practical application of such governance model, which confirms the validity thereof, reflects a better economic and financial performance than that of comparable companies and has historically been supported by the shareholders at General Shareholders' Meetings and by the capital markets.

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- The sound checks and balances system implemented by the company, which: (i) separates oversight and management duties; (ii) ensures that there is a majority of independent directors; (iii) ensures a high level of professional diversity and diversity of gender and origin on the Board of Directors; (iv) grants very significant powers to the lead independent director; (v) establishes a succession plan for the chairman; (vi) decentralises the executive duties of the group among the various country subholding and head of business companies; and (vii) makes Iberdrola, S.A. a holding company with duties that relate solely to the strategic supervision and coordination of the businesses conducted by the group.

The agenda for the General Shareholders' Meeting to be held on 29 March 2019 once again contains a proposal for the re-election thereof. The procedure followed for said proposal is similar to the one followed in 2015. The rationales for the proposal are set out in reports (PwC and Board of Directors) and are the following:

- Iberdrola, S.A. has performed better than comparable companies and the EURO STOXX UTILITIES index during the 2001-2017 period. In other words, from this viewpoint, there are no reasons justifying a change in the model and leadership.
- The group's model of governance and organisation was approved by the shareholders at a General Meeting and is based on the separation of the duties of strategy and supervision (essentially entrusted to Iberdrola, S.A., to its Board, to its management team and to its organisation) from the duties of management (entrusted to each of the head of business companies heading up the various businesses).
- The By-Laws of Iberdrola, S.A. provide checks-and-balances that avoid the risk of accumulation of powers:
    a) There is a majority of independent directors, and the By-Laws do not allow the Board of Directors to make or propose appointments that break such majority. This commitment also covers the committees.
    b) The Board of Directors has a diverse composition of professional profiles, gender, seniority and nationalities. All non-executive directors are required to have a high level of dedication and to be a member of one of the committees.
    c) The Board of Directors has a lead independent director (*consejero coordinador*) with broad powers.
        - Call to and planning of the agenda for the meeting of the Board of Directors.
        - Coordination of non-executive directors.
        - Management of the re-election, evaluation and succession of the chairman & CEO.
        - Contacts with shareholders.
- At the time of preparation of this report, Iberdrola is in the second year of implementation of its 2018-2022 Strategic Plan, presented in February 2018 to the international financial community, and which has been broadly supported by the market. The company's evolution to date reflects an extremely high level of compliance with the defined objectives.

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The company also has a Business CEO (*consejero director-general de negocios*), who has been specially appointed by the Board of Directors, with responsibility for all the businesses of the group in order to support the chairman & CEO (together with the management team) in the function of strategic organisation and coordination of the group. In addition, the company has a structure of executives and employees authorised to implement its strategy and basic management guidelines, with powers provided under two operating principles: (i) the principle of joint action, which governs the exercise of the powers that are of a decision-making or organisational nature; and (ii) the principle of solidarity, which governs the exercise of powers of mere representation.

Furthermore, the group has *Internal Rules on Powers of Attorney* which generally define the system for representational powers of the group, which is governed by the principle of several representatives, pursuant to which each company will appoint its representatives from among its own employees rather than from the employees of another company of the group, and by the establishment of limitations on time, quantity and the substitution of powers, among others.

Consultative Committees

102-22

Permanent internal informational and consultative bodies within the Board of Directors, without executive powers, with informational, advisory and proposal-making powers within their scope of activity.

- **Audit and Risk Supervision Committee.** Carries out duties relating to the supervision of the internal audit function, the review of the internal control and risk monitoring systems, the process of preparing the economic and financial information, the auditing of accounts and compliance, all upon the terms established in its Regulations.

Audit and Risk Supervision Committee		
Position	**Director**	**Status**
Chair	Georgina Kessel Martínez	Independent
Member	Denise Holt	Independent
Member	José W. Fernández	Independent
Member	Xabier Sagredo Ormaza	Independent

Secretary (non-member): Rafael Sebastián Quetglas.

- **Appointments Committee.** Performs duties relating to the selection, appointment, re-election and cessation in office of the company's directors and senior officers upon the terms established in its Regulations.

Appointments Committee		
Position	**Director**	**Status**
Chair	María Helena Antolín Raybaud	Independent
Member	Iñigo Víctor de Oriol Ibarra	Other external
Member	Ángel Jesús Acebes Paniagua	Independent

Secretary (non-member): Iñigo Gómez-Jordana Moya.

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- **Remuneration Committee.** Performs duties relating to the remuneration of the company's directors and senior officers upon the terms established in its Regulations.

Remuneration Committee		
	Director	**Status**
Chair	Juan Manuel González Serna	Independent
Member	Inés Macho Stadler	Other external
Member	Manuel Moreu Munaiz	Independent

Secretary (non-member): Rafael Mateu de Ros Cerezo.

- **Sustainable Development Committee.** Performs duties relating to the revision and update of the Corporate Governance System and supervision of the sustainable development policies: human resources, equal opportunities, occupational health and safety, stakeholder relations, respect for human rights, sustainability, etc., upon the terms established in its Regulations.

Sustainable Development Committee		
Position	**Director**	**Status**
Chair	Samantha Barber	Independent
Member	Iñigo Víctor de Oriol Ibarra	Other external
Member	Anthony L. Gardner	Independent

Secretary (non-member): Fernando Bautista Sagüés.

For more detailed information regarding the composition, operation and activities carried out by the governance bodies of the company, see the *Activities Report of the Board of Directors and of the Committees thereof* for financial year 2018.

Beneficial ownership

102-5

At 31 December 2018, the company's share capital totalled 4,798,221,750 euros, represented by 6,397,629,000 shares of the same class and series, each having a nominal value of 0.75 euro. All shares give the holders thereof the same rights. The approximate distribution of equity interests is as follows:

- Foreign institutional investors 66.27%
- Domestic institutional investors 10.25%
- Retail shareholders 23.48%

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No shareholder holds a controlling interest in the equity structure of the company. Below is a table showing those shareholders who hold a significant interest[10] in the share capital of, or voting rights in, Iberdrola as of 31 December 2016, 2017 and 2018.

Significant shareholders and percentage of direct and indirect voting rights (%)	31/12/2018	31/12/2017	31/12/2016
Qatar Investment Authority	8.65	8.57	8.51
Norges Bank	3.33	3.21	3.20
Capital Research and Management Company	N/A	3.10	N/A
BlackRock, Inc.	5.13	3.03	3.01
Kutxabank, S.A.	N/A	N/A	3.00

As at the date of approval of this report, the share capital of Iberdrola, S.A. totals 4,890,342,750 euros and is made up of 6,520,457,000 shares, each having a nominal value of 0.75 euro, which are fully subscribed and paid up.

[10] Defined according to Royal Decree 1362/2007 and Circular 2/2007, of 19 December, of the National Securities Market Commission.

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I.2. Iberdrola's Contribution to the Sustainable Development Goals

- Introduction
- Commitment to the SDGs
- Our main focus: SDGs 7 and 13
- Main objectives and actions in 2018 that contribute to the SDGs

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Introduction

In September 2015, the Member States of the United Nations adopted 17 Sustainable Development Goals (hereinafter, SDGs) as part of the 2030 Agenda for Sustainable Development. These goals are designed to, among other things, end all forms of poverty, fight inequalities and injustice and tackle climate change.

The success of the Agenda will be the result of the collaborative efforts of all of society, with companies being included in this process for the first time in their role as promoters of innovation and engines for economic development and employment. Strong and visionary business leadership is essential for achieving the necessary transformation that the SDGs require.

Iberdrola recognises that the SDGs offer a new vision that allows us to translate global needs and desires into solutions. They propose a new viable model for long-term growth and will contribute to companies developing more solid strategies. The integration of the SDGs into business plans strengthens the identification and management of material risks and opportunities and costs, the creation of and access to new markets, and innovation in the business models - making them more efficient and thus aligning the strategy and expectations of the company with its employees, customers, suppliers and investors and the communities in which it operates.

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References to SDGs in this Report

This report is a compendium of the annual performance of the company in the area of sustainable development, of its strategy in this regard, and of the principal activities and projects undertaken.

To facilitate an analysis from the viewpoint of its contribution to the 2030 Agenda, it is important to establish a relationship between the activities that Iberdrola describes throughout this report and the various SDGs that are furthered by the activities performed. Therefore, the SDGs to which the company contributes are identified in each section, based on the mapping made by the tool *SDG Compass. The guide for business action on the SDGs*, as well as the recent document published by GRI and the UN Global Compact "*GRI-UNGC Business Reporting on SDGs. An Analysis of Goals and Targets*", but only including those SDGs to which the company believes it makes a significant contribution.

Annex 2 provides more detailed information regarding Iberdrola's contribution to the SDGs and related goals, as well as the related GRI disclosures and the pages on which the corresponding performance information can be found.

Commitment to the SDGs

Based on ongoing dialogue with its Stakeholders, and aware of the clear economic, social and environmental impact of all of its activities, Iberdrola frames all of its business activities within a commitment to a Purpose and certain values, and within the context of respect for Human Rights. It thus promotes initiatives that contribute to achieving a more just, egalitarian and healthy society, and particularly the achievement of the SDGs, especially those relating to universal access to electricity (goal 7) and the fight against climate change (goal 13), but also others like the promotion of innovation, the development of education, the protection of biodiversity, gender equality, and particularly the empowerment of women, as well as the protection of disadvantaged groups.

Therefore, Iberdrola has linked the SDGs to its business strategy since 2015, and in 2018 revised its Corporate Governance System to include the company's contribution to the SDGs as part of the company's corporate philosophy.

The SDGs thus inspire or are included as a fundamental element in the following areas:

- By-Laws
- *Purpose and Values of the Iberdrola group* and *Code of Ethics*
- Corporate governance and regulatory compliance policies
- Sustainable development policies
- Governance rules of corporate decision-making bodies and of other functions and internal committees

Ultimately, it is an attempt to cause all Stakeholders to participate in the social dividend generated by its activities, or shared value, which is the sum of all the economic, social and environmental impacts that a company generates through its activity, within the environment in which it does business.

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It should be noted that, among the various corporate policies that have been approved, those relating to sustainable development are intended to ensure the alignment of all conduct of the group with the bylaw-mandated commitment of the company to the social dividend and to the SDGs, as provided in the *General Sustainable Development Policy*.

This policy sets out the general principles and provides the basis for governing the group's sustainable development strategy. The goal is to ensure that all its corporate activities and businesses are carried out while fostering the sustainable creation of value for society, citizens, customers, shareholders and the communities in which the group is present, equitably compensating all groups that contribute to the success of its business enterprise, with a long-term vision that achieves a better future without compromising present results, favouring the achievement of the SDGs and rejecting actions that contravene or hinder them.

The company's commitment to contribute to the SDGs is supervised by the governance bodies. Thus, the Sustainable Development Committee of the Board (the composition and duties of which are described in the "Corporate Governance" section of Chapter II.7) is vested with the power to, among other things, "*Monitor the group's contribution to the achievement of the SDGs".*

The SDGs are cross-sectional within the group. For this reason, Iberdrola has an SDG Advisory Committee, a multidisciplinary team that meets on a quarterly basis in order to review the actions taken by Iberdrola and analyse the alignment thereof with the SDGs, in addition to proposing new challenges and encouraging actions that help to achieve the fixed goals. The SDG Advisory Committee held 4 meetings during 2018.

Activities to raise awareness of the SDGs

As a company committed to the achievement of the SDGs, Iberdrola also wants to disseminate and raise the awareness of its employees regarding the importance thereof, and the capacity of the actions of each of them as a company and as individuals. The activities include:

- Making available to all employees a training course on the SDGs, prepared in collaboration with Unesco. This course will serve as the basis for a new online orientation course made available to all new hires.
- Preparation of a campaign called "The SDGs and Me", which defines each of these Goals, Iberdrola's position and the activities that each person can perform in their daily life to improve them.
- At the internal communication level, the various notices included in the intranet have a graphical link to the SDGs.
- Various social campaigns defining their link to the SDGs have been launched.
- All volunteering campaigns, as well as the social contributions made by the group and its foundations, have been linked to the SDGs they seek to improve.

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Our main focus: SDGs 7 and 13

Iberdrola focuses its efforts on the SDGs where its contribution is most significant: the supply of accessible and non-polluting energy (goal 7) and climate action (goal 13). This commitment forms part of its governance model and of the company's management, and is formalised in goals that are tied to the remuneration of the management team: the shareholders at the Shareholders' Meeting 2017 approved the linkage of the long-term incentive plan to contribution to achievement of these two Goals.

The following tables show the disclosures in this report where it can be seen how the company contributes to the achievement of these two goals and their related aspirations. The mapping comes from *SDG Compass. The guide for business action on the SDGs*, available at www.sdgcompass.org, developed by the Global Reporting Initiative (GRI), the United Nations Global Compact and the World Business Council for Sustainability Development.

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Goal 7: Affordable and sustainable energy

Ensure access to affordable, reliable, sustainable and modern energy for all

Our goal for the "Electricity for All" programme: bring electricity to 16,000,000 million people by 2030 who today lack access to this energy source.

The *Electricity for All* programme is Iberdrola's response to the call of the international community to extend universal access to modern forms of energy, with environmentally sustainable, financially affordable and socially inclusive models. It is intended to ensure access to electricity in emerging and developing countries.

Since the launch of the *Electricity for All* programme in January 2014, we have contributed to 5.4 million people benefiting from access to electricity through projects carried out in Latin America and Africa, meeting our 2020 commitment two years in advance. We have also participated in the 2018 SE4ALL (Sustainable Energy for All) forum held in Lisbon, sharing our targets and commitments at this programme.

Commitment to renewables. Iberdrola, a world leader in renewable energy, commits to the decarbonisation of the economy, which means electrification and the encouragement of renewable technologies, increasing renewable installed capacity by 9% between 2018 and 2019, with the start-up of an additional 2,600 MW.

Goal of the 2030 Agenda (SDGs)	*GRI Indicator*	*Description*	*Pag.*
7.1.- By the year 2030, **guarantee universal access to** affordable, reliable and modern **energy services**.	Own indicator	Number of beneficiaries of the *Electricity for All* programme	202
	Shift indicator C070101 from SDG EU26	Proportion of population of distribution zones with access to electricity	201
	EU28	Power outage frequency	184
	EU29	Average power outage duration	185
7.2.- By 2030, increase substantially the share of renewable energy in the global energy mix.	Own indicator	Installed capacity from renewable sources (MW or %)	25
	Own indicator	Power produced from renewable sources (MWh or %)	25
	302-1	Energy consumption within the organization	142
7.3.- By 2030, double the global rate of improvement in energy efficiency.	302-4	Reduction of energy consumption	143
	302-5	Reductions in energy requirements of products and services	146
	EU30	Average plant availability	345
7.a.- By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology. 7.b.- By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States and landlocked developing countries, in accordance with their respective programmes of support.	Own indicator	Amount allocated to R&D+i (€M)	194

PUBLIC

13 CLIMATE ACTION

Goal 13: Climate action

Take urgent action to combat climate change and its impacts

The group recognizes the seriousness of the threat that global warming entails, which must be faced in a coordinated manner with governments, multilateral agencies, the private sector and society. The company thus undertakes to assume a position of leadership in the fight against climate change and to assume the following principles of conduct: i) prevent pollution by reducing the intensity of greenhouse gas emissions, ii) promote electrification, efficiency and smart grids, iii) support international negotiations and the participation of the private sector, iv) advocate for an emissions market that generates a strong and sustainable price signal, and v) support a tax system that includes the "polluting party pays" principle.

Iberdrola has set itself a goal to reduce the intensity of its CO_2 emissions to 50% below those of 2007 by 2030, and to be carbon-neutral by 2050.

It has committed to maintaining its position as one of the leading European companies with the lowest CO_2 emissions per kWh produced, and to achieve this by focusing its efforts on reducing the intensity of greenhouse gases, promoting renewable technology and increasing efficiency.

Policy, memberships, awareness-raising and reporting

The company has a *Policy against Climate Change*, in which there is a commitment to supporting the necessary international conventions, encourage the development of technology, and promote efficient energy use and responsible consumption. It has also endorsed the recommendations of the Task Force on Climate-related Financial Disclosure (TCFD), created by the Financial Stability Board (FSB), the objective of which is transparency regarding risks associated with climate change. Iberdrola has a section of its website called Against Climate Change to show the actions taken in this area. In 2016 Iberdrola included a *Plan for Raising Social Awareness on Climate Change* as an additional focal point for its climate change actions, with initiatives aimed at different audiences. And an *Introduction to climate change* course has been launched for all employees as a virtual training initiative.

Goal of the 2030 Agenda (SDGs)	*GRI Indicator*	*Description*	*Pag.*
13.a Implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change 13.1.- **Strengthen resilience** and adaptive capacity to climate-related hazards and natural disasters in all countries.	302-1	Proportion of energy consumption derived from renewable energy.	142
	302-4	Reduction of energy consumption (efficiency).	143
	302-5	Energy savings of green products and services.	146
	305-1	Direct GHG emissions. Scope 1 (per GHG Protocol)	152
	305-2	Indirect GHG emissions. Scope 2 (per GHG Protocol)	153
	305-3	Other indirect GHG emissions. Scope 3 (per GHG Protocol)	154
	EU30	Average plant availability	345
	Own indicator	Installed capacity from renewable sources (MW or %)	326
	Own indicator	Power produced from renewable sources (MWh or %)	328
	201-2	Financial implications and other risks and opportunities for the organisation's activities due to climate change	68
13.3.- Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.	Own indicator	Awareness-raising activities regarding climate change and renewable energy	149

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Main objectives and actions in 2018 that contribute to the SDGs

The following table lists some of the more significant goals relating to the SDGs as well as Iberdrola's main activities during 2018 and indicators measuring the Iberdrola group's contribution:

SDGs and related targets	Iberdrola s main actions and achievements 2018
1.4 Ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance **1.5** Reduce exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters	**Actions and achievements:** • Procedures to protect customers in situations of vulnerability: covers 100% of vulnerable customers in Spain. • Procedures for protecting vulnerable customers in the United Kingdom with the *Warm Home Discount* programme. • Work with *Operation Fuel* in Connecticut (United States) to ensure that 1,200 people in vulnerable situations have access to energy throughout the year. • Contribution of more than 11 million euros at the group level to initiatives intended to improve the quality of life of vulnerable groups.
2.1 By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round	**Goal:** Voluntary contributions by the group's employees of consumer staples, thus contributing to alleviating the situation of social exclusion and poverty of many people. **Actions and achievements:** • Iberdrola has gathered more than 6,000 kilos of food at its work centres thanks to '*Operation Kilo*', a programme launched in 2012. The more than 6 tons of food contributed by the employees have been distributed to various families through social organisations in Portugal, Spain and Mexico. • Encouragement of volunteering activities to distribute food to families in situations of vulnerability, soup-kitchens, etc.

PUBLIC

3.4 Reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being

3.6 Halve the number of global deaths and injuries from road traffic accidents

3.9 Substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination

Goal: Reduce the accident rate (accidents involving own staff) by 10% over the average of the last 5 years.

Actions and achievements:

- Improve the Global Occupational Safety and Health System, which is aligned with the *Occupational Safety and Health Policy* and the strictest international standards.
- Health and safety measures for contractors through training programmes and in-sourcing of work and personnel.
- 0-accident plan in Brazil in order to reduce the accident rate among employees.

4.4 Substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship

4.7 Ensure that all learners acquire the knowledge and skills needed to promote sustainable development

Goal: Exceed ratio of training hours received per employee over that of comparable companies.

Actions and achievements:

- Develop continuous training plans for employees, monitoring compliance therewith.
- **45 hours of training per employee in 2018** (42 hours in 2017, 4.4 times greater than the annual training hours of companies in the energy sector of the country. 2018 data not yet published to establish the comparison.).
- 2.2 million euros of investment in the scholarship and research grant programme for the 2018-2019 academic year.
- *Iberdrola U*: Universities programme. The group has contributed to the training of almost 4,000 university students in just the past five years.

PUBLIC

5.1 End all forms of discrimination against all women and girls everywhere

5.4 Promote shared responsibility within the household and the family

5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life

5.c. Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels

Goal: Increase the number of women in management positions.

Actions and achievements:

- **Only continental European electric utility included in the Bloomberg Gender-Equality Index (GEI).**
- The Iberdrola group has an *Equal Opportunity and Reconciliation Policy* that includes measures to solidify the reconciliation of work and personal life: ScottishPower offers training with up to 6 months of leave to improve opportunities. Avangrid offers flex time with tele-work. Neoenergia has 6 months of maternity leave and legal, financial and psychological support for employees. Iberdrola Mexico has flexible work hours and improved vacation days. Spain was the first Ibex-35 company to apply the intensive workday, in 2008, and has more than 70 measures to facilitate reconciliation.
- 36% of Iberdrola's Board of Directors are women, double that of the other Ibex-35 companies.
- **Support for female sports. Women's Universe (*Universo Mujer*) programme in partnership with the Higher Council for Sport (*Consejo Superior de Deportes*), promoting female sports within 16 Spanish federations.**

6.3 Improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally

6.4 Substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity

6.5 Implement integrated water resources management at all levels

6.6 By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes

Goal: In its position as one of the utilities with the best water productivity (water utilised/revenue), Iberdrola commits to maintaining this indicator 50% below the European average for the sector in the coming 5 years.

Actions and achievements:

- Join the United Nations' CEO Water Mandate to encourage sustainable practices in the use of water.
- **It has been part of CDP Water since its first edition.**
- Improve the management of the hydraulic sub-footprint and of the environmental management systems.

PUBLIC

7.1 Ensure universal access to affordable, reliable and modern energy services

7.2 Increase substantially the share of renewable energy in the global energy mix

7.3 Double the global rate of improvement in energy efficiency

7.a Enhance international cooperation to facilitate access to clean energy research and technology and promote investment in energy infrastructure and clean energy technology

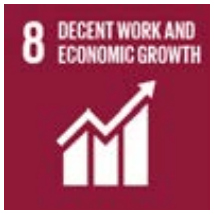
7.b Expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries

Goal: By 2030, achieve access to energy for 16,000,000 people who previously lacked it, within the framework of the *Electricity for All* Programme.

Goal: increase renewable installed capacity by 9% during 2018 and 2019, with the start-up of 2,600 MW.

Actions and achievements:

- **A leader in renewable energy: 38,247 GWh of wind (onshore and offshore) output, 23,086 GWh of hydroelectric and 421 GWh of solar and others in 2018.**
- Offer of 100% renewable energy: "Custom Plans".
- **ScottishPower, only 100% renewable electric company in the United Kingdom.**
- Energy efficiency: 59 million tons of CO_2 emissions avoided during the last 3 years.
- Fernando de Noronha Zero Carbon Project in Brazil to develop a sustainable energy model.



8.2 Achieve higher levels of economic productivity through diversification, technological upgrading and innovation

8.4 Improve progressively global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation

8.5 Achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value

8.8 Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment

Goal: Maximise issues in the green finance market.

Actions and achievements:

- 34,078 direct jobs.
- 425,000 direct, indirect and induced job positions throughout the world[11].
- Almost €8,000 million in tax contributions in 2018.
- €32,300 million in impact on the GDP of the countries in which the group does business.
- €7,753 million procurement volume in 2018.
- Largest corporate issuer of green bonds in the world: 13 issues with a value of almost 9,000 million euros, which will be invested mainly in renewable projects.
- Digital transformation applied to the businesses: big data, virtual reality and artificial intelligence.

[11] PwC study "Economic, social and environmental impact of Iberdrola worldwide" (based on 2017 data).

PUBLIC

9.c Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries

9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all

9.4 Upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes

9.5 Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including by encouraging innovation and substantially increasing the number of research and development workers

Goal: Development of the Innovation and Digitalization Programme.

Actions and achievements:

- **267 million euros in R&D+i in 2018 (most innovative Spanish utility and third most innovative in Europe).**
- 75 innovation projects between 2018 and 2019.
- Digitalization to 2020 Plan: more than 4,800 million euros of investment.
- World leaders in smart grids. The STAR project culminated in Spain in 2018 and the SMART UK project continued in the United Kingdom.
- Development of the smart grid projects *Smart City* (Atibaia) in Brazil and *Smart Community* (Ithaca) in the United States.
- Development of new products for customers based on Data Analytics (Energy Wallet, Custom Plans) and development of new apps.
- Develop projects to improve management of the grids in distributed generation scenarios, like the *Alois* project in Spain and *Fusion* project in the United Kingdom.

10.2 Empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status

10.3 Ensure equal opportunity and reduce inequalities of outcome, including by eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and action in this regard

Goal: Foster diversity and the social inclusion of vulnerable groups through the corporate volunteer programme and the social welfare projects of the foundations.

Actions and achievements:

- More than 7,000 proposed volunteer activities at the global level were offered to employees in 2018.
- Ensure equality of opportunities within the workforce through talent management.
- Human Rights Management Model at the global level and training for suppliers.
- II Edition of the Iberdrola Awards for solidarity, given to entities that fight for the equality and integration of the most vulnerable people.
- Iberdrola's Social Programme, focused on social support, psychological treatment, lodging for women, labour integration and equal opportunities, among others. More than 160,000 beneficiaries and approximately 100 social entities during the 2018-19 period in Spain.

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11.2 Provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons

11.4 Strengthen efforts to protect and safeguard the world's cultural and natural heritage

11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management

Goal: Installation of 25,000 recharging stations for electric vehicles by 2021 through the Sustainable Mobility Plan, with initiatives aimed at employees, companies, customers and suppliers.

Actions and achievements:

- **Incentives to buy electric vehicles and availability to employees of electric vehicles from the corporate fleet.**
- Electric vehicle fleet available to employees.
- Join the *x Aire Limpio* platform, in which public, private and tertiary sector organisations coordinate the viewpoints needed to design air quality plans in cities, in order for the sustainability of transport, buildings and industry, together with efficiency in waste management, result in a cleaner atmosphere.
- Illumination Programme of the Foundations, the goal of which is promote the recovery of artistic heritage and improve the interior and/or exterior illumination of unique buildings through collaborations with entities and institutions.

12.2 Achieve the sustainable management and efficient use of natural resources

12.5 Substantially reduce waste generation through prevention, reduction, recycling and reuse

12.6 Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle

12.8 Ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature

12.6 Reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management

Goal: Improve the *CSR Scoring* model for suppliers and increase the percentage awarded to them with analysis based on social responsibility.

Actions and achievements:

- Energy efficiency plan at the corporate buildings.
- 90% of energy production is carried out using local sources of energy available in the country where the electricity is generated.
- 88% of procurement from local suppliers.
- **First Ibex-35 company to certify its General Shareholders' Meeting as a sustainable event in 2016, in accordance with international ISO 20121 standard.**
- Publication of Sustainability Report since 2004 and specific sustainability website.

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13.a Implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change

13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries

13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning

Goal: achieve a 50% reduction in the intensity of CO_2 emissions by 2030, as compared with the emissions of 2007; and be carbon-neutral by 2050.

Actions and achievements:

- Development of a unique model preparing scenarios of mitigation and adaptation to assess the environmental impacts of climate change on the company over the long term, conforming to the requirements of the Task Force on Climate-related Financial Disclosures (TCFD).
- CO_2 emissions 70% less than the average for the European electricity sector (continental Europe, 2015).
- Request to close the last two coal plants.
- Participation in the Katowice Climate Change Conference (COP 24), the events associated with the United Nations General Assembly and the various phases of the Tanaloa Dialogue.
- *Plan for Raising Social Awareness on Climate Change*, with initiatives aimed at different audiences.

14.2 By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans

Goal: Preserve marine ecosystems through innovative measures in the construction and operation of offshore wind farms.

Actions and achievements:

- Installation of noise mitigation systems for mammals in the construction and relocation phase and/or respect biotopes for the preservation of marine life.
- Regular studies of environmental impact on the area to monitor and conserve the habitat.
- Dolphin Watch Aberdeen: project to protect dolphins in Sussex (United Kingdom) focused on the protection of fauna and the conservation of marine habitats with disclosure and awareness-raising activities.
- Insulation of subsea cables to avoid increasing temperature in the Baltic sea.

15.1 Ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands

15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and protect and prevent the extinction of threatened species

Goal: adjustment of 25,000 supports at distribution lines to avoid the electrocution of birds over the next two years (Flapping Wings (*Aleteo*) project).

Actions and achievements:

- Biodiversity protection programmes.
- Member of the *Biodiversity Pact*, sponsored by the Biodiversity Foundation.
- **AENOR Corporate Environmental Footprint certificate**.

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16.5 Substantially reduce corruption and bribery in all their forms

Goal: Renewal of ISO 37001 certifications regarding the anti-bribery management system and UNE 19601 certification on the criminal compliance management system.

Actions and achievements:

- **Inclusion for the fifth consecutive year on the list of the World's Most Ethical Companies of the Ethisphere Institute (United States).**
- Iberdrola's Board of Directors has approved the group's *Code of Ethics*, the *Crime Prevention Policy* and the *Anti-Corruption and Anti-Fraud Policy*, which are regularly reviewed and updated.
- Compliance System that includes rules to mitigate the risk arising from relations with third parties. Includes the *Protocol for Management of the Risk of Third-Party Fraud and Corruption*, the *Protocol for Corporate Transactions* and the *Protocol for Social Contributions, Donations and Sponsorships.*
- Award from *Expansión* to the company with best compliance practices 2018-2019.
- Receipt of "*Compliance Leader Verification*" certification provided by the Ethisphere Institute as evidence of the effectiveness of the Compliance System.
- The group has anonymous ethics inboxes to allow for the reporting of improper actions or acts contrary to law or the *Code of Ethics.*
- Sponsorship of the Iberdrola Chair on Economic and Business Ethics of the Universidad Pontificia Comillas (ICADE).

17.17 Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships

17.19 Build on existing initiatives to develop measurements of progress on sustainable development

Goal: Promote alliances with institutions that contribute to action against climate change.

Actions and achievements:

- Collaboration with the *Spanish Office of Climate Change* and the *Spanish Green Growth Group.*
- Alliances with the academic world: *Chair for the Sustainable Development Goals* and *Chair on Climate Change* (Polytechnic University of Madrid).
- Support for the youth initiative of the Spanish Network for Sustainable Development of the UN's Sustainable Development Solutions Network – SDSN Youth.
- Alliance with *High Level Political Forum* 2018 in New York.
- Shire Alliance to supply electric power and improve facilities at refugee camps. 2nd phase approved with the help of the EU.
- Iberoamerican conference on the SDGs in Salamanca.

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Iberoamerican Conference on Sustainable Development Goals in Salamanca

From 27 to 29 June 2018, the University of Salamanca, the Polytechnic University of Madrid and Iberdrola organised the Iberoamerican Conference on Sustainable Development Goals, among the acts commemorating the VIII Centenary of the University of Salamanca, a meeting that turned this city into the Iberoamerican capital of the SDGs during these days.

The Conference was conceived with the goal of achieving a collective commitment driving the transformation necessary for achieving the Sustainable Development Goals of the 2030 Agenda of the United Nations in the Iberoamerican region.

Given that such profound and complex transformations can only be approached collectively, this commitment took the form of a large multiactor platform, with the participation of public and private institutions, organisations from the tertiary sector, universities and citizenry, the true catalysts for change.
The Conference, with the participation of more than 50 leading international speakers and more than 600 attendees, was structured around four major themes:

- Education for transformation
- Environment and energy
- Innovation for development
- Multiactor partnerships

And more than 50 leading international speakers participated, with more than 600 attendees.

Iberdrola collaborated both in the organisation of the conference and on different presentations, within its commitment to disseminate the SDGs to society, and support for Goal 17. Iberdrola's Chairman participated in the inaugural table, where he emphasised the company's interest in working with a conference that serves to *promote the sustainable development goals in Iberoamerica,* a task that must be handled "*among all players*", including government authorities, companies and civil society as a whole. Within the framework of the Conference, Iberdrola launched its new goal for the Electricity for All Programme, with which it wants to reach 16 million beneficiaries by 2030.

I.3. Business Model and Strategy

- Business model
- Corporate Governance System
- *Code of Ethics*
- Policies and commitments
- Sustainable development policies
- Responsibilities
- Responsibility in the sustainable development strategy
- Goals, resources and results
- Key impacts on sustainability
- Risks and opportunities Comprehensive risk system
- Climate change risk management Iberdrola and the TCFD

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Business model

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Iberdrola focuses its activities on:

- Production of electricity from renewable and conventional sources.
- Transmission and distribution of electricity and gas.
- Purchase/sale of electricity and gas on wholesale markets.
- Supply of electricity, gas and related energy services.
- Other activities mainly linked to the energy sector.

As explained in Chapter I.1, Iberdrola carries out its activities mainly in the Atlantic area: Spain, the United Kingdom, the United States, Brazil and Mexico.

The business model developed by the group is based on Iberdrola's purpose (see "Purpose and Values" section of Chapter I.1) through a long-term sustainable industrial enterprise. Under this consideration, and taking into account the long-term consensus energy scenarios, Iberdrola is pursuing a strategy with the following main characteristics:

- The organic growth of the company is focused on major investments in the countries referred to above, plus continental Europe. The international diversification in terms of contribution to results will continue to grow in the coming years.
- The investment will preferably focus on the networks and renewables businesses, which, in addition to being regulated businesses or long-term contracts, contribute decisively to the fight against climate change.
- The strategic pillars defined by the company are profitable growth, operational excellence, customer-focused operations, the optimisation of capital, and innovation.
- The company has published its commitment to decarbonisation, setting stringent objectives: to reduce the intensity of its CO_2 emissions to 50% below those of 2007 by 2030, and to be carbon-neutral by 2050. These goals have been recognised as being based on science in accordance with the Science Based Targets initiative (SBTi).
- One characteristic of Iberdrola is its focus on innovation and on the rapid adoption of available technology.
- Financial stability is considered key for balanced growth. The company seeks to maintain high levels of solvency and liquidity, which ensure the normal development of operations, good access to the capital markets, and a sustainable dividend policy.
- The commitment to social responsibility and sustainability is reflected by the inclusion in the company's strategy of the concept of the "social dividend", defined as the sustainable creation of value for its Stakeholders by engaging in all of its activities.

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Corporate Governance System

The company's Corporate Governance System is made up of the *By-Laws*, the *Purpose and Values of the Iberdrola group*, the corporate policies, the governance rules of the corporate decision-making bodies and internal committees and Compliance.

Leadership in corporate governance and transparency is one of the hallmarks of Iberdrola's identity: The Board of Directors therefore regularly reviews the Corporate Governance System, keeping it updated and including therein the good governance recommendations and best practices generally accepted in international markets.

In October 2018 there was a revision of the Corporate Governance System to include, among other changes, the company's contribution to the SDGs as part of the company's corporate philosophy. In February 2019 there was a new revision to include the Corporate Purpose of the Iberdrola group and its new values. For more information about the *Corporate Purpose and Values of the Iberdrola group*, see the "Purpose and Values" section of Chapter I.1.

The commitments of Iberdrola defined in this System materialise daily in all business activities of the group, as well as in its strategy to maximise the social dividend, sustainable development and respect for human rights, encouraging initiatives that contribute to achieving a more healthy, equal and just society, and particularly to the achievement of the SDGs, especially the goals relating to universal access to electricity and the fight against climate change.

Ultimately, it is to seek Shared Value and to maximise Iberdrola's contribution to society through an energy model that is healthier, more accessible and based on electricity, and in the definition and construction of which all involved players should collaborate.

Along these lines, one should note the inclusion of Article 7. Social Dividend in the company's By-Laws: "*The Company conceives of the social dividend as the sustainable creation of value for all Stakeholders affected by the activities of the group in carrying out its businesses, the advancement of business communities which the Company participates in and leads, both from*

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the economic viewpoint and from the perspective of business ethics, the promotion of equality and justice, the encouragement of innovation and protection of the environment, as well as through the generation of quality employment, its strategy of social responsibility, and its effort in the fight against climate change".

Iberdrola is conscious of the importance of the social dividend for all of the communities in which the group is present. Maximisation of the social dividend and the company's commitment to the sustainable creation of value are key values that the Board of Directors takes into account in order to define the strategy of the group.

Code of Ethics

Contribution to SDGs of the performance described by the indicators of this section
(according to SDG Compass www.sdgcompass.org)

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The company's *Code of Ethics* establishes a set of principles and guidelines for conduct (applicable to all directors, including natural persons appointed by corporate directors to represent them in the performance of their duties, to professionals and to suppliers of the companies of the group, regardless of their rank, their geographical location or functional reporting, or the group company to which they provide their services), intended to ensure the ethical and responsible behaviour of all directors, professionals and suppliers of the group.

The *Code of Ethics*, which forms part of the Corporate Governance System, was approved by the Board of Directors in 2002 and last amended in October 2018. This last revision includes the unification of the three ethical codes existing until that time: *Directors' Code of Ethics, Professionals' Code of Ethics* and *Suppliers' Code of Ethics,* into a single code applicable to all directors, professionals and suppliers of the group (excluding from its scope country subholding companies that are listed or not wholly owned by the group and that have their own code of ethics, as well as the subsidiaries thereof).

The body charged with ensuring that the *Code of Ethics* is applied is the Compliance Unit (hereinafter, the "Unit"), a collective, internal and permanent body connected to the Sustainable Development Committee of the Board and with powers in the regulatory compliance area. The Unit's main duties include ensuring the application of the *Code of Ethics* and the dissemination of a preventative culture based on "zero-tolerance" towards the commission of unlawful acts and fraud. The operation and main powers thereof are set forth in the *Regulations of the Compliance Unit*.

In addition, Compliance Divisions have been established at each country subholding company and/or head of business company of the group, which are structured as internal independent areas linked to the respective Audit and Compliance Committee, with duties in the area of regulatory compliance and in the prevention and correction of unlawful or fraudulent conduct.

For more detailed information regarding the group's Compliance System, see the Ethics and Integrity section of Chapter II.7.

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Policies and commitments

The Iberdrola group has a set of corporate policies that develop the principles reflected in the Corporate Governance System and that contain the guidelines governing the actions of the company and the companies of its group, as well as those of the directors, officers and employees thereof, within the framework of the *Purpose and Values of the Iberdrola group*.

The companies of the group assume a set of principles and values that express their commitment to corporate governance, business ethics and sustainable development. The awareness, dissemination and implementation thereof serve to guide the activities of the Board of Directors and its committees and of the decision-making bodies of the company in their relations with the company's various Stakeholders.

These policies, which can be viewed in full or in summary in the Corporate Governance tab of the website, are grouped into three categories:

- Corporate Governance and Regulatory Compliance Policies.
- Risk Policies.
- Sustainable Development Policies.

Iberdrola has also assumed certain public commitments that guide the activities of the group:

- By subscribing to various initiatives relating to the environmental and social dimension of its activities.
- Through its membership in certain business and social organisations, which are identified by their objectives and purposes.

Both the initiatives and the partnerships are available in the "Public Policies" section of Chapter II.7 of this report.

These policies and commitments serve to guide the company and its workforce to manage their activities, and specifically the material topics dealt with in this document.

Sustainable development policies

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Iberdrola has a *General Sustainable Development Policy* which sets out the general principles and provides the basis for governing the group's sustainable development strategy. The goal is to ensure that all its corporate activities and businesses are carried out while fostering the sustainable creation of value for society, citizens, customers, shareholders and the communities in which the group is present, equitably compensating all groups that contribute to the success of its business enterprise.

This sustainable development strategy is based on a long-term vision that achieves a better future without compromising present results, favouring the achievement of the SDGs and rejecting actions that contravene or hinder them.

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The actual and effective implementation of this strategy is to form part, along with the Corporate Governance System that supports it, of the virtual soul of the group, one of the key elements that differentiates it from its competitors and which is a deciding factor for its establishment as the preferred company for its Stakeholders.

The policy contains 5 cross-cutting principles of conduct in relation to:

- the sustainable creation of value
- transparency
- development and protection of intellectual capital
- innovation
- responsible taxation

And 6 principles of conduct in relation to the principal Stakeholders:

- shareholders and investors
- communities in which the group does business
- environment
- human team and talent
- customers
- suppliers

The *General Sustainable Development Policy* is further developed and supplemented by various sustainable development policies addressing specific needs and expectations of the Stakeholders:

- *Stakeholder Relations Policy*
- *Innovation Policy*
- *Policy on Respect for Human Rights*
- *Quality Policy*
- *Corporate Security Policy*
- *Human Resources Framework Policy*
- *Knowledge Management Policy*
- *Recruitment and Selection Policy*
- *Equal Opportunity and Reconciliation Policy*
- *Occupational Safety and Health Policy*
- *Sustainable Management Policy*
- *Environmental Policy*
- *Policy against Climate Change*
- *Biodiversity Policy*

The principles of conduct included in these sustainable development policies are described throughout this report.

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Responsibilities

The "Corporate and governance structure, ownership and legal form" section of Chapter I.1 describes the organisational model of the Iberdrola group and its responsible persons. The responsibilities of the corporate functions or business units regarding the various aspects dealt with in this report are the following:

- The chairman & CEO of the Board of Directors, together with the Business CEO and the rest of the management team, assumes the duty of strategic organisation and coordination of the group through the dissemination, implementation and monitoring of the general strategy and the basic management guidelines established by the Board of Directors.
- Issues relating to corporate governance and that affect the legal area are the responsibility of the Office of the Secretary of the Board of Directors.
- Aspects relating to labour practices are the responsibility of the Human Resources and General Services Division, within the Finance and Resources Division.
- Aspects relating to the environment are the responsibility of the Innovation, Sustainability and Quality Division. And specifically, those aspects relating to the fight against climate change are the responsibility of the Energy Policies and Climate Change Division. Both divisions report directly to the chairman & CEO.
- Issues relating to procurement are the responsibility of the Procurement and Insurance Division, within the Finance and Resources Division if referring to general supplies, and the responsibility of the Wholesale and Retail Business, within the group's General Business Division, if referring to the procurement of fuel.
- Those relating to regulation and public policies are the responsibility of the Planning, Management and Regulatory Positioning Division in coordination with the country subholding companies of each of the countries in which Iberdrola operates.
- Products sold, demand, customers and other related topics are the responsibility of the Wholesale and Retail Business if referring to liberalised markets like Spain or the United Kingdom, and of the Networks Business if referring to regulated markets like the United States or Brazil.
- Those relating to production facilities are the responsibility of the Wholesale and Retail Business or the Renewables Business, each within their scope of activity, and those relating to transmission and distribution facilities are the responsibility of the Networks Business. These three businesses are within the General Businesses Division of the group.

By way of complement:

- The Operating Committee, made up of the chairman & CEO, the Business CEO and the directors of corporate functions and business units, is an internal committee providing technical support, information and management, with respect to both the duties of supervision and monitoring as well as the strategic organisation and coordination of the group through the dissemination, implementation and monitoring of the general strategy and the basic management guidelines established by the Board of Directors, while always respecting the scope of day-to-day management and effective decision-making corresponding to the governance and management bodies of the head of business companies of each of the businesses.

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- The Compliance Unit, as an internal and permanent decision-making body linked to the Sustainable Development Committee of the company's Board of Directors, is responsible for proactively ensuring the effective operation of the company's Compliance System, which is made up of all of the rules, formal procedures and significant actions intended to ensure that the company conducts itself in accordance with ethical principles and applicable law, and for preventing improper conduct or conduct that is contrary to ethics, the law or the Corporate Governance System that might be committed by the professionals thereof within the organisation.
- The Internal Audit Division ensures the proper operation of the information technology and internal control, risk management and governance systems of the company and of the group. Its activities are governed by the provisions of the Corporate Governance System, the *Basic Internal Audit Regulations of Iberdrola, S.A. and its group (BIAR)* approved by the Board of Directors and the other internal rules of the company, as well as the *International Standards for the Professional Practice of Internal Auditing* approved by the Global Institute of Internal Auditors (IIA). The BIAR is required knowledge of the professionals of the group that it affects, and describes the nature, organisation, competencies, resources, activities, powers and duties of the function and establishes the relations between the Internal Audit Area of Iberdrola, S.A. and the Internal Audit divisions of the other companies of the group.

To exercise these responsibilities, the Iberdrola model provides that they are assumed in a decentralised manner by the country subholding companies and head of business companies in each country, which are organised through their respective boards of directors. The head of business companies occupy themselves with the effective management thereof, as well as the day-to-day management and control thereof.

Responsibility in the sustainable development strategy

The implementation, monitoring and supervision of the sustainable development strategy is the responsibility of the various companies of the group in accordance with the corporate and governance structure of the group described in Chapter I.1, in all cases respecting the principles of subsidiarity and decentralised management through the various committees that assume duties in the area of sustainable development and reputation.

Specifically, the Corporate Sustainable Development and Reputation Committee has the duties of:

- defining the basic corporate lines of evolution of practices focused on the sustainable growth of the social dividend and improvement of the group's reputation,
- approving and monitoring development plans in both areas,
- acknowledging the most significant advances, and
- collaborating in the preparation of public information regarding these areas disclosed by the company.

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For its part, the Sustainable Development Committee of the Board (the composition and duties of which are described in the "Corporate governance" section of Chapter II.7) is vested with the power to, among other things:

- *Assess and review the Company's plans implementing the sustainable development policies and monitor the level of compliance therewith.*
- *Supervise the Company's actions relating to sustainable development and report thereon to the Board of Directors and to the Executive Committee, as appropriate.*
- *Supervise and evaluate the processes of relations with the various Stakeholders.*

The *Activities Report of the Board of Directors and of the Committees thereof* for financial year 2018, available on the corporate website, identifies the reports prepared by this Committee and the appearances that took place during the year.

Goals, resources and results

Iberdrola regularly publishes its medium- and long-term goals using various formats: *Capital Markets Day,* the materials for which are available on the corporate website, is one of the most important events for communication of the company's future outlook. As additional information, Iberdrola annually publishes its *Integrated Report,* which is also available on the corporate website, using the methodology of the *International Integrated Reporting Council (IIRC).*

To reach its financial and operational goals, Iberdrola has an annual process for assigning resources, by establishing the corresponding income and expense budgets, which are approved by the company's Board of Directors.

Internally, the various businesses and corporate organisations determine their annual goals in harmony with the strategic goals of the company, both financial and non-financial, directed specifically towards the activities for which they are responsible. The results obtained with respect to the established goals are used to establish the annual variable remuneration of the company's management team. The listed country subholding companies have their own process for establishing objectives and remuneration of their officers pursuant to their own special framework of strengthened autonomy, although they will be consistent with those of the Iberdrola group.

The sustainable development objectives are set by the different businesses and corporate divisions. Many of them are set out in the Social Responsibility Plan that the company prepares on a bi-annual basis. The table below shows the main objectives of the Social Responsibility Plan 2018-2019, which consists of more than 300 activities.

For more detailed information regarding the Social Responsibility Plan, see the introduction of Chapter II "Responsible Energy for People": Our Priorities.

The achievements obtained by Iberdrola are reflected in the performance of the various quantitative indicators covered by the various aspects dealt with in this report.

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Principal sustainable development objectives 2018 2019	
Our priorities	**Objectives**
Fight against climate change and protection of biodiversity	5% reduction in specific direct emissions during the 2017-2019 period compared to the 2014-2016 period.
	Increase renewable installed capacity by 9% during 2018 and 2019, with the start-up of 2,600 MW.
Contribution to the well-being of our communities	Continue providing access to energy for people who lack it, in line with the 2020 goal of reaching 16 million beneficiaries.
	Work with *Operation Fuel* in Connecticut (United States) to ensure that 1,200 people in vulnerable situations have access to energy throughout the year.
Sustainable economic growth	Maximisation of the volume of issues in the green financing market and update of the *Green Financing Issue Framework* to ensure consistency with the *Green Bond Principles* and available best practices.
	Develop new global Cybersecurity campaigns.
Innovation, digitalization and quality for our customers	Development of the *Innovation and Digital Transformation Programme*, applied to all the businesses.
	Development of new products for customers based on Data Analytics (Energy Wallet, Customised Plans) and development of new apps.
	Increase in subscriptions to electronic invoicing to 26% of the entire Continental Europe portfolio by year-end 2018.
	Development of projects to improve management of the grids in distributed generation scenarios: *Alois* in Spain and *Fusion* in the United Kingdom.
	Development of the smart grid projects *Smart City* (Atibaia) in Brazil and *Smart Community* (Ithaca) in the United States.
Good governance, transparency and Stakeholder engagement	Approval by the Board of Directors of a new *Digital Presence and Action Policy.*
	Development of a unique model preparing scenarios to assess the environmental impacts of climate change on the company over the long term, conforming to the requirements of the Task Force on Climate-related Financial Disclosures (TCFD).
	Maintenance of ISO 37001 certification regarding the anti-bribery management system and UNE 19601 certification on the criminal compliance management system, as well as the Pro-ethics stamp at Neoenergia.
	Creation of an energy policy chair at the European level.
	Development of the Human Rights Management Model at the global level.
Promote Socially responsible practices in the supply chain	Improvement in the supplier sustainability evaluation model (now *RSC Scoring*) and actions to increase the percentage volume of procurement awarded to suppliers that have been evaluated in the area of sustainability.
	Review of the methodology for measuring the carbon footprint of suppliers to evaluate Scope 3.
	Preparation of a protocol for performing social audits at the first level of contracting.
Workforce health & safety and personal development	Reduction of accident ratios, highlighting the *0 Accident Plan* in Brazil.
	Continuous increase of female presence in significant positions.
	Development of continuous training plans for employees, monitoring compliance therewith.

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Key impacts on sustainability

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The objective of Iberdrola's sustainable development strategy is to favour the "sustainable creation of value by engaging in the activities included in its corporate object, taking into account the Stakeholders related to its business activity and its institutional reality, in accordance with the *Purpose and Values of the Iberdrola group"*, as set out in the *General Sustainable Development Policy* approved by the Board of Directors.

This sustainable development strategy is aligned with the implementation by the Iberdrola group of a business enterprise focused on the sustainable creation of value for all of its Stakeholders, providing a quality service through the use of environmentally-friendly energy sources, staying alert to the opportunities offered by the knowledge economy, and committed to the SDGs, especially in relation with goals 7 and 13 regarding universal access to energy and the fight against climate change.

For this purpose, the group innovates, makes new investments and promotes more efficient, sustainable and clean technologies, fosters the growth and develops the talent and the technical and human capacities of its professionals, works for the safety of people and supply, and labours to build a successful business enterprise together with all of the participants in its value chain, sharing the achievements with its Stakeholders.

The sustainable development strategy will endeavour to ensure the achievement of the following objectives, based on the principles set out in the SDGs:

- Cause all Stakeholders to participate in the success of Iberdrola's business enterprise through the social dividend generated by the group.
- Favour the achievement of the strategic goals of the group in order to offer a safe, reliable and high-quality supply of energy that is respectful of the environment.
- Improve the competitiveness of the group through the assumption of management practices based on innovation, equal opportunities, productivity, profitability and sustainability.
- Responsibly manage the risks and opportunities deriving from changes in the surroundings, and maximise the positive impacts of its activities in the various territories in which it operates and minimise the negative impacts, to the extent possible, avoiding short-term approaches or those that do not sufficiently take into account the interests of all Stakeholders.
- Encourage a culture of ethical behaviour that increases business transparency in order to generate creditability and trust within the Stakeholders, which includes society as a whole.
- Promote relationships based on trust and the creation of value for all of its Stakeholders, providing a balanced and inclusive response to all of them, particularly emphasising the involvement of local communities to glean their expectations regarding significant potential issues, and thus be able to take them into consideration.
- Contribute to the recognition of the group and the improvement of its reputation.

Furthermore, the group's commitment to sustainability specifically takes shape in five basic principles of conduct pursuant to its *Sustainable Management Policy*:

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- Competitiveness of the energy products supplied.
- Safety in the supply of energy products.
- Reduction in environmental impact of all of the activities performed by the companies of the group.
- Creation of value for shareholders, customers and suppliers, looking after business profits as one of the foundations for the future sustainability of the company and of the group.
- Driving the social dimension of the activities of the group.

Iberdrola responsibly manages the main risks relating to the impacts where the group engages in its principal activities, along with the potential risks arising from the environment, thus maximising the positive impacts and minimising the negative ones, addressing the expectations of the Stakeholders. For this reason, Iberdrola has a Comprehensive Risk Control and Management System that identifies, analyses and measures significant threats following common procedures for the entire group, which include ongoing assessment as well as the application of best practices and recommendations, as described in the following section “Long term risks and opportunities. Comprehensive Risk System.

Measurement of the social dividend

The measurement of the social dividend encompasses the principal direct, indirect and induced impacts, both present and future, generated by the group’s activities, consistently with Iberdrola’s commitment to the long-term sustainable creation of value.

Due to the diversity of sustainable development goals and commitments, the group uses a broad set of indicators that allows for an evaluation of the contribution from various viewpoints. Even though the indicators do not capture all of the impacts generated, the results obtained constitute an efficient assessment tool to verify the achievement of the bylaw-mandated commitment to the social dividend in the communities in which the group does business.

This assessment is taken into consideration by the Board of Directors when defining the group’s strategy, and is shared transparently with all Stakeholders.

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Long-term risks and opportunities. Comprehensive Risk System

102-15

The Iberdrola group is subject to various risks inherent to the different countries, industries and markets in which it does business and to the activities it carries out, which may prevent it from achieving its objectives and successfully implementing its strategies.

Aware of the significance of this issue, the Board of Directors of the company undertakes to develop all of its capabilities in order to adequately identify, measure, manage and control the significant risks to all the activities and businesses of the group, and to establish through the *General Risk Control and Management Policy* the mechanisms and basic principles for appropriate management of the risk/opportunity ratio.

All actions aimed at controlling and mitigating risks shall conform to the following main principles of conduct, among others:

a) Segregate functions, at the operating level, between risk-taking areas and areas responsible for the analysis, control and monitoring thereof.

b) Act at all times in compliance with the law and the company's *Corporate Governance System* and, specifically, with due observance of the values and standards reflected in the *Code of Ethics* and the principles and good practices reflected in the *Corporate Tax Policy*, under the principle of "zero tolerance" for the commission of unlawful acts and situations of fraud set forth in the *Crime Prevention Policy* and in the *Anti-Corruption and Anti-Fraud Policy*.

Comprehensive Risk Control and Management System

The *General Risk Control and Management Policy* and the basic principles underpinning it are implemented by means of a *Comprehensive Risk Control and Management System*, supported by a Risk Committee of the group and based upon a proper definition and allocation of duties and responsibilities at the operating level and upon supporting procedures, methodologies and tools suitable for the various stages and activities within the system, including:

a) The establishment of a structure of risk policies, guidelines, limits and indicators, as well as of the corresponding mechanisms for the approval and implementation thereof.

b) The on-going identification and analysis of significant risks and threats (including passive liabilities and other off-balance sheet risks), both for each corporate business or function and taking into account their combined effect on the group as a whole. To the extent possible, risks will be measured following homogenous procedures and standards common to the entire group.

c) The analysis of risks associated with new facilities, as an essential element in risk/return-based decision-making.

d) The audit of the system by the Internal Audit Division.

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The risk factors to which the group is subject are generally grouped into the following categories:

- Corporate governance
- Market
- Credit
- Business
- Regulatory and political
- Operational, technological, environmental, climatic, social and legal
- Reputational

Effectiveness of risk management processes

102-30

Generally, the group's *Comprehensive Risk Control and Management System* allows for proper *ex ante* identification of risks or sounds alarms that allow for the making of decisions tending to minimise the impact of the risks.

The pillars of the system include the on-going evaluation of the suitability and efficiency thereof, as well as best practices and recommendations in the area of risks for eventual inclusion thereof in the model.

The group's Risk Committee does so on a monthly basis. This committee is supplemented with the Credit Risk and Market Risk Committees, which report to said Risk Committee, and which meet on a fortnightly and monthly basis, respectively.

On at least a quarterly basis, the Audit and Risk Supervision Committee of the Board of Directors monitors trends in the group's risks:

- It reviews the group's quarterly risk report.
- It coordinates and reviews the Risk Reports sent periodically (at least half-yearly) by the Audit and Compliance Committees of the companies of the group that have such a body.
- On at least a half-yearly basis, it prepares a risk report for the Board of Directors.

A more detailed description regarding risk management at Iberdrola can be found in the following public documents, available on the website:

- Section "E" of the *Annual Corporate Governance Report* for financial year 2018.
- The "Principal risks and uncertainties" section of the *Consolidated Management Report* for financial year 2018.
- Note 5 to the consolidated financial statements for financial year 2018
- The Integrated Report. February 2019.

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Climate change risk management. Iberdrola and the TCFD

201-2

In 2015 the Financial Stability Board (FSB) established a Task Force to encourage investors to have sufficient information regarding the risks relating to climate change and the manner in which each company is managing it: the Task Force on Climate-related Financial Disclosures (TCFD). Climate change could entail various risks in the medium term, both transitional and physical (according to the types defined by the TCFD). In June 2017 the Task Force published recommendations to include an analysis of risks and opportunities relating to climate change in annual financial reports, as well as the adjustment of the company's strategy and governance thereto. The eleven recommendations of the TCFD are structured around four thematic areas:

- Governance
- Strategy
- Risk management
- Metrics and targets

Iberdrola was one of the first companies to publicly commit to implement these recommendations in its public reports by 2020. To this end, Iberdrola already published in its February 2018 Integrated Report a description of the level of development of the four aforementioned areas. It has deepened this analysis during 2018, and has prepared a publication analysing climate scenarios, as required by the recommendations.

Governance

Iberdrola's Board of Directors considers climate change to be a priority element for the company. In 2018 it undertook a profound reform of Iberdrola's Corporate Governance System strengthening the group's commitment to all of the SDGs, especially goals 7 and 13.

The Sustainable Development Committee of the Board is in charge of reviewing aspects relating to climate change, among other things, and receives regular reports. The 7 meetings that took place during 2018 included aspects relating to climate change in its agenda.

The Board of Directors revised the *Policy against Climate Change*, and specifically Iberdrola's contribution to the mitigation of climate change and to the decarbonisation of the energy model, gradually reducing the intensity of greenhouse gas emissions (expressed in grams of CO_2 per kWh generated) in order to place it below 150 grams of CO_2 per kWh by 2030 (which is a 50% reduction in the intensity of emissions compared to 2007), continuing the development of electric energy from renewable sources, focusing innovation efforts within more efficient technologies having a lower intensity of carbon dioxide emissions, and progressively introducing them in their facilities, until reaching carbon neutrality by the year 2050.

Based on this commitment, there is also a link between the long-term incentive plan of the executive directors and the achievement of goals that support SDGs 7 and 13.

For more information, see the Corporate Governance System section of this chapter, as well as the following link Corporate Governance System.

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Strategy

Climate change is a key element for defining the company's strategy. Iberdrola treats it not only as a risk factor, but also as an opportunity for growth through mitigation and adjustment activities during the transition towards a low-carbon economy.

Iberdrola's strategy is aligned with the objectives of the Paris Agreement, given that the company has been integrating the fight against climate change into its strategy since the early 2000s, clearly committing to decarbonisation of the energy model through renewable energy, storage and smart grids, together with the commitment to achieve the SDGs.

In 2018 ScottishPower sold its 2,566 MW of thermal generation, making it the first vertically integrated company in the United Kingdom with 100% renewable wind power generation facilities.

Iberdrola has chosen four climate scenarios on which it is performing the analysis of potential impacts on its business model:

- **Two transition scenarios** that for Iberdrola represent potential paths towards a low-carbon economy. They are based on plausible projects prepared by a third party, the International Energy Agency:
    - *Sustainable Development Scenario* (*SDS*): this scenario assumes achievement of the climate change goals agreed to in Paris (<2°C), improvement in air quality and universal access to electricity in accordance with the UN SDGs.
    - *New Policies Scenario* (*NPS*): a scenario based on the World Energy Outlook, which includes current and announced energy policies (e.g. nationally determined commitments, or NDCs, from the Paris Agreement).

  There has been a comparative analysis of these two scenarios allowing for conclusions to be extracted by business and geographic area regarding the level of resiliency of Iberdrola's strategy with respect to climate change in the short and medium term. Continuity of the Outlook 2018-2022 has been assumed, with a qualitative transfer thereof through 2030.

  The result of the analysis indicates that, thanks to the company's strategy and positioning in renewable energy, divestment from oil and coal plants, and smart grids, its business model is sufficient to face both scenarios.

  It is important to note that, over the long term, Iberdrola's goal to achieve carbon neutrality by 2050 (which the company already set in 2009) is more ambitious than the goals sought under the NPS scenario and is aligned with the SDS.

- **Two physical scenarios**, based on the IPCC Fifth Assessment Report, to diagnose the range of impacts:
    - *Representative Concentration Pathway 8.5* (*RCP 8.5*) of the Intergovernmental Panel on Climate Change (IPCC): the most unfavourable case of the physical risks that the company might face corresponds to a 3.7º C increase in average global temperature during the 2081-2100 period.
    - *Representative Concentration Pathway 4.5* (*RCP 4.5*) of the Intergovernmental Panel on Climate Change (IPCC): stabilisation scenario, taking account of the efforts being made and to be made at the international level to reduce greenhouse gas emissions.

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Taking into account that adjustment to the physical risks arising from climate change is a major issue for a sector as strategic as electricity, Iberdrola has analysed the principal climate threats to which the electricity sector might be exposed under these two scenarios in the various jurisdictions and for the different technologies in the short, medium and long term.

From this analysis derive the specific detailed studies in those sectors and locations that have been identified as most vulnerable to the impacts of climate change, going into detail regarding the quantification of the impacts and ability to adapt.

The preliminary analysis evaluated the risks arising from the principal climate threats, like increasing temperature, changes in rainfall and increase in sea levels, considered to be chronic risks, as well as the increase in frequency and severity of extreme meteorological events (flooding, heat waves, hurricanes, etc.) for the various jurisdictions in which Iberdrola operates and for the different technologies, taking into account the vulnerability and exposure thereof. The RCP 4.5 and RCP 8.5 emission scenarios have been considered for the group of climate variables analysed in order to consider a scenario of emissions stabilisation (RCP 4.5) and a more pessimistic scenario of higher concentrations of GHG emissions, and thus greater changes in climate (RCP 8.5).

The analysis leads to the conclusion that the risks arising from climate change affect customary business variables and therefore variables managed within the customary processes of its operations. It is expected that climate change will affect the probability of occurrence and potentially the intensity of such events, for which reason, even if they do not constitute a new source of risk, there is a greater level of sensitivity to them.

Extreme phenomena are identified as one of the main threats to the different technologies and jurisdictions, the frequency and severity of which are expected to increase in coming years. However, there are plans and predictive systems that allow for the impacts arising from these events to be minimised. One example of an extreme event that was already managed is in the management of the networks in the United States, where Avangrid Networks launched a plan for the next 10 years, “Transforming Energy”, in order to improve the resiliency of the network against severe storms, with measures like the replacement of supports and conductors, the improvement of tree trimming and maintenance, and better connectivity, among others.

The chronic impacts are progressive and will be occurring in the coming decades, relatively long periods, for which reason they will be managed based on the level of adaptation and resilience of the various facilities. This also means that, in large part, the group’s future assets, and not the current assets, will be the ones bearing the most severe impacts, as all assets are gradually renewed when they reach the end of their useful life.

The adaptive ability of Iberdrola’s facilities, and thus the ability to manage the risks arising from climate change, is due to, among other factors, the large diversification of generating assets that allows the group to better manage the risk arising from climate change and consideration of climate variability in traditional processes, like the replacement of equipment and the supply of spare parts, as well as in the technical specification of the equipment.

However, given the constant evolution of science and the uncertainty associated with studies on climate projection and the impacts thereof, the analysis must be continued and deepened in order to quantify the potential impacts and establish adjustment measures if necessary. There can thus be a detailed analysis of the variability of resources like hydraulic, wind and solar based on the location of the company’s assets, and progress to the extent that climate science homogeneously introduces itself in the processes in the various countries in which Iberdrola

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does business. They are all lines within the working plan regarding the adjustment to climate change.

For more information regarding the company's strategy, see the document *Outlook 2018-2022* (or the document replacing it for a subsequent period), which can be accessed through its corporate website in the *About Us* section, as well as in the section "Key impacts on sustainability" of this chapter.

Risk management

As regards the process for identifying the risk of climate change, Iberdrola's Board of Directors and senior management are committed to identifying and evaluating the risks of the group: a) *Ex ante*: the risk tolerance levels are reviewed and approved annually through risk policies and limits that establish the qualitative and quantitative risk appetite at the level of the group and at each of the principal businesses and corporate functions; b) *Ex post*: at least one quarterly supervision of major risks and threats and the different exposures of the group, as well as compliance with the risk policies, limits and approved indicators.

Climate change covers various risks, which to a large extent are not new risks for Iberdrola. Pursuant to the *General Risk Control and Management Policy*, risks relating to climate change are included in the catalogue of threats. Within the group, the identification, analysis and management thereof is approached with a multi-departmental focus, in which there is cooperation between corporate as well as business functions with the participation of the highest management levels of the group. Regular review procedures are established for this purpose.

The group's control and risk management system considers and monitors the risks arising from climate change, which can be grouped into:

- Physical: potential material impacts on facilities.
- Transitional: associated with the process of global decarbonisation, including regulatory changes, market prices, technologies, reputation.
- Other: like risks in the supply chain and social phenomena.

Based on the estimates of the impacts and Iberdrola's mitigating elements (included in section 4.7 of the Consolidated Management Report), it is not expected that the climate change risks evaluated will have a catastrophic or permanent impact on the group's consolidated figures analysed to 2040, which are globally resistant. In any case, the opportunities arising for the company from the decarbonisation of the global economy are greater than the risks.

It should be noted that although the impacts from climate change can already be seen in the short term (e.g.: greater intensity and frequency of climactic events in certain geographic areas), they are gradual and over relatively long terms.

Finally, although they represent an enormous challenge, climate change and the necessary transition towards decarbonisation of the energy model are also an opportunity compatible with growth and profitability for the company. Iberdrola has undergone a profound transition in this regard over the last two decades, clearly anticipating the energy transition to face the challenges of climate change and the need for clean electricity. Today, the group is perfectly positioned to take advantage of the following opportunities, among others, thanks to its leadership in renewable energy, smart grids, storage and digitalization, and its commitment to the transition towards a low-carbon and climate-resistant economy:

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- **Investment opportunities and improved competitive advantage.** Legislative and regulatory changes encouraging decarbonisation through greater electrification, the development of renewable energy and the integration thereof into the electricity system through smart grids and backup capacity, technological innovation, etc.
- **New services and markets.** Demand for new energy services and products related to the energy transition (e.g. electric mobility, demand-side management, smart grids, energy storage, etc.).
- **Advantages in the acquisition of financing.** Growing pressure on the financial sector and capital markets, which favours those companies with an ambitious decarbonisation strategy, low exposure to assets linked to climate change and good positioning on the sustainability and transparency indexes.
- **Strengthening of corporate reputation.** Result of a leadership position in the energy transition.
- **Sustainable creation of value.** Maximisation of the social dividend for all Stakeholders.

For more information regarding the management of climate risks, see section 4.7 "Climate change risks" of Chapter 4. "Principal risks and uncertainties" of the *Consolidated Management Report* for financial year 2018, as well as the Integrated Report. February 2019.

Metrics and targets

Iberdrola includes in this sustainability report and in the Integrated Report significant indicators to report on aspects relating to climate and to the strategy of the fight against climate change, including the greenhouse gas emissions inventory, the intensity of emissions, reduction targets, the use of energy, energy intensity, the energy mix, renewable installed capacity, use of water, source of water, R&D+i and Capex in the development of low-emission products, services and/or technology.

Iberdrola believes that disclosure of the financial risks relating to climate change in a consistent and improved manner will allow for the establishment of a constructive and well-informed dialogue amongst investors and companies regarding the opportunities and risks relating to their activities.

For more information, see the "Reduction in emissions" section of Chapter II.3. Iberdrola also has a specific section on its website called Against Climate Change in order to show the company's efforts to mitigate and adapt to the consequences of climate change.

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II. "Responsible Energy for People": Our Priorities

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Iberdrola is firmly committed to contributing to the sustainable development of society and improving the quality of life of people. This commitment materialises in the innumerable projects and activities undertaken by Iberdrola and set out in the Social Responsibility Plan 2018-2019 “Responsible energy for people”. It summarises the most significant projects, sets the goals and shows our alignment with the Sustainable Development Goals of the United Nations (SDGs).

Iberdrola’s vision of its responsibility is based on the long-term creation of value for our Stakeholders. For this reason, we focus our work on meeting their expectations and strengthening the links of mutual trust with our shareholders, employees, suppliers, environment and society in general. We have called this shared value the social dividend, which constitutes the basis of the responsibility that we assume through our actions contributing to society.

The vision of “Responsible energy for people” is grouped around seven priorities: It is a broad focus, because we believe that it is the proper way to respond to the expectations of our Stakeholders. We have also added multiple lines of work with specific tasks (more than 300) and measurable goals in accordance with international sustainability standards. We have also included the exchange of lessons learned to face the new challenges raised by society.

These goals are monitored by the Corporate Social Division together with the areas and businesses, and the results are evaluated by the Sustainable Development and Reputation Committee of the group and by the Sustainable Development Committee of the Board of Directors, when the latter so requests.

Iberdrola’s largest impacts for the success of the 2030 Agenda are focused on SDG 13 (Climate action) and SDG 7 (Affordable and clean energy), which also constitute significant business opportunities due to the growing electrification of the economy. One should also note the company’s enormous contribution to the development of our communities in the areas of biodiversity, innovation, training, transparency, solidarity, education, the arts, culture, etc. Supplying “Responsible Energy” means responding to all of these challenges, meeting the demands of our Stakeholders.

Sustainable development at Iberdrola is integrated into its businesses and corporate areas, and is at the head of a new management paradigm in which companies take a more active role in building a more equitable world.

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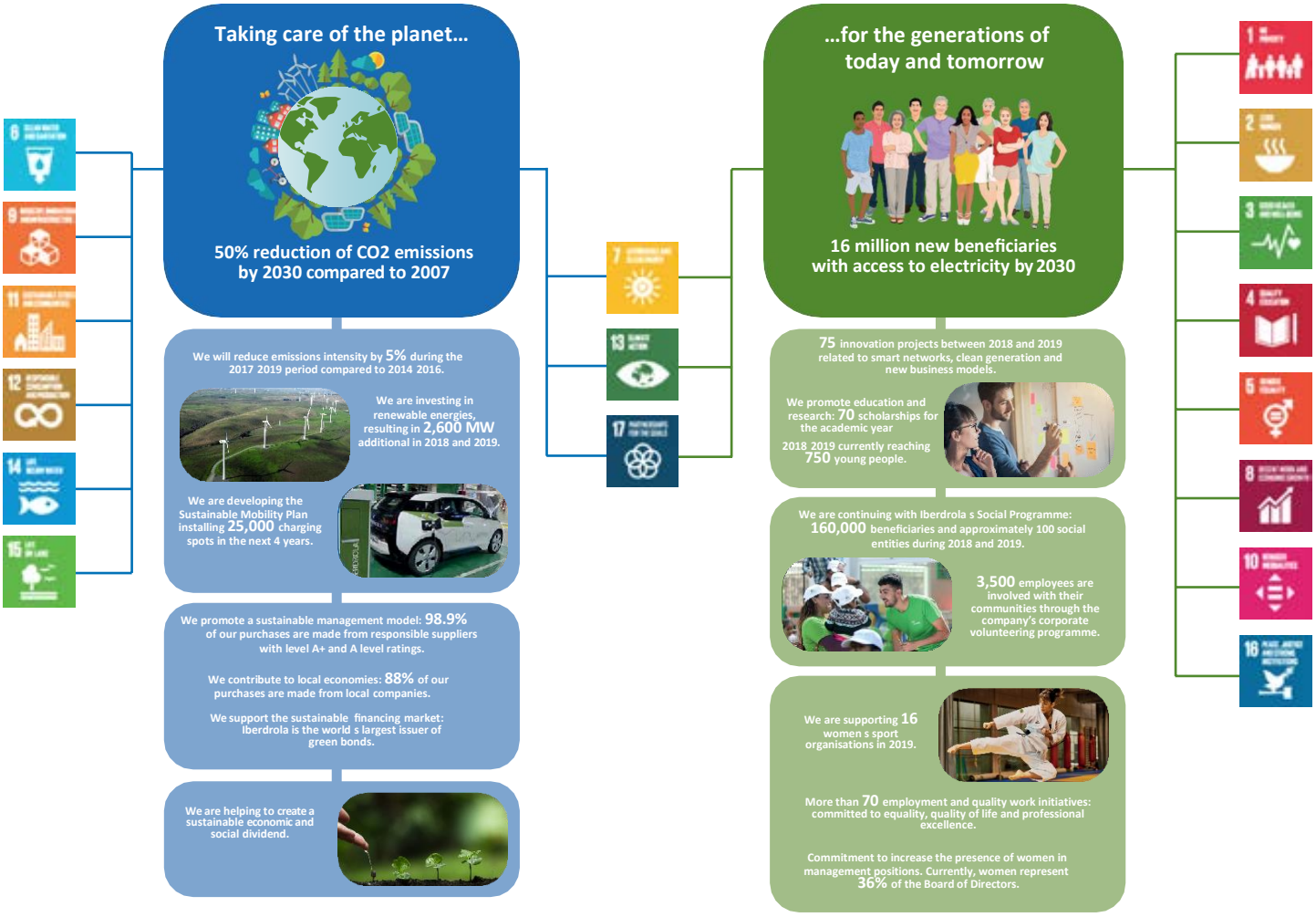
RESPONSIBLE ENERGY FOR PEOPLE

*Our **commitment to sustainable development** is realized by integrating the **United Nations 2030 Agenda** into the strategy and operations of the Iberdrola Group.*

Our greatest contributions to the achievement of the Sustainable Development Goals are oriented around ***two major axes*** *which inspire our actions:* ***we take care of the planet*** *by being at the forefront in reducing emissions in the energy sector, and* ***we contribute to the welfare and progress of societies*** *in all the territories where we are present. Iberdrola's commitment materialises through different lines of work which encompass more than* ***300 environmental, social and economic actions****, thus responding to the expectations and needs of our Stakeholders.*

IBERDROLA'S CONTRIBUTION TO THE SUSTAINABLE DEVELOPMENT GOALS DURING 2018 -2019



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II.1. Sustainable Economic Growth

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- Economic/financial impact
- Green financing
- Energy transition and supply costs
- Creation of employment and salaries
- Stable labour environment. Commitment to quality employment

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Economic/financial impact

Contribution to SDGs of the performance described by the indicators of this section
(according to SDG Compass www.sdgcompass.org)

GRI 201

The electricity sector is a significant driver of the economy, to which it continuously contributes through significant investments and the creation of high-quality jobs, both direct and indirect. Its function is to provide safe, competitive and sustainable supply. Generation technologies using renewable sources are decisive in the fight against climate change, as they allow for increased electrification of the economy, thus reducing dependency on fossil fuels.

Iberdrola continues to engage in a process of growth and internationalisation that has made it one of the leading electric companies in the world. This strong position was achieved through a sound, long-term industrial plan that is both profitable and creates value, supported by a business strategy of sustainable growth and geographic diversification.

Analysts describe a global scenario for the energy sector characterised by an increase in energy demand, tied to a need to reduce CO_2 emissions. Estimates call for high growth in demand in the medium and long term in emerging countries and moderate growth in the developed world. In any event, this energy transition will require large investments in renewable generation facilities, in smart grids and in efficient storage; all accompanied by greater digitalization to support efficiency and the development of new products.

Iberdrola's strategy, implemented at the beginning of the 2000s, has been based precisely on these growth vectors: investment in renewables, smart grids, efficient storage, digitalization and customer solutions. The strategic pillars defined by the company are profitable growth, operational excellence, customer-focused operations, the optimisation of capital, and innovation. Its current leadership position reflects the benefits of its forward vision and diversification of businesses and areas.

A summary of the Iberdrola strategy can be found in the document *Strategic Overview 2018-2022* (or in the document superseding it in a subsequent period), which can be accessed through its corporate website in the *About Us* section.

Iberdrola's financial results for the year are summarised in the Results section of the website. Alongside these results, the company also requires its companies to explain how they are achieved and to evaluate them in terms of sustainability, understanding that adequate disclosure of non-financial information is an essential element for the sustainability of financing activities.

This *Sustainability Report 2018* covers the requirements arising from the entry into force of the new Law 11/2018 on non-financial information and diversity, forming an integral part of the company's management report. The Annual Reports, the *Integrated Report. February 2019*, the

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quarterly results reports and other operational and financial information of interest can also be found on the website.

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Direct economic value generated, distributed and retained (€ millions)	2018	2017	2016
Iberdrola total			
Revenue (sales and other income)	36,273	32,714[12]	30,706
Operating costs	22,433	20,446	18,588
Employee remuneration (excluding company social security costs)	2,387	2,517	2,260
Payments to providers of capital	2,402	2,916	2,692
Payments to government administrations	3,096	2,723	2,740
Community investments (verified according to the LBG Model)	54	63	36
Economic value retained	5,901	4,049	4,390

Information by geographic area can be found in Annex 1 Supplementary Information.

Financial assistance received

Financial assistance received by the Iberdrola group is shown in the following table on a consolidated basis:

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Financial assistance (€ millions)	2018	2017	2016
Capital subsidies	6	10	13
Operating subsidies	3	6	3
Investment tax credits[13]	8	30	0
Production tax credits[14]	91	90	87
Assistance for other items included in the GRI Protocol	0	0	0
Iberdrola consolidated total	**108**	**136**	**103**

Information by geographic area can be found in Annex 1 Supplementary Information.

GRI 203

In addition to the direct economic impacts that occur as a result of the cash flows that are generated, the Iberdrola group also induces additional effects or indirect economic impacts such as those described below:

203-2

Indirect impacts of the businesses and facilities

From an economic standpoint, the expansion of electricity systems drives the regional economy in the region where it occurs and creates employment opportunities, contributing to economic and social enhancement.

[12] Includes Sales in the amount of €31,263 million and Other revenue €1,451 million.
[13] *Créditos fiscales a la inversión.*
[14] *Créditos fiscales a la producción.*

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Positive effects include:

- Facilities for the production, transmission and distribution of electrical energy are built in dispersed geographic locations. This contributes to the generation of economic activity and jobs in urban and rural environments. This can also support the revitalisation and repopulation of underpopulated rural areas.
- These same facilities create significant indirect employment in the region in the form of local contracting companies, creating demand for various lodging, security, health, mechanical, supplier services, etc.
- Due to this geographic reach, electricity activities generate fees, taxes and duties at the local, regional and national levels and allow for the generation of revenue in very different areas, to which one must add the tax loads associated with increased commercial and financial activity.
- In local communities, professional training is promoted and skilled labour, such as services for building and maintaining wind farms, is boosted.
- Local communities are supported through sponsorship of the initiatives of social and environmental institutions and organisations.

Negative effects can be considered to include the following:

- Environmental risks, which may give rise to undesirable consequences for the environment, such as spills and improper emissions, or waste management; these situations might occur despite the ever more demanding operational practices developed by the group.
- The landscape impact of the facilities, especially large ones, and the possible negative effects (during construction or operation) on traditional activities, particularly in the rural environment, such as ranching, hunting or fishing.

Indirect impacts of the supply chain

The high volumes of Iberdrola's purchases (described in detail in the "Description of supply chain" section of Chapter II.6) of equipment, works and services, as well as fuel, becomes an engine for growth in the countries in which the company is present.

Entrepreneurial support

Iberdrola supports the creation and strengthening of new entrepreneurial projects through a number of significant initiatives, including the following:

- In 2018 Iberdrola procured a volume equivalent to 42.6 million euros from companies in Spain that have been operating for less than 5 years, which is clear support for entrepreneurship.
- Inclusion of the specific category *Generation of employment and employment of youth* at the Supplier of the Year Awards in Spain: incentivising the suppliers to commit to youth and female employment, and encouraging them to offer high-quality professional opportunities to youth, which will undoubtedly lead to an improvement in competitiveness and innovation at the companies and will allow them to retain talent.
- Iberdrola's venture capital program, *Iberdrola Ventures - Perseo*, funded with 70 million euros, is an opportunity for companies dedicated to innovative technologies and business models, ensuring the sustainability of the energy model. For more information about this

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programme, see the section "Digital innovation and transformation projects" of Chapter II.4, as well as the Innovation section of the corporate website.

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During the construction and operation of its facilities, Iberdrola also carries out certain infrastructure activities that are unrelated to its facilities and without a specific commercial purpose, but rather that are intended to meet the needs of the social environment, resolving existing shortcomings in the local communities.

A summary of these projects with strong social impact during 2018 is provided below:

- Noteworthy is support for professional formation and training in areas near Iberdrola's facilities. In 2018, more than 8,000 people visited the Energy Classrooms near the wind farms in Spain. There is also a visitor centre in the United Kingdom at the Whitelee windfarm, where visits are received from the general public and from school groups.
- In Mexico, it has participated in the construction and/or improvement of various recreational and educational centres, as well as infrastructure improvement and expansions of potable water and sewerage networks.
- In the United Kingdom, action has been taken to improve the various infrastructures as well as landscape improvements for the enjoyment of the people near the different production centres.
- Finally, one should note the collaboration with Hydrographic Confederations and other bodies in Spain to enable various activities near the hydroelectric reservoirs (sports events, support for reproduction of certain species, etc.), by adjusting flows at certain times, as well as specific assistance in the repopulation of species.

Green financing

Iberdrola is a world leader at the company level with respect to green financing, highlighted by the number and amount of green bonds issued. All of the foregoing is to align with its vision and values, optimise the cost of its debt and diversify its sources of financing.

The differentiating feature of such bonds is the commitment of the issuer to use the proceeds to finance or refinance socially responsible projects like renewable energy, improving efficiencies in electricity transmission grids and researching more efficient energy sources. The issuer also commits to regularly report the return on its investments in these projects in terms of sustainability.

The company issued its first *green* bond in 2014, and since then has intensified its financing in this SRI (Socially Responsible Investing) focused market, with many more issues, in various areas: both public and private, senior and subordinate (November 2017 and March 2018 hybrid green bonds), by the corporation as well as its subsidiaries (Avangrid *green* bond in November 2017).

The process for selecting and evaluating projects that can be (re)financed by green instruments is articulated in the *Iberdrola Framework for green financing* (the "**Framework**"), which has been verified by PriceWaterhouseCoopers Auditores, who also verify this *Sustainability Report*, and is fully consistent with the *Green Bond Principles.*

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The validation of the projects eligible for each issue can also be found in the corresponding *Second Party Opinion* prepared by VigeoEiris and available on the corporate website. It is important to note that the issue of this type of financial asset requires not only compliance with the *Green Bond Principles* and of the *Framework* at the operational level, but also the existence of a strong sustainability profile of the issuing group.

The table below summarises the environmental benefits in 2018 related to investments financed with the green bonds issued by Iberdrola.

Bond	Area of investment	Installed capacity attributable to the bond (MW)	2018 output attributable to the bond (GWh)	CO_2 avoided due to the bond (Tm)
XS1057055060	Renewables[15]	478	1,000	220,493
XS1398476793	Renewables	736	1.384	324,862
XS1490726590	Renewables	403	805	227,687
XS1527758145	Renewables	540	1.128	247,033
XS1564443759	Renewables	201	237	63,509
XS1575444622	Renewables	340	794	313,010
XS1682538183	Renewables	279	587	223,618
XS1721244371	Renewables	648	1,309	370,542
XS1797138960	Renewables	225	0	0
XS1847692636	Renewables	241	0	0
XS1924319301	Renewables	25	81	46,874

For more details on these issues and their sustainability returns, see the *Report on Green Bond Returns* available in Annex 3 of this report.

[15] Among others.

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Energy transition and supply costs

Contribution to SDGs of the performance described by the indicators of this section
(according to SDG Compass www.sdgcompass.org)

Demand-side management

As part of its demand-side management programmes, Iberdrola's main objective is to improve energy efficiency and the smart use of active electrical grids to thus contribute to the more efficient use of energy by consumers, and thereby reduce CO_2 emissions and contribute to the fight against climate change.

The types of actions taken include those relating to information, training and the supply of solutions and technologies that help them improve energy efficiency and reduce the environmental impact of their energy habits and consumption. Iberdrola engages in demand-side management in all of its geographic areas and for its various types of customers.

The main activities performed are broken down separately due to the unique nature and law of each country or market:

Spain

Noteworthy is the completion of the smart meters installation plan in Spain, reaching a figure of 10.7 million meters installed, within the *STAR* programme.

Iberdrola also sells a wide range of products and services that promote efficiency, energy saving and environmental protection, all within its *Smart Solutions*:

- Energy efficiency: efficient air conditioning and lighting, capacitor banks, home automation systems and other solutions.
- Renewable energy facilities: solar photovoltaic energy.
- Comprehensive management of energy supplies.
- Electromobility.

In 2018 more than 800,000 customers benefited from products and services that improve energy efficiency.

In the industrial and commercial sectors, there are initiatives to diagnose and propose measures for energy savings and efficiency, like efficient lighting, efficient air conditioning, etc.

Other activities to promote energy efficiency were also carried out through the website, social media, campaigns, customer invoices, etc.

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In addition, Iberdrola's contribution to the Energy Efficiency Fund, used to increase energy efficiency in the different energy consumers sectors in a way that contributes to reaching the national energy savings goal established by the National Energy Efficiency Obligations System (*Sistema Nacional de Obligaciones de Eficiencia Energética*) was 15.2 million euros.

United Kingdom

In the residential customer market, ScottishPower is participating in the *Energy Company Obligation (ECO) Programme*, sponsored by the British government, the purpose of which is to reduce CO_2 emissions and heating costs through insulation and energy efficiency measures. It also provides energy consultancy and support services through a range of channels, with a team of accredited consultants.

In the area of commercial and industrial customers, the company's products are focused on energy savings, cost reductions and CO_2 emissions. These include automated controls that allow for proactive or reactive response to the requirements of the grid.
In addition, there has been continued development of the Demand-Side Response (DSR) products to generate business opportunities through the management of one's own energy consumption based on network requirements.

United States

There are various energy efficiency programmes in the states in which Avangrid distributes electricity, including *Clean Energy Communities* and *Home Energy Solutions* in Connecticut.

There are also programmes to help improve the energy efficiency of homes under construction or undergoing major renovations. There is also the *Residential New Construction* programme in Connecticut and the *Berkshire Gas New Construction Initiative* in Massachusetts.

Brazil

The companies of the Neoenergia group carry out various energy efficiency programmes for residential customers. For example, the *Vale Luz* programme, which promotes the safe and efficient use of electric power, and the *Energía con Ciudadanía* project, intend to encourage reduced consumption. There is also a programme for training in the efficient and safe use of energy for educators, students and the general population.

In the institutional and industrial segments, Neoenergia has carried out a range of projects relating to the improvement of energy efficiency and the development and improvement of the competitiveness of these sectors.

Generally, most of the programmes seek to promote energy efficiency in the buildings of customers and help to control their electricity consumption through various tools, allowing this consumption to be monitored.

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Availability and reliability

EU10

The companies of the Iberdrola group have no direct responsibility for long-term planning processes for the corresponding electricity systems in the countries in which they operate.

Government authorities conduct the studies needed to anticipate the long-term needs of the respective electricity system, and Iberdrola's companies act as market agents, making investment decisions that are consistent with their business plans.

Spain

The planning of generation in Spain is a government function and is indicative in nature, as participants make investment decisions within a free-market environment.

Analysing the reliability of the short-term electricity supply is a task assumed by the System Operator (which role is played by Red Eléctrica de España, S.A.), which regularly studies different operation scenarios to verify the robustness of the system. Iberdrola significantly contributes to increasing reliability in the operation of the system by providing great flexibility through hydroelectric generating and pumping capacity as well as with a pioneering renewable energy control centre.

The Networks Business also contributes to guaranteeing reliability, performing studies to identify the short- and long-term investments needed to meet the increase in demand and to renew older facilities by adopting more modern technologies and network digitalization programmes, with a view to guaranteeing a more operational and reliable network. Of note is completion of the deployment of smart meters, with 10.7 million installed, a modernisation of 99.9% of the company's meters in Spain. The investments in smart distribution grids helps to improve reliability and availability of the networks.

United Kingdom

A large part of the United Kingdom's generating facilities is reaching the end of its use life, and the government is determining an energy policy and regulations to enable renewal without endangering the safety of supply. There are auctions of capacity in which the government calculates the required capacity to cover demand depending upon its system reliability target, and asks for bids from industry players owning facilities or projects, awarding the required capacity. February 2018 saw the fourth long-term T-4 auction, in which both existing plants and new projects took part. Iberdrola is developing new projects in offshore wind technology.

Electricity transmission network activities are governed by the RIIO-T1 regulatory framework for the 2013-2021 period. Investments with a dual purpose are being considered during this period: first, to increase the transmission capacity of interconnections between Scotland and England, and second, to enable the evacuation of energy from all renewable facilities expected in the short to medium term. Of note is the start-up of the Western Link subsea cable, which has increased transmission capacity between Scotland and Wales by 2,000 MW. Both objectives will make it possible to guarantee reliable, high-quality service in the coming years.

The reliability of electricity distribution networks is ensured through studies that make it possible to identify the short- and long-term investments needed to meet new demand and to renew older facilities, all of which is managed in accordance with the RIIO-ED1 regulatory framework for the 2015-2023 period. The investments in smart distribution grids helps to improve reliability and availability of the networks.

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United States

Iberdrola is among the leading producers of wind energy in this country.

The group's North American companies act in accordance with the laws and regulations of the states in which they operate. In the state of New York, the companies participate in planning activities through official bodies, ensuring that they can meet short- and long-term demand under proper conditions of reliability and safety. The System Operator (NYISO) operates within the reliability margins set by the North American Electric Reliability Council, the Northeast Power Coordinating Council and the New York State Reliability Council (NYSRC). NYSRC sets the installed capacity reserve margin, as well as the required level of generating capacity, such that the loss of load in the New York control region is no more than one day per ten years. In New England, ISO-NE sets installed capacity requirements (ICR) using similar criteria.

In the State of Maine, transmission and distribution companies have no authority over energy planning, and cooperate with official bodies on operational matters that may be required by such bodies. In any case, electricity distribution companies guarantee reliability, carrying out studies that make it possible to identify the short- and long-term investments needed to meet the increase in demand, and to renew older facilities by adopting more modern technologies, with a view to ensuring a more operational and reliable network.

The construction of the 233 km HVDC transmission line (New England Clean Energy Connect) awarded to Avangrid in 2018 will improve grid stability and reliability, allowing for the supply of 1,200 MW of 100%-hydroelectric energy to the state of Massachusetts. The project is in the initial phase of obtaining the main permits.

Brazil

The group's companies in Brazil manage major electric distribution areas and electricity production plants. They work in close cooperation with the public administrations, developing systems to help them attain energy planning goals, achieving the desired balance between available resources and the quality and reliability of the electricity supply.

Iberdrola's Networks Business contributes to ensuring the reliability of electricity supply, making investments to meet the rapid increase in demand and electricity consumption in the areas in which it distributes, ensuring a more functional and reliable network. It also invests in electricity transmission projects that will encourage robustness by improving the backbone of the system. 4 transmission projects were awarded in December 2018 involving the construction of 3,000 km of transmission lines, favouring the safety of the system.

Other examples of activities to improve the quality of supply in Brazil during 2018 are:

- Improvement of prioritisation of incidents based on their scope (number of customers affected and duration of the interruption) and definition of a new contingency plan for the crisis.
- Review and expansion of automation, improving coordination of protective equipment and expanding automation of the lines.
- Construction of nine new substations.

The group's companies in Brazil also participate in developing generating facilities (hydroelectric, wind and photovoltaic).

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Mexico

In Mexico, a major portion of production is generated by combined cycle generation plants with long-term contracts from the Federal Energy Commission. These plants contribute to the country's energy transition with efficient energy, providing safety of supply and high levels of availability. The rest of the production is sold through long-term contracts to private customers.

Iberdrola is also investing to grow in the segment of renewable energy, especially wind and solar photovoltaic.

Fuel

A key element in managing the availability of electricity service is the procurement of the necessary fuel. Iberdrola ensures it has a global portfolio of gas and coal contracts that is flexible and geographically diverse. This is in addition to a stable, long-term and low-risk supply of nuclear fuel.

The risk of fuel cost is managed using financial contracts that fix the price of the fuel at a particular time, allowing for reduction of risks and ensuring a margin on forward sales. These financial contracts are primarily used to fix the costs of coal and gas under long-term contracts. Derivatives are also be used to cover fuel costs in euros, as purchases are usually made in U.S. dollars.

The Iberdrola group's generation facilities have high availability factors, as shown below:

EU30

Average availability factor of generation technologies (%)	2018	2017	2016
Combined cycle	90.4	90.9	89.9
Conventional thermal	94.3	93.9	85.5
Cogeneration	92.2	82.8	91.0
Nuclear	89.3	89.3	86.0
Hydroelectric	86.9	86.0	87.0
Wind	96.4	94.4	96.8
Total[16]	**91.6**	**90.5**	**91.0**

Information on the availability factors in the various countries is described in Annex 1 Supplementary Information.

Supply costs

The cost of electricity supply, and the energy transition, are taking on a greater role in the political and social agenda. The principal challenge is to reconcile secure and environmentally friendly supply, thanks to the use of renewable energy, with prices that are competitive and can be afforded by society as a whole.

[16] Weighted average with the installed capacity.

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The electricity sector, which by nature is a basic service for society, is broadly regulated in the various countries in which Iberdrola operates, with varying levels of liberalisation in some of them. The most significant cost-related issues being debated and regulatory developments currently occurring in these countries are described below:

European Union

- The Agency for the Cooperation of Energy Regulators (ACER) and the European Commission, in studies on electricity prices published since 2016, confirm that taxes and components associated with energy and environmental policies are what have grown the most in recent years, reaching half of the bill in countries like Spain. This increase is mainly due to the electricity sector being the only sector that financially supports the renewable energy development goal imposed by the European Union. A competitive electricity supply requires the elimination of cost components outside of the service itself, which must be accommodated through general taxes for renewable goals to be distributed among all polluting energies.

- The Clean Energy for All Europeans package includes various legislative proposals, including a revision of the Market Design favouring the energy transition and responding to the need to comply with the 2030 environmental agenda (40% reduction in GHG emissions, 32% increase in renewables and 32.5% improvement in energy efficiency), monitoring the safety of supply and the competitiveness of the European industry, and allowing prices that are accessible for European citizens.

- As regards the existence of specific regulated rates for vulnerable customers, the Package maintains the situation until 2025, when the Commission will analyse the situation and may propose the elimination thereof.

Spain

- The wholesale price for electricity in the Iberian *SPOT* market is aligned with the other European markets. According to the Third Report on Energy Prices and Costs in Europe published by the European Commission at the beginning of 2019, prices for industrial customers in Spain are below the European average. For residential customers, Spain holds fifth place in the European Union, after Germany, Denmark, Belgium and Portugal. However, as mentioned above, only half of the electricity bill of certain customers, especially those in the residential and commercial segment, is directly related to the provision of the service. The rest derives from the pursuit of energy policy goals (aid for renewable energy and cogeneration), social goals (subsidies for electricity in non-mainland territories and recovery of tariff deficits from previous years) and taxes.

- The government has approved a Royal Decree Law (15/2018) with urgent measures for the energy transition and the protection of vulnerable consumers, which seeks to reduce the price of domestic invoices and expand coverage for vulnerable groups, among other things. Along these lines, it expands subsidised rates (*bono social*) to certain groups, creates a thermal subsidised rate for heating, eliminates the “green cent” tax on gas and temporarily suspends the tax on electric power production. All of these measures help to reduce the final price.

- Iberdrola has included in its *General Sustainable Development Policy* the protection of customers in situations of vulnerability, in order to ensure energy supply to this group. For this purpose, it is taking action to promote, inform and facilitate access to the

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subsidised rates, and it is also working with public authorities, various institutions and NGOs to identify and protect economically disadvantaged persons (see "Access to electricity" section of Chapter II.5).

United Kingdom

- In 2018, the UK government approved the "Tariff Cap" law and Ofgem defined the cap for the standard variable tariffs (SVT) at 1,137 pounds annually for a dual customer (gas and electricity) with direct debit from 1 January 2019 until 31 March of 2019. Ofgem published the new limits that will apply from April to October 2019 on 7 February: 1,254 pounds annually for dual customers. The price limits will apply until no later than 2023 and will be updated on a half-yearly basis.

- Although the government continues working to minimise the costs that it controls, as a demonstration of its environmental commitment it has maintained the minimum price of CO_2 and has announced an annual budget of 60 million pounds for the next auction of Contracts for Differences for projects commencing during the 2023-24 and 2024-25 periods. The government expects to award between 1 and 2 GW of offshore wind.

United States

- The Environmental Protection Agency (EPA) has proposed an "Affordable Clean Energy" (ACE) rule to replace the Clean Power Plan (CPP) which establishes guidelines for the states allowing them to develop greenhouse gas reduction plans for existing coal plants. The ACE is mainly based on making efficiency improvements at generating plants and on the application of new technologies, giving states the flexibility to develop their own plans for regulating the emissions of generating plants.

- The development of smart grids, the rapid replenishment of supplies in the face of extreme weather conditions, new EPA regulations, and the integration of new energy sources require major investments, which sometimes conflicts with the goal of reducing final tariffs. These final rates are agreed between the distributors and the state regulators.

Brazil

- According to the International Energy Agency's *Renewables 2018* market report, Brazil has the least polluting energy matrix among the large economies of the world. 43% of final energy consumption in Brazil is from renewable sources, which rises to 85% if we analyse the electric generation mix.

- Prices in Brazil's electricity market are highly dependent on the hydrological situation of the country and on rainfall expectations; in fact, the hydrological situation worsened beginning in April 2018, causing the Regulator to activate the yellow tariff flag in May and second-level red from June to September (both inclusive), meaning that the final consumer pays an additional cost of 5 Brazilian reais per 100 kWh consumed. The yellow flag was activated during the last quarter of the year, meaning an additional cost of 1 Brazilian reais for each 100 kWh.

- Furthermore, according to ANEEL data, almost 30% of Brazilian domestic consumer electric invoices are due to taxes, 53% corresponds to generation, transportation and other industry costs and 17% corresponds to energy distribution costs.

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- Brazil has the "Light for All" programme for vulnerable consumers, which has been extended to December 2022 for Coelba. This programme was created in 2003 in order to electrify rural, isolated and economically disadvantaged areas. The programme is coordinated by the Ministry of Mines and Energy, operated by Eletrobrás and executed by the energy concessionaires and rural electrification cooperatives. The programme is financed by industry funds, by the state governments and by the electric power distribution companies. The current Coelba contract is financed 65% with industry funds (CDE account) and 35% with own funds that are recovered in the tariff revisions every 5 years. The Coelba contract does not have financing from the government of the State of Bahía.

- The Ministry of Mines and Energy has approved the Decennial Energy Expansion Plan, which provides for the installation of a total of 54.6 GW between this year and 2027, of which 32.3 GW will be renewable. Breakdown by technology: 13 GW will be wind, 6.9 GW solar and 6.8 GW hydroelectric, with the remaining 5.6 GW being biomass and mini-hydro. It is also expected that 40,227 million euros will be allocated to the transmission business.

Mexico

- In Mexico, private investment in electricity generation, the goals of renewable generation and the establishment of a system of clean energy certificates are encouraging competition and the diversification of the energy matrix, which is allowing for a reduction in generation costs. These goals are being reached to a large extent thanks to the long-term energy auctions, which allowed for the construction of 7,451 MW of clean energy and very competitive prices at the global level. There were three auctions of this type through the end of 2018, and the price has progressively decreased from USD 41.8/MWh for the first auction to USD 20.57/MWh for the third.

- At the end of 2017 the CRE published a new methodology for calculating the regulated rate for basic supply, which is now additive, reflecting the costs of the system. This new methodology has been gradually implemented for industrial consumption during 2018. Domestic consumption will remain with the old methodology indefinitely.

As an electricity operator in these countries, Iberdrola maintains a spirit of cooperation with regulators of the electricity supply systems to help define their growth, and will operate within the established regulations, defending the decarbonisation of the economy and supporting frameworks that expand free-market activities and market transparency and encourage required investments and efficient operations, through tariff schemes that send efficient signals to consumers and do not penalise them compared to other sources of energy.

For more information about the business environment and the main factors and trends in the markets in which the company operates, see the *Integrated Report*. *February 2019.*

Nuclear plant decommissioning

Iberdrola is the only 100%-owner of a nuclear plant in Spain (Cofrentes). It also has interests in Almaraz I and II (52.69%) Trillo (49%), Vandellós II (28%) and Ascó II (15%), as indicated in the section "Scope of information of Chapter III. About this Report".

According to Law 25/1964 on nuclear energy, the management of radioactive waste, including spent nuclear fuel, and the decommissioning and closing of the nuclear plants, is an essential public service reserved to the State, pursuant to article 128.2 of the Spanish Constitution. This

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law vests Empresa Nacional de Residuos Radiactivos S.A. (Enresa) with the management of this public service.

Enresa prepares the *General Radioactive Waste Plan* (*Plan General de Residuos Radiactivos*) (PGRR), which is the basic reference document setting forth the strategies to be followed and activities to be carried out in Spain in the fields of radioactive waste management and plant decommissioning, together with the corresponding economic/financial study. The PGRR is sent to the Ministry of Ecological Transition (MITECO) with a 4-year frequency, or whenever the Ministry requires, for approval after a report of the Nuclear Safety Council, after hearing from the Autonomous Communities with respect to territorial and environmental ordinances. The first PGRR was adopted in 1987 and the sixth, approved in June 2006, is currently in force.

The financing system in Spain for PGRR activities is based on contributions from waste-generating entities called the “Fund for the Financing of the General Radioactive Waste Plan Activities”. The fund is managed by Enresa and includes provisions for the decommissioning of nuclear power plants.

Iberdrola makes contributions to the fund through a fee that is calculated by Enresa and approved by the government, which covers all management expenses relating to the management of the spent fuel and the radioactive waste generated at its plants, as well as the expenses corresponding to the decommissioning and closure thereof, as provided in the PGRR.

In addition, Iberdrola records a reserve on its balance sheet to cover the pre-decommissioning stage of its nuclear power plants. Pre-decommissioning means the period from the final cessation of operations of the plant and decommissioning approval, at which time ownership of the plant passes to Enresa. The current sixth PGRR establishes a period of 3 years for this stage.

Nuclenor, S.A., the company owning the Santa María de Garoña plant in which Iberdrola has a 50% interest, created a reserve for the pre-decommissioning to pay for the closure once commercial operation of the plant has ended and until Enresa takes ownership thereof.

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Creation of employment and salaries

Contribution to SDGs of the performance described by the indicators of this section
(according to SDG Compass www.sdgcompass.org)

GRI 401 GRI 402

Policies and commitments

The professionals of the Iberdrola group form a global, multicultural, committed and qualified team that contributes to the sustainable creation of value with its work and talent.

The policies defined for the management of human resources contain guidelines governing labour relations among the various companies of the group and serve as a reference to define the company's employment-related goals: maintaining employment guarantees and a stable relationship with workers; strengthening of occupational health and safety and training aspects; protection of diversity and equal opportunity in access to employment; promotion of professional development; and promotion of behaviour and attitudes among its entire workforce in line with ethical principles.

Iberdrola has a *Human Resources Framework Policy*, the purpose of which is to define, design and disseminate a human resources management model of the group that will allow it to obtain, promote and retain talent and encourage the personal and professional growth of all people belonging to the group's workforce, making them participants in the successful business enterprise and guaranteeing them a dignified and safe job.

This policy is further developed in the following specific policies:

- *Recruitment and Selection Policy*
- *Knowledge Management Policy*
- *Equal Opportunity and Reconciliation Policy*
- *Occupational Safety and Health Policy*

The key principles for the conservation of human capital are considered to be the design and implementation of frameworks for the management of human resources and labour relations that allow all employees to share in the group's success and promote the economic and social development thereof, thereby contributing to compliance with SDG 8 Decent Work and Economic Growth, and furthering competitiveness and business efficiency.

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Principles of the Iberdrola group's business culture	
Satisfaction of legitimate expectations	Of all Stakeholders.
Financial and non-financial results	All of our actions must be focused on results.
Human capital	Invest in our largest asset, our employees.
Professionalism	For leaders, managers and/or technicians.
Multinational	Teams with different cultures and locations who work together.
Integration and commitment	To the organisation.
Communication	Open, transparent and systematic at all levels.

Objectives

In relations with its employees, Iberdrola has identified as especially significant issues:

- Culture: the strengthening of a group corporate culture.
- Integration: encouraging the integration of the people joining the group (Onboarding Programme).
- Recruitment: defining a basic recruitment model at the international level.
- Training: the implementation of an integrated training management system.
- Diversity: raising the awareness of our workforce with respect to diversity.

Our workforce

405-1

Employees in the workforce	2018		2017		2016	
	no.	%	no.	%	no.	%
By gender						
Men	26,117	77%	26,229	77%	25,925	76%
Women	7,961	23%	8,026	23%	8,157	24%
By age group						
Up to 30 years old	5,378	16%	4,924	14%	4,955	14%
Between 31 and 50 years old	19,512	57%	18,912	55%	18,541	55%
Over 50 years old	9,188	27%	10,419	31%	10,587	31%
By professional category						
Management team	830	2%	928	3%	854	2%
Middle managers and skilled technicians	14,240	42%	14,676	43%	16,589	49%
Skilled workers and support personnel	19,008	56%	18,651	54%	16,639	49%
Number of employees	**34,078**	**100%**	**34,255**	**100%**	**34,082**	**100%**

For reasons of confidentiality, in order to comply with the requirement established by the personal data protection laws in effect in each country, the information systems of the companies making up the Iberdrola group do not record their membership by ethnic group, religious group or any other diversity indicator. Information by geographic area can be found in Annex 1 Supplementary Information.

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Subcontracted activities

EU17

To perform those activities that the company deems necessary to carry out at its facilities using subcontracted personnel, Iberdrola follows a procedure of executing services agreements defining the type of activities to be performed, and contractors are responsible for allocating and managing the resources required for the proper performance thereof.

To ensure that the subcontracted activities are performed in alignment with the values of the group, the subcontracted companies:

- Must be approved in accordance with the process described in the "Description of Supply Chain" section of this report, which takes into account both their technical performance and their labour, environmental and social practices.
- Must meet the requirements set forth in the contracting terms of the group, which take into account financial and quality aspects as well as environmental, labour, health and safety, and social responsibility performance.

Under these terms and conditions, subcontractors, with a total of 10,772,560 days worked, manage their technical and human resources and Iberdrola supervises the subcontracted activities performed, and does not deem it necessary to keep statistics regarding subcontracted personnel, except as regards health and safety given the importance of these issues in the social area and because they are considered material topics.

New hires

GRI 202 401-1

At Iberdrola, we believe that the talent of our organisation is a fundamental part of ensuring the success of the organisation each day. It is for this reason that we join forces from all countries to attract and select professionals with the skills, knowledge and abilities aligned with the current and future values and needs of the company. We thus work in the critical areas to achieve this goal: attraction of talent, recruitment and selection, as well as the orientation and integration of new professionals.

As a global company, we have specific policies approved by the Board of Directors that regulate the selection activity (*Recruitment and Selection Policy* and the *Equal Opportunity and Reconciliation Policy*), as well as a master recruitment and selection process that applies at the global level. We also rely on local practices in order to ensure that the best and most diverse pool of talent is attracted and selected in line with activities appropriate to each specific territory and legal system.

In 2018, Iberdrola took various actions in this area, including the following:

- Attending job forums and holding talks and conferences with students to share the value of our company with youth, encouraging them to participate in our selection processes. Numerous activities were attended at various prestigious universities in the countries where Iberdrola has a presence, reaching a target audience of approximately 18,000 students.

- Restructuring of all of the company's pages on professional social media, the purpose of which is to attract talent and promote the brand as an employer.

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- Revision and automation of the selection and on-boarding process with the upcoming inclusion in 2019 of a new software tool (*Success Factors*) that will help to improve the experience of internal and external candidates, employees, hiring managers and human resources teams.

- Extraction of key data from the selection and on-boarding process to detect areas for improvement in each process. This information is shared with the local Human Resources teams each month so that they can make comparisons with the other countries and have a global view of each indicator.

- At Iberdrola España and ScottishPower, there is a training course for the hiring managers who participate in the selection process, providing training in four modules: the selection process, impartiality in the process, labour regulations and skills-based interviews. With this training, we increase knowledge of the process and strengthen our policy whereby we always ensure the selection of the best candidate, always observing equality of opportunity and promoting non-discrimination.

- At Neoenergia, a feedback programme has been developed for professionals who participated in the process and have not been selected for the position in question, in order to improve for future candidates.

- Weekly email of vacancies published internally to the group of officers, department heads and team leaders to encourage mobility within the company, as well as for career development and personal and professional growth.

Actions to attract young talent

Especially noteworthy in this area is the Universities Program, *Iberdrola U*, which focuses its efforts on strengthening the relationship between the company and the academic world through a number of resources and activities aimed at attracting talent, transferring knowledge and contributing to our society.

Iberdrola has signed agreements for this purpose with major universities in the countries in which it has a presence.

- Massachusetts Institute of Technology (MIT) in the United States.
- Monterrey Technology Institute in Mexico.
- University of Strathclyde in the United Kingdom.
- Universidad Pontificia de Comillas and Universidad de Salamanca in Spain.
- Hamad bin Khalifa University in Quatar.

Iberdrola U currently reaches approximately 200,000 students, 20,000 professors and 1,500 scholarship fellows, and is based on five lines of action: support for university chairs, development of R&D projects, training through student scholarships, internal training of Iberdrola employees and support for young entrepreneurs.

Specifically, through the Young Entrepreneurs initiative, Iberdrola held 9 “hackathons” and “bootcamps” in 2017-2018 with the presence of 1,000 entrepreneurs and the help of more than 200 mentors. There were also 23 more workshops and more than 3,200 hours of mentoring were provided to the students.

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There was also a continuation of the following projects:

- Training programmes at the company directed towards vocational students, as well as university students, in order to complete their education within the professional environment. In total, 544 vocational students and 858 university students throughout the world have had the opportunity to engage in training at Iberdrola Spain, ScottishPower, Avangrid, Neoenergia and Iberdrola Mexico.
- International scholarship programmes for master's studies, with which students obtain financial support to complete their studies. In 2018, Iberdrola granted 66 scholarships for Master's studies, with students from Brazil, Spain, Mexico, the United Kingdom and the United States having had the opportunity to study in different countries.
- Mentoring programmes for students from the Iberdrola scholarship programme, with which they can not only develop skills and abilities relevant to the professional area but also work towards their career goals.
- Continuation of the development plan of the junior professional program, in 2018 pursuant to which an extensive group of recent graduates were incorporated into different areas of the company in Mexico, Spain, the United Kingdom and the United States.

All of these scholarship programmes form part of the actions that Iberdrola has taken to attract young talent. The limited number of profiles make it difficult to achieve numerical equality with respect to gender in the hirings that occur in the industry. This is something on which Iberdrola is actively working, taking action at all of its subsidiaries to increase the attraction of women towards technical careers and thus increase the critical mass of available talent.

Finally, with a view to improving opportunities for internal selection, Iberdrola makes available to the group's professionals a unique employment channel, where each of them can view and apply to fill internal job vacancies that match their profile.

New hires	2018		2017		2016	
	Men	Women	Men	Women	Men	Women
By age, in numbers						
Up to 30 years old	1,351	377	1,012	295	962	281
Between 31 and 50 years old	1,235	328	1,353	318	771	290
Over 50 years old	87	35	189	43	108	22
By age[17], in %						
Up to 30 years old	32.15	32.04	26.39	27.09	24.90	25.66
Between 31 and 50 years old	8.44	6.72	9.65	6.50	5.68	5.83
Over 50 years old	1.19	1.84	2.26	2.10	1.27	1.06
Total number	2,673	740	2,554	656	1,841	593
Total[17] in %	10.23	9.30	9.74	8.17	7.10	7.27

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Iberdrola's approach is to promote and favour the hiring of employees in the geographic boundaries within which it does business, also encouraging these individuals to reach executive positions in the corresponding companies. In 2018, 98.85% of executive officers at the companies of the group were local, defined as anyone with management responsibilities in the same geographic area as the one they come from, thus excluding professionals of other nationalities who are assigned there temporarily under an international mobility programme.

[17] Of the headcount of this group at year end.

PUBLIC

The management approaches described in the "Diversity and Equal Opportunity" and "Non-discrimination" sections of this report are applied to both remuneration as well as the selection of professionals. The current collective bargaining agreements at the companies of the Iberdrola group ensure equality in starting wages for men and women.

202-1

Entry level wage compared to legal minimum wage (%)	2018	2017	2016
Spain	136.54	140.72	150.63
United Kingdom	113.01	125.52	127.32
United States	146.00	125.00	137.50
Brazil	128.74	135.18	N/Av.
Mexico[18]	449.12	464.09	480.24

Average remuneration (base plus variable salary) by age groups and gender

Iberdrola (EUR)[19]	Remuneration men/ Remuneration women		Men		Women		Total	
	2018	2017	2018	2017	2018	2017	2018	2017
Up to 30 years old	92.7	98.0	22,208	25,076	23,953	25,579	22,591	25,188
Between 31 and 50 years old	89.1	94.5	42,685	46,569	47,882	49,299	43,991	47,287
More than 50 years old	111.0	110.2	67,787	68,259	61,064	61,914	66,378	66,973
Total	**97.3**	**100.9**	**45,990**	**49,089**	**47,278**	**48,639**	**46,293**	**48,983**

Average remuneration (base plus variable salary) by professional category

Iberdrola (EUR)[19]	Total		
	2018	2017	2016
Management team[20]	119,185	124,675	123,497
Middle managers and skilled technicians	53,798	56,009	55,304
Skilled workers and support personnel	32,008	34,617	34,233
Total	**46,293**	**48,983**	**49,360**

[18] In Mexico, the minimum wage is generally not used as a reference for market wages; it is applied in sanctions by the labour authority, fines and limits on tax deductibility.
[19] Companies included: Iberdrola S.A., subsidiaries of: Iberdrola Spain, ScottishPower, Avangrid, Neonergia and Iberdrola Mexico.
[20] The management team includes up to the level of team leaders.

PUBLIC

As regards the on-boarding and integration of new professionals, the new global on-boarding programme has been launched for a group of professionals who recently joined the company in Spain, the United Kingdom, the United States, Brazil and Mexico. This new programme is intended not only to facilitate their on-boarding and inclusion into the company, but also to strengthen their professional development. A new virtual itinerary has been created within this programme in "Landing Page" format which includes all elements that a new employee needs to land at Iberdrola. It has an orientation video, general information about Iberdrola, general courses on the energy business and specific courses on compliance, human rights, social responsibility and cybersecurity, among other topics. This bundling of orientation training is completed with other resources like a new section of the employee portal and a guide for managers.

Employee turnover

Personnel leaving the company[21]	2018		2017		2016	
	Men	Women	Men	Women	Men	Women
By age, in numbers						
Up to 30 years old	293	117	242	113	254	106
Between 31 and 50 years old	839	317	638	288	614	242
Over 50 years old	1,694	382	1,072	336	1,063	216
By age[22], in %						
Up to 30 years old	6.97	9.94	6.31	10.38	6.58	9.68
Between 31 and 50 years old	5.73	6.50	4.55	5.88	4.53	4.86
Over 50 years old	23.27	20.04	12.80	16.45	12.50	10.36
By seniority, in numbers						
Up to 10 years	925	320	810	308	766	293
Between 11 and 20 years	386	165	222	167	245	98
Over 20 years	1,515	331	920	262	920	173
By seniority[22], in %						
Up to 10 years	7.59	8.06	6.18	7.18	6.12	7.37
Between 11 and 20 years	6.85	7.66	3.93	4.16	3.92	4.11
Over 20 years	18.28	18.01	12.32	10.90	11.20	9.64
Total number	2,826	816	1,952	737	1,931	564
Total[22] in %	10.82	10.25	7.44	9.18	7.45	6.91

[21] Information by geographic area can be found in Annex 1 Supplementary Information.

[22] Of the headcount of this group at year end.

PUBLIC

Turnover at the company[23]	2018	
	Men	Women
By age, in numbers		
Up to 30 years old	93	24
Between 31 and 50 years old	270	74
Over 50 years old	309	70
By age[24], in %		
Up to 30 years old	2.21	2.04
Between 31 and 50 years old	1.84	1.52
Over 50 years old	4.24	3.67
By seniority, in numbers		
Up to 10 years	248	70
Between 11 and 20 years	46	17
Over 20 years	378	81
By seniority[24], in %		
Up to 10 years	2.03	1.76
Between 11 and 20 years	0.82	0.69
Over 20 years	4.55	4.41
Total number	**672**	**168**
Total[24] in %	**2.57**	**2.11**

Average seniority of workforce (years) 2018	Men	Women	Total
Spain	20.60	15.81	19.64
United Kingdom	16.54	14.65	15.90
United States	14.16	13.84	14.07
Brazil	7.90	7.27	7.78
Mexico	6.39	4.56	6.05
Other countries	6.65	5.51	6.32
Iberdrola total	**13.99**	**12.57**	**13.66**

[23] Information by geographic area can be found in Annex 1 Supplementary Information.
[24] Of the headcount of this group at year end.

PUBLIC

International mobility programmes

The Iberdrola group's global mobility programmes form part of the set of human resources tools that contribute to the development of talent, transmitting and strengthening the culture of the group and offering opportunities for professional growth in an international environment that attracts, motivates and retains the professionals who will ensure the sustainability of the business.

In 2018 these programmes were redefined to promote the creation of a global community of talent that contributes to attaining the group's objectives, to transmit and strengthen the company's culture and to offer opportunities for professional growth that attract, motivate and retain the professionals who will ensure the sustainability of our business. During the year, 425 employees participated in the group's international mobility programmes in their various forms.

2018 also saw the continuation of the *Job Swap Opportunity Program*, which seeks to facilitate development opportunities for the group's professionals, allowing them to face new professional challenges and responsibilities, thus increasing their global view and knowledge of the business, as well as generating more versatile profiles and strengthening mobility and internal communication. Through this programme, two employees have the opportunity to temporarily swap their positions for a period of 9 to 12 months, whether within the same organisation, within the same business, between business and corporate area or between different countries. In addition to continuing the *Job Swaps* programme initiated in 2017, 7 employees participated in this initiative at the global level during 2018.

Furthermore, in order to favour opportunities for internal promotion and international mobility, in 2018 there was continued use of the unique employment channel mentioned above, with the publication of 3,337 vacancies, 70% of which were filled internally.

Under the new homogeneity objectives in the Human Resources model, the management team of Iberdrola and its subsidiaries totals 783 people at year-end 2018, with a voluntary turnover rate of 1.75%.

PUBLIC

Stable labour environment. Commitment to quality employment

Collective bargaining agreements

102-41

To properly frame labour relations, the companies of the Iberdrola group have collective bargaining agreements or specific equivalent agreements to govern aspects relating to the management of people.

Generally speaking, the collective bargaining agreements of the Iberdrola group apply to all employees working under an employment relationship and for the account of the companies of the group, regardless of the type of contract entered into, the professional group to which they are assigned, their occupation or the job performed.

However, issues relating to the corporate organisation, the law of each country or even usage and custom in each country lead to certain groups being expressly excluded from the scope of collective bargaining agreements (for example, executives in Spain are not covered by the agreement). This is why there is not 100% coverage, as indicated in the table below:

Employees covered by a collective bargaining agreement	2018	2017	2016
Number of employees	26,900	26,643	27,010
Percentage of employees	78.94	77.78	79.25

In the companies of the group there are 2 collective bargaining agreements in Spain, 3 in the United Kingdom, 12 in the United States, 11 in Brazil, 3 in Mexico, and 1 in the other countries. A breakdown by geographic area is available in Annex 1 Supplementary Information.

These agreements have specific monitoring mechanisms, such as the committees and sub-committees of the Collective Bargaining Agreement in Spain, the *ScottishPower Company Consultative and Negotiating Machinery Constitution* in the United Kingdom, *The Open Items Forum*, update meetings, safety expert panels, Strategic Safety Board and the *Joint Union Management Partnership Committee* in the United States, which serve to regulate labour, safety and health, and pension issues and consult with employees and with representatives on social matters within the company, as well as to ensure compliance with commitments made.

402-1

The different organisational changes and significant events that occur are officially reported in compliance with the various legal provisions that apply at both the global and the local level within the labour relations of the companies of the group. These notifications are made via the various channels and forums enabled for the purpose, such as monitoring committees formed by management and employee representatives, intranet, notices to interested parties, unions, etc.

PUBLIC

- In Spain, organisational changes are governed by both the *Workers Statute* and by the collective bargaining agreements, and generally provide for a period of at least 15 days.
- In the United Kingdom, when a significant event occurs, interested parties are notified within a minimum period of 4 weeks, as provided by law as well as the collective bargaining agreements.
- In the United States, notice requirements are governed both by collective bargaining agreements and labour laws. When organisational change or significant events occur that may impact union employees, union leaders are routinely provided with advance notice.
- In Brazil, organisational changes at Elektro are governed by the collective bargaining agreement, which provides guidelines on how these changes should occur, always with prior notice to the union institutions. The deadline is defined by the area itself, depending on the type of operational change.
- In Mexico, significant operations are reflected in the collective bargaining agreements and notice is provided an average of two to three months in advance.

Benefits

401-2

Iberdrola offers a set of benefits to its employees, including:

- Life insurance
- Medical insurance
- Disability insurance
- Maternity/paternity leave
- Pension fund
- Remuneration in the form of company shares

Information by geographic area can be found in Annex 1 Supplementary Information.

For employees of companies party to the *7th Collective Bargaining Agreement* in Spain, ScottishPower, Avangrid, Neoenergia and Iberdrola Mexico, which represent 98% of the workforce, there are no significant differences between benefits provided to part-time employees and benefits provided to full-time employees.

201-3

The features of the contributions to pension plans at the various countries of the group are described below by country:

Spain

The companies signing the *7th Collective Bargaining Agreement* jointly sponsor a voluntary employee pension plan in which 98% of the workforce participates. The periodic contributions made under said Collective Bargaining Agreement are determined as a percentage of each employee's annual pensionable salary. Iberdrola does not have any unmet financial commitments pending with respect to this plan.

PUBLIC

United Kingdom

98% of the workforce participate in the pension plans of the workforce in one form or another:

- The defined-benefit plan has two pension plan structures, based on company and seniority.
- The defined-contribution plan has a pension scheme that is based on a percentage of each employee's annual pensionable salary. This scheme is optional for employees and is co-funded by the company and employees.

United States

- The Networks Business has twelve defined-benefit plans, for which the company makes the contribution, with benefits being based on salary and years of service. It also has defined-contribution plans with distinct and separate operations. Employees can make contributions as a percentage of their pre-tax salary (generally up to 50%). Approximately 90% of the workforce are members of these defined-contribution plans.
- The Renewables Business has a corporate defined-benefit plan, with contributions assumed by the company and benefits determined based on salary and years of service. It also has a defined-contribution plan with three different types of company contributions. Employees can make contributions as a percentage of their pre-tax salary. 100% of the workforce are members of these defined-contribution plans.

Brazil

After the integration of all of the businesses of the company Elektro Holding into Neoenergia on 24 August 2017, the pension plan scheme is as follows:

- At Elektro, the Networks Business has a defined-benefit plan and a mixed plan (70% of salary as defined benefit and 30% as defined contribution). 83% of the workforce are members of both plans. For the companies of Elektro Holding, a defined-contribution plan was implemented by means of which employees may make contributions as a percentage of their salary, with the business contributing the same amount.
- The distributors Coelba, Celpe and Cosern have various defined-benefit plans and defined-contribution plans. 99% of the workforce are members of both plans.

Mexico

The commitments to the organised employees of Iberdrola Mexico, arising from the auctions by the Federal Electricity Commission, in which Iberdrola is required to apply a Collective Labour Agreement for organised staff, are provisioned as internal funds. A defined-contribution pension plan was implemented in 2015, with 60% of the non-organised workforce with pension plan rights signing up.

EU15

Employees eligible to retire	In the next 5 years (%)			In the next 10 years (%)		
	2018	2017	2016	2018	2017	2016
Iberdrola total	12.59	16.21	12.04	21.70	27.60	25.30

A breakdown by professional category and region can be found in Annex 1 Supplementary Information.

PUBLIC

II.2. Workplace Health & Safety and Personal Development

PUBLIC

- A safe work environment
- Professional training and development
- Diversity and equal opportunity

PUBLIC

A safe work environment

Contribution to SDGs of the performance described by the indicators of this section
(according to SDG Compass www.sdgcompass.org)

GRI 403

Policies and commitments

The *Occupational Safety and Health Policy*, approved by the Board of Directors in 2007 and last amended in October 2018, describes the principles that should guide the behaviour of the group's companies in this area.

To reduce the number of accidents and improve workplace safety conditions, apart from this policy, Iberdrola also has a Global Occupational Safety and Health System, which is aligned with corporate policy and the strictest of international standards and incorporates the group's best practices from all of the countries where it has a presence.

This Global Occupational Safety and Health System is the group's tool for continuous improvement, whereby the lessons learned from all events that occur are used to create a global knowledge base to prevent them from being repeated in any part of the Iberdrola group. Furthermore, the System is based on the principle that the group's contractors are its collaborators, and Iberdrola involves them in its occupational safety culture.

In alignment with such Global System, group companies are equipped with specific procedures making up the respective local safety and health systems, which are implemented within each company and externally audited. These systems develop the principles that the company has adopted to ensure compliance with legal requirements and to comply with expectations for the ongoing improvement of activities in this area.

PUBLIC

The health and safety requirements established for the workforce are set forth in the collective bargaining agreement of each company (when applicable), in the procedures making up the Occupational Risk Prevention Management System, and in the internal regulations of each of the group's companies.

As regards contractors and subcontractors, the group's contracting terms, which can be found in the contracting terms of the group section of the website, specify the requirements to be met by firms wishing to participate in an award process. In addition, the particular conditions regarding occupational risk prevention are set forth in documents of specific requirements in each country, which are also contractual documents.

EU18

The company thus believes that 100% of the employees of subcontracted companies, regardless of their category, have received appropriate safety and hygiene training.

By way of example, the following are some of the safety and health requirements specified in the contracting terms that apply in all countries of the group:

- Subcontracted employees who have specific duties to monitor and control occupational risk prevention must provide evidence of having received the training established for such purpose under the law applicable thereto.

PUBLIC

- Subcontracted employees shall have the necessary training to deal with the risks of the facilities and of the work to be performed.
- During the performance of the work or service, the contractor must adopt such measures as are necessary to comply with its obligations and those of the companies to which the contractor has subcontracted such work or services.
- The contractor shall be responsible for safety conditions during the period of execution of the works or performance of the service, as well as for any supplementary measures that are required for the proper performance of the subject matter of the contract.

Certifications

In the area of occupational risk prevention, the group has the following evaluation and monitoring mechanisms, which go beyond the legal requirements in each of the countries in which the group has a presence.

- The occupational health and safety management systems of the group's companies in Spain, the United Kingdom, Brazil[25], Mexico, Portugal, Greece, Hungary and Romania have OHSAS 18001 certification.
- In the United States, in 2018 UIL and Avangrid Renewables subsidiaries joined in the OHSAS 18001 certification already existing at Avangrid Networks since 2016.

Objectives

For financial year 2018, safety and health goals have been established for the entire group, as well as by country and by business, based on the improvement of accident rates, for both its own and contracted personnel, a continuation of annual planning, and the evaluation and implementation of improvements in management systems.

Particular goals have also been established for the businesses, such as obtaining or maintaining OHSAS 18001 certification, the creation of safe behaviour improvement plans, as well as the quantification of risk detection and of monitoring measures implemented.

Responsibilities

The main responsibility for taking preventive action lies with the company, and therefore, with its organisational hierarchy, which is required to introduce prevention standards, guidelines and policies into all of its activities and decisions, and across all levels of the organisation with executive or decision-making abilities.

In order to assist the company in achieving this end, there is a health and safety organisational structure made up of an Iberdrola Prevention Area within the Human Resources Division in most countries.

In accordance with the principle of integration of occupational risk prevention, the hierarchical/functional organisation of each company is entrusted with giving effect thereto and is responsible for complying with and enforcing health and safety rules within its area of activity.

[25] Neoenergia has a Safety and Health Management System that defines work procedures and instructions, which is available on its intranet. Elektro and the Wholesale and Retail and Renewables Businesses are certified under OHSAS18001. For companies included within Iberdrola's ownership for purposes of the Management System, Neoenergia plans to obtain OHSAS18001/ISO45001 Certification for the distributor Cosern by 2019, for the distributor Celpe by 2020 and for the distributor Coelba by 2021.

PUBLIC

There was a strengthening in 2018 of the Global Health and Safety team, under the Human Resources Area, with the following duties:

- Exchange of good practices among all countries.
- Participation and leadership in the Distribution, Wholesale and Renewables GPGs.
- "*Global H&S Assessments*" programme (internal audits based on Iberdrola's health and safety standards) in all countries.
- Launch of the "*5 essentials of safety*" campaign at the global level.
- Work with new Offshore Health and Safety team to establish the prevention management system.
- Subcontractors: Prepare and agree on "*Pre-qualification and Post-evaluation Procedure*" among the Health and Safety, Procurement and Businesses departments at the global level.
- Launch and management of "*Global Practice Groups*".

Occupational safety and health committees

403-1 403-4

All companies of the group have occupational safety and health committees, under different names, to establish channels for consultation and participation with the employee representatives in this area, to monitor indicators, and to plan and take measures to correct deficiencies and to improve the Safety and Health System. The committees are described below by country:

Spain

In Spain, the companies that are signatories of the *7th Collective Bargaining Agreement* have a central committee that coordinates the activities of the thirty-seven local safety and health committees to which all work centres and administrative units are assigned. All were created in accordance with the Occupational Risk Prevention Act and are formed with equal representation between the company and the workers. These committees regularly consult with the workers' representatives on all safety and health issues that affect them.

In 2018, the committees met on a quarterly basis and were the most important consultation and participation control bodies in the area of occupational risk prevention, as well as the forum where formal agreements on the matter were reached with the trade unions.

The Prevention Coordination Committees are responsible for the definition, promotion, coordination, monitoring and control of policies, standards, plans and activities in the area of occupational health and safety, among their management levels, hierarchical/functional organisation and the Prevention Service.

United Kingdom

At ScottishPower, a Health and Safety Committee is responsible for the strategy, the guidelines and management in this area. It is made up of members of each one of the management teams of the businesses and of the health and safety team, and meets quarterly. The committee is supported by the officers of each business, the Health and Safety Department and the Health and Safety Forums. The forums meet regularly and are made up of employees representing each of the businesses, members of the Health and Safety Department and worker representatives.

PUBLIC

United States

There are various levels of safety committees representing 100% of the employees at Avangrid. The Health and Safety Committee is made up of the CEO and other officers and meets regularly to review strategic issues, performance and initiatives. At the Networks Business, the Executive Safety Committee and the Strategic Safety Board, along with the Safety Panels (committees made up of employees and safety experts) and the employee safety teams, review risk-related work and the safety activities that have been undertaken. Worker representatives and executives are also involved through their participation in the committees and safety meetings. At the Renewables Business, safety is reviewed regularly at the meeting of the executive committee and at the Central Committee with representatives of all the renewables plants to review the status of health and the achievement of the safety objectives in all regions.

During the pre-qualification project, all contractors of Avangrid are asked questions regarding the participation of their employees in health and safety committees and meetings. 74% of the high-risk contractors involved in operation and construction activities have Health and Safety committees, and 93% of the contractors have documented the safety meetings of their employees.

In the United States, leadership in health and safety has been strengthened with the following initiatives:

- Cintellate (accident management tool) implemented at Avangrid.
- Safety training for particular positions of responsibility at the company ("*HOP*" and "*Leadership Training*").
- *Risk Reduction Plans.*

Brazil

Neoenergia has a Health and Safety Management System that defines work procedures and instructions, which is available on its intranet. All of the businesses are certified under OHSAS18001, except for the companies included within Iberdrola's ownership for purposes of the Management System, which is planned to be certified under OHSAS18001/ISO45001 by 2019 in the case of Cosern, 2020 for Celpe and 2021 for Coelba.

To ensure the evolution of a safety culture, the companies have a Safety Committee made up of the group's management team to join in strategic health and safety actions, which ensures the effectiveness of the activities and the communication of risk prevention actions as a value that informs all of its activities.

Apart from the seven local committees by business and company, the companies have more than 92 internal committees for the prevention of accidents, the latter of which are made up 50% of company representatives and 50% of worker representatives.

PUBLIC

A "Zero Accident Plan" was implemented at Neoenergia in 2018, with the following lines of action:

- Improve the evaluation, supervision and monitoring of contractors.
- In-source key maintenance personnel.
- Strengthen the Occupational Risk Prevention leadership and culture.
- Improve training of internal staff on Occupational Risk Prevention.
- Strengthen operational procedures (operations in the electric system).
- Creation of internal procedure for giving notice of these improprieties to the government authorities - intensify record-keeping.
- Intensify public awareness campaigns.
- Investment to maintain and improve the grids (protection, insulation, etc.).

The number of fatal accidents among contractors in 2018 was considerably reduced in Brazil as a result of this programme.

Mexico

Iberdrola Mexico has a mixed safety and health committee at each facility, governed by the Mexican NOM-029-STPS standard and by the collective bargaining agreement. There is also a Safety Committee (COSE) made up of the heads of safety and environment at each facility and coordinated by the Generation Division. Organised workers have a collective bargaining agreement that deals with safety issues like EPIs, safety organisation, worker representation, handling of accidents and professional diseases, application of health and safety law, etc.

Other countries

In other countries the Renewables Business has safety management systems duly certified under OHSAS 18.001:2007, there are committees with the participation of the company and employees that deal with occurrences in the area of health and safety at the end of each month and reporting on noteworthy activities and plans for future actions.

The implementation of a prevention management system is commencing in the other countries of the Wholesale and Retail Business.

In house staff represented on health and safety committees (%)	2018	2017	2016
Iberdrola total	**98.61**	**98.53**[26]	**95.70**

At contractors[27], 46% of the staff are represented on safety and health committees. Information by geographic area can be found in Annex 1 Supplementary Information.

[26] In Mexico, there has been a recalculation of the data from 2016 and 2017, including the Renewables and Engineering businesses.
[27] Does not include the United Kingdom, which will be included in the analysis in future years.

PUBLIC

Injury and absenteeism rates.

403-2

Injury rate among group personnel[28]	2018	2017	2016
Number of accidents	**399**	**455**	**472**
Men	363	376	407
Women	36	79	65
With fatality	**0**	**0**	**0**
Men	0	0	0
Women	0	0	0
With leave	**80**	**104**	**108**
Men	75	101	96
Women	5	3	12
Without leave	**319**	**341**	**364**
Men	288	265	311
Women	31	76	53
Number of fatalities	**0**	**0**	**0**
Men	0	0	0
Women	0	0	0
Number of lost days	**3.929**	**4,374[29]**	**2,877**
Men	3.806	4,318	2,534
Women	123	56	343
Injury rate (IR)	**1.37**	**1.75**	**1.82**
Men	2.26	2.20	2.12
Women	0.21	0.22	0.84
Severity index	**0.07**	**0.07**	**0.05**
Men	0.12	0.09	0.06
Women	0.01	0.00	0.02

[28] Methodology for calculating the indicators:
- Injury rate (IR) = (number of accidents with leave*1,000,000)/hours worked.
- Severity index = (number of calendar days lost per accident, as from first day of leave/hours worked)*1,000.

[29] In 2017 there was a lower number of accidents with leave but a higher mayor number of lost days.

IBERDROLA

PUBLIC

403-2

Absenteeism among group personnel[30]	2018	2017	2016
Number of missed days per year	**13,981**	**11,447**	**15,734**
Men	9,371	7,420	10,217
Women	4,610	4,027	5,517
Number of lost days	**166,561**	**189,025**	**199,665**
Men	109,612	125,955	130,461
Women	56,939	63,070	69,204
Number of lost hours	**1,663,424**	N/Av.	N/Av.
Men	1,109,664	N/Av.	N/Av.
Women	553,760	N/Av.	N/Av.
Absenteeism rate (AR)	**4,615.21[31]**	**N/AV.**	**N/AV.**

Information is provided by geographic area in Annex 1 Supplementary Information.

The table below shows the accident and absenteeism rates of subcontracted employees:

403-2

Injuries and absenteeism among subcontracted personnel	2018	2017	2016
Number of accidents	**570**	**631**	**438**
Men	549	614	N/Av.
Women	21	17	N/Av.
With fatality	**3**	**13**	**4**
Men	3	13	N/Av.
Women	0	0	N/Av.
With leave	**174**	**309**	**268**
Men	171	307	N/Av.
Women	3	2	N/Av.
Without leave	**396**	**309**	**166[32]**
Men	378	294	N/Av.
Women	18	15	N/Av.
Number of fatalities	**3**	**13**	**4**
Men	3	13	N/Av.
Women	0	0	N/Av.
Number of lost days	**9,661**	**11,927**	**10,194**
Injury rate (IR)[33]	**1.72**	**3.10**	**2.70**

[30] Absenteeism rate (AR) = (missed days due to absenteeism, as from first day of leave/days worked)*200,000.
[31] The data for Spain and Mexico has been recalculated due to a change in methodology, the information for 2016 and 2017 cannot be recalculated due to a lack of data. Therefore, the information for Spain, Mexico and Iberdrola total is not comparable.
[32] Does not contain information from Neoenergia.
[33] Injury rate (IR) = (number of accidents with leave*1,000,000)/hours worked.

PUBLIC

As mentioned previously in this section, the number of fatal accidents among contractors in 2018 was considerably reduced in Brazil as a result of the implementation of the Zero Accident Plan at Neoenergia.

Management of health and safety is organised in accordance with the guidelines set out in the OHSAS 18001 standard, as described in the management approach for this section, ensuring that the group has monitoring and evaluation mechanisms in all operations that go beyond legal requirements.

Occupational diseases

The Iberdrola group's companies monitor the health of their employees for prevention purposes, using in-house or outsourced medical services that are responsible for monitoring the health of employees through regular medical check-ups.

In general terms, the group considers that employees are not exposed to specific occupational or work-related diseases in the course of their work that may be considered to have a high level of incidence or to carry a high risk.

403-3

Occupational disease rate (ODR) among own personnel[34]	2018	2017	2016
Men	0.01	0.03	0.00
Women	0.00	0.00	0.03
Total	**0.01**	**0.02**	**0.01**

[34] Methodology for calculating the indicators (per GRI standard):

- Occupational disease rate (ODR) = (number of occupational disease cases/hours worked)*200,000.

PUBLIC

Professional training and development

Contribution to SDGs of the performance described by the indicators of this section
(according to SDG Compass www.sdgcompass.org)

GRI 404

Policies and commitments

Iberdrola recognises the importance of intellectual capital to the company in its *Knowledge Management Policy*. In implementing this policy, which is intended to disseminate and share the knowledge existing within the company by fostering ongoing learning and cultural exchange, Iberdrola reaffirms that the company's intellectual capital depends on its people, its operational and organisational structures, and its internal and external relationships with all Stakeholder groups. At Iberdrola, learning is thus permanent, ongoing and aligned with the strategy of the group.

At Iberdrola, training and development are considered to be a key factor to the success of the organisation. This understanding is embodied in the design of specific programmes to equip Iberdrola's professionals with the qualifications needed to perform their roles, and to foster a culture of development, value creation and ongoing improvement that allows them to assume new responsibilities in the future. These plans are validated by the heads of the businesses and by the Human Resources Division.

The commitments assumed with the start-up of these plans and programmes are summarised below:

- Alignment with the strategic goals of the company.
- Professional improvement for job performance.
- Better professional development, fostering personal advancement and employability.
- Adjustment of human resources to technological and organisational changes.
- Adaptation of new employees to the company.
- Ease of access to an international job framework.

Specific activities

Iberdrola's commitments to the training and development of its professionals extend to all professional categories, all levels of responsibility, and without distinction as to gender.

In 2018 we launched various global initiatives in the training management area:

- Definition of a global master process for training management in order to harmonise this management among all countries.

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- Launch of a unique global learning and development portal, called Learning Meeting Point (LMP), so that employees can directly access all of these virtual training and development tools.
- Availability to employees of a new area with many freely accessible self-study resources in virtual format.
- Recognition of international mobility programmes as an instrument favouring the exchange of experience and knowledge, professional development, the firm establishment of a group culture, and employee retention.

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The Iberdrola group believes that professional development contributes to achievement of the company's results and improving the efficiency of the organisation, by equipping employees with the skills and competencies they need to perform their work efficiently today and preparing them to undertake greater responsibilities and challenges in the future.

All of Iberdrola's training and development activities are based on the 70/20/10 learning model. This model is supported by the theory that 70% of a professional's learning comes from experience and on-the-job training, 20% is acquired through conversations with other people and evaluations, and only 10% comes from structured courses and programmes.

Other significant training and development activities during the year:

- The Iberdrola Campus has hosted numerous courses and development programmes in all knowledge areas and for all Iberdrola groups. It has also been the location of a large number of corporate events. These facilities have become a leading training centre for the company, and work is progressing on the second phase of the project.
- There has been a continuation of the language programmes, offering Spanish, English and Portuguese classes to employees from the different countries.
- Global initiatives relating to virtual training include the launch of the following courses for all employees: "Equality at Iberdrola", "Campaign against Cancer", "New European Data Protection Regulation (GDPR)", "Human Rights at Iberdrola", "Procurement Policy and Procedure", training seminars within "TEAMS (digital platform for collaborative work)", training seminars on "Climate Change", and training seminars on our *Code of Ethics*, among others.
- Iberdrola has various programmes aimed at those who have been identified as high-potential professionals, including the two-and-a-half year *MBA in the Global Energy Industry* offered by Universidad Pontificia de Comillas in Madrid and the Strathclyde University Business School in Glasgow. This is a global programme with participating professionals from Spain, the United States, the United Kingdom, Brazil and Mexico. In 2018 the third promotion successfully ended the second year of the programme and the selection process has been carried out for the fourth promotion, which will begin in January 2019.
- For technicians and middle managers, Iberdrola has a global skills-based development model implemented through a process that permits the formation of Personal Development Plans (PDPs) for these professionals. Through various development resources such as on-site activities, workshops, online resources or jobsite actions, the programme allows employees to work in annual periods on the development of their professional skills. Although each country locally adjusts to offer the development plans defined in the PDPs, it is important to note that the SAVIA programme (the programme

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in which the PDP process takes shape in Spain) celebrated its 10th year in 2018, coinciding with its fourth edition.

In addition to the resources available in the skills-based development model, Iberdrola continued offering specific skills development programmes in 2018 to ensure that employees not only have the necessary training to perform their tasks efficiently but are prepared to assume new responsibilities in the future. These activities are provided locally and are adapted to the particular culture and characteristics of each country.

- Within the global process of evaluating leadership skills and identifying employee potential, there was a new analysis of the group in 2018. In this analysis, there has been another review of the group of talent to categorise the career plans of the high-potential group, the management group and the technical group. Another new development in 2018 was the definition of promotion goals, internal movement, job swaps and international mobility for the high-potential group, focusing not only on identifying this group, but also offering them challenges, and generating opportunities for learning through exposure to new experiences. In the area of talent management, there have been development meetings with professionals in the various countries in which Iberdrola has a presence in order to improve knowledge about their skills, interests, professional aspirations and development needs, all in order to determine the development activities to be carried out with each of them.
- The development activities include offering external Coaching to various professionals in Spain, the United Kingdom and the United States.
- There has been a continued application of mentoring within the two existing global programs, the *Early Career Global Program (ECGP)*, which is intended to help with the adjustment and integration of junior professionals from the United States, Mexico, Brazil and the United Kingdom to their new responsibilities in Spain, as well as to strengthen their professional development with the support of an internal mentor from the company, and the "*50 Hires*" programme. The scholarship students in our International Master's Scholarship Program were also included in our mentoring programme in 2018.
- There has been work to consolidate a programme for new team managers in order to strengthen the abilities and skills required in the management of teams of these professionals in the first stages of their career. This programme has been globally designed but followed a local implementation in order to adapt it to the needs of each of the countries. It thus has different names based on the country involved: "DINAMO" in Spain, *"Leadership Fundamentals programme*" in the United Kingdom, "*AMP'D Leading People*" in the United States, "*Lidera*" in Brazil and "*Liber*" in Mexico. All of them have a modular structure combining different development resources such as visits to facilities, workshops and online resources, as well as jobsite activities.

2018 saw the continuation of various working sessions, mainly with ScottishPower, Avangrid, Neoenergia and Iberdrola Mexico, primarily in order to exchange knowledge, information and experience in the training and development areas. Along these lines, the Annual Development Meeting of the Executives and Talent area was held at the Iberdrola Campus in San Agustín de Guadalix (Madrid) in 2018.

Training for executives

The Executive Management and Talent Unit worked during 2018 on coordinating and supervising the global talent management process in the various countries; it also attends to all management training and development needs through the Management School, with the following noteworthy programmes conducted in 2018:

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- *Energising Leadership Programme*, taught by ESADE Business School. Geared towards management trainees with high potential and/or executives who are beginning their careers. 2018 saw the 10th anniversary of the design and administration of this well-established programme in the catalogue of the Management School.
- *Leading in the Age of Disruption*, given by Financial Times – Instituto de Empresa CLA. This programme, held for the first time in 2018, allowed participants to be able to understand the context in which they are operating, how it affects the reality of the company, their environment and individual reality, and to discover what new skills they need as leaders to succeed in this new context.
- *Driving Leadership Transformation Programme*, jointly taught by IESE and IMD Business School. This programme is directed towards established executives who have a track record with the group and who have already taken the Global Leadership Programme. The main goal is to complete and strengthen previously-acquired knowledge.
- All countries have continued to provide various executive development programmes at the local level.
- Various executives from Spain, United Kingdom and the United States participated in their respective local coaching programmes.
- ScottishPower is readjusting its training and development catalogue for executives in accordance with the needs detected in the Climate Survey.
- Avangrid signed an agreement with Yale University to offer up to ten places in open executive development programmes.

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Employees and hours of training by professional category and gender	2018		2017		2016	
	Men	Women	Men	Women	Men	Women
Hours of training						
Management team	19,504	5,871	21,477	5,225	19,734	4,766
Middle managers and skilled technicians	371,927	164,251	355,838	132,073	440,544	129,480
Skilled workers and support personnel	914,036	112,077	895,808	96,690	649,260	121,210
Total	**1,305,467**	**282,199**	**1,273,123**	**233,988**	**1,109,538**	**255,456**
Average hours of training per employee						
Management team	29.15	34.73	18.06	28.09	33.62	35.83
Middle managers and skilled technicians	36.71	35.54	33.55	26.96	40.46	33.22
Skilled workers and support personnel	56.49	33.74	56.16	30.16	51.92	55.40
Average	**48.38**	**34.78**	**48.54**	**29.16**	**42.79**	**31.32**

The differences between men and women are a result of the different specific training for the diverse professional profiles of the workforce, and are not due to discriminatory policy. Information by geographic area can be found in Annex 1 Supplementary Information.

Labour climate survey 2018

The Global Human Resources Division carried out a process of designing and unifying the commitment surveys of all the countries of the group in 2018, thus generating a single more effective model, since a single survey for the entire group allows for the sharing of results among countries, the plotting of action plans and the adoption of best global practices. The five countries participated in the design, with the support of an outside consultant.

The global surveys were gradually launched in the various countries from February to April 2018. There was an extensive communication campaign that was widely accepted, as 78% of the employees invited to participate answered the survey (25,744 of 32,981 invited employees). This high level of participation allowed for subsequent work with a very reliable database. The survey is 100% confidential, ensuring the anonymity of the respondents at all times.

Communication of the results to team leaders has increased their knowledge of their teams and of their management work. These results have led to the development of action plans to strengthen the more highly valued areas.

Employees receiving performance and career development reviews

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As stated in Iberdrola's *Human Resources Framework Policy*, employee performance evaluations and communication of the results thereof are considered to be fundamental aspects of their professional development. Some of the basic principles of conduct relating to this aspect described in said policy are:

- Perform periodic evaluations of the performance of the employees of the group.
- Communicate the results thereof to the employees evaluated so as to favour their professional development.

At the Iberdrola group, employees are included in formal performance review processes, which vary based on the internal level of the employees and their corresponding responsibility, as well as the country in which they are located.

Employees can be reviewed through two types of processes, based on the level of responsibility relating to their position:

Executive officers:

- Goals review ("What"): measurable, quantifiable and specific goals to be achieved over the course of the review period, relating to the goals of the company.
- Performance review ("How"): review of conduct during the achievement of the goals.

Employees who are not part of the management team:

- Performance review ("How"): employees are reviewed on the basis of a number of personal competencies.

These processes are based on a corporate SAP-based tool that allows management of the Human Resources processes relating to the review. In this way, all users involved in such processes (employee, evaluator and Human Resources team) can work in real time and globally. However, the main advantage of this tool is that it allows for the global handling of all participants, unifying the focus and applicable standards.

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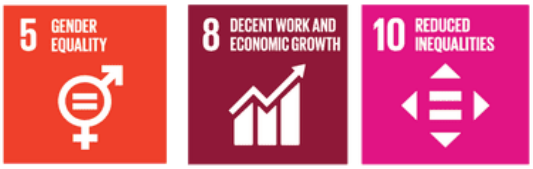
Employees with performance reviews (%)			
Men (%)	**80.70**	**83.58**	**85.13**
Management team	89.41	94.57	97.11
Middle managers and skilled technicians	93.21	96.20	98.23
Skilled workers and support personnel	72.64	74.91	73.13
Women (%)	**83.28**	**86.00**	**86.18**
Management team	85.22	90.10	98.14
Middle managers and skilled technicians	91.82	95.23	94.31
Skilled workers and support personnel	71.25	72.15	72.95
Iberdrola average	**81.30**	**84.15**	**85.38**

Information by geographic area can be found in Annex 1 Supplementary Information.

Diversity and equal opportunity

Contribution to SDGs of the performance described by the indicators of this section
(according to SDG Compass www.sdgcompass.org)



GRI 405

The development of labour relations based on equal opportunity, non-discrimination and respect for diversity are key goals of Iberdrola's *Human Resources Framework Policy* and *Equal Opportunity and Reconciliation Policy* approved by the Board of Directors, which promote the commitments of equal treatment between men and women and support for employees with diverse abilities, promoting their effective employment.

Diversity and inclusion: sum of cultures and talents

At Iberdrola, we work for cultural diversity and we take actions to raise awareness about functional diversity. The companies of the group are committed to the creation of an inclusive environment because each person can contribute their attributes, which entails great wealth. Thus, in the various countries in which it operates, the company promotes equal opportunity and respect diversity, effective equality between men and women in access to employment, training, promotion and working conditions, and provides support to workers with diverse abilities, facilitating their integration into the workplace.

Iberdrola has procedures in place to prevent any discrimination for reasons of race, colour, gender, language, religion, political opinion, national or social origin, social status, membership in an indigenous community, disability, health, marital status, pregnancy, sexual orientation or other personal condition that is unrelated to job-performance requirements.

The following specific activities should be noted:

- In the United Kingdom, ScottishPower has created 4 new employee networks: SP Connected Women, In-Fuse LGBT+, Future Connections and SP Carers, each of them

sponsored by a representative of the ScottishPower Management Committee. ScottishPower has also continued its collaboration with well-known entities such as Employers Network for Equality & Inclusion, Equate, Working Families, ENABLE, POWERful Women, Stonewall and Carer USA. The British subsidiary has once again sponsored the *National Diversity Conference of Scotland*, which brought together representatives from the business and educational world, as well as NGOs, in order to share ideas regarding diversity and encourage the organisations to create a more inclusive and diverse environment. At the conference, ScottishPower and other attendees offered some of their more positive experiences in this area. During the year, ScottishPower has offered workshops directed towards a group of senior leaders in order to define and spread awareness of the Diversity and Inclusion Strategy for 2019 and 2020.

- In the United States, Avangrid has continued its collaboration with various initiatives supporting diversity, like Troops to Energy jobs to foster the inclusion of veterans in the workforce; and it forms part of a consortium, along with other services companies, to discuss good practices to achieve this goal.
- As regards diversity in Spain, the group has held the *Hello/Hola* and *My Guest* (*Mi invitado*) cultural exchange programs for the children of employees in Spain, the United Kingdom and the United States.

Gender equality

Iberdrola's Corporate Governance System articulates the company's firm commitment to equal opportunities, from which derives the commitment to gender equality in four management areas: recruitment and selection, salary terms, professional training and development, and communication. Six areas of action are specified:

- Promote equality within and outside of Iberdrola.
- Analyse positive measures to correct inequalities.
- Ensure that women participate in all areas of consultation and decision-making.
- Eliminate career obstacles for women.
- Favour the professional development of women within the group.
- Encourage measures of reconciliation and flexibility under the perspective of gender parity.

Iberdrola has taken on the targets of SDG 5 "Gender Equality", and has therefore implemented a number of actions, policies and procedures that contribute to the achievement thereof both directly (through its corporate policy, which focuses on the creation of a favourable framework of labour relations based on equal opportunity, non-discrimination and respect for diversity) and indirectly (through awareness-raising and the promotion of equality outside of the organisation itself). Some specific examples for achieving SDG 5 are:

- Iberdrola promotes the reconciliation of professional and personal life, as well as parity in the performance of household chores, through the provision of facilities for the care of ill family members, children and flexible working hours. Iberdrola supports the concept of family co-responsibility.
- Iberdrola is decisively committed to equality in its governance bodies, as well as in positions of responsibility at the executive level.
- Iberdrola defends effective gender equality not only with the management of its human team, but also, for example, by supporting female sports and the selection of STEM (Science, Technology, Engineering and Mathematics) careers by young students.

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WE PROMOTE EQUALITY-FOCUSED ACTIVITIES

We promote **gender equality**, ensuring that men and women have the same opportunities for personal development and growth.

Agreements with notable universities to achieve **gender equality, goal number 5 of the Sustainable Development Goals** approved by the United Nations.

Holding events to drive **professional growth and leadership among women** in the energy sector.

Structuring the recruitment process to **avoid personal preferences.** Job opportunities available to all staff through the employee portal.

The commitment to gender equality has progressed over the years and has materialised in various initiatives:

- In 2007 Iberdrola Spain introduced measures to support maternity by allowing pregnant women to have 15 days off prior to delivery and one year of reduced working hours at 100% salary, guaranteed.
- In 2008 Iberdrola Spain agreed with its workforce to make the shortened workday universal, which consisted of condensing the workday with no stop for lunch in order to leave the work centre early. The initiative, which was unprecedented at a large industrial company, was an inflection point in Spain, as it was the first in the country to attempt full work and family reconciliation.
- In 2016 Iberdrola's Board of Directors strengthened as a strategic objective the development of labour relations based on equal opportunity, non-discrimination and respect for diversity, as set out in the group's *Equal Opportunity and Reconciliation Policy.*
- At year-end 2018, 36% of Iberdrola's Board of Directors are women, which makes it one of the IBEX-35 companies with the largest number of women on the Board. The company has also committed to a woman as the new CEO of Iberdrola Spain to lead this subsidiary.
- Iberdrola has been included in the Bloomberg Gender-Equality (GEI) Index, which recognises companies that have policies favouring gender equality and best practices in the area of work/life balance. The company is the only Spanish energy company included in this index.

Iberdrola currently has various initiatives and collaborations with institutions that support respect for the principle of equality in both the private and public arena.

At the group level, the company is a member of the European Round Table, an initiative at the EU level bringing together 50 chairs and executive directors of European multinational companies in order to design and defend policies creating a strong, open and competitive European Union. Within this initiative, Iberdrola works in the Social Changes working group, focusing on issues relating to the European Union's most valuable resource, its people. One of its four action areas is the promotion of the representation of women in leadership positions, focused on monitoring figures and milestones mainly promoted and driven by the more than 50 members of the initiative.

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Other examples of collaborations and initiatives in the main countries in which it operates are:

Spain

- To put the principle of diversity and equal opportunities into effect, the 7th Collective Bargaining Agreement includes an Equality Plan within the framework of labour relations (hiring, training, promotion, remuneration, etc.). Said Plan describes the numerous reconciliation measures made available to employees, which is a non-monetary supplement to remuneration.
- Sponsorship of the event "Commitment to equality with the UCM".
- Work with the Diversity Charter.
- Sponsorship of female sport through Women's Universe (*Universo Mujer*) (described as case study later in this section).
- Delivery of "Women Who Shine" awards.
- International Day for the Elimination of Violence against Women. To commemorate this day, Iberdrola, together with the Spanish Home Office (*Ministerio del Interior*) carried out the "Don't look the other way" campaign in order to raise awareness and work with all of society to stop this social disgrace. The initiative includes videos recorded with 360º technology showing various episodes of chauvinistic violence that turns the citizen viewer into the leading character in various events. This campaign has also been presented internally to the employees.

United Kingdom

- "*Gender Pay Gap*", a report describing the salary gap, has been published in the United Kingdom in compliance with British law. ScottishPower has also set a goal of exceeding 40% women in middle management positions and 30% women executives by 2022.
- In collaboration with Equate Scotland, there has been a launch of Women Returner, a comprehensive support programme for female employees with STEM careers who have been inactive for two or more years, whatever the reasons.
- Joining in a new coalition on gender diversity to increase the number of women at upper levels and as middle managers in the energy industry in the United Kingdom. The new coalition is made up of eight major companies in the industry.
- Member of Women's Engineering Society (WES), a professional network of women in the technology and engineering area that offers inspiration, support and development to future professionals in the field, and is a member of Employers Network for Equality and Inclusion and of Working Families.
- Organisation of an event in collaboration with two Scottish organisations to encourage children to select the scientific path with a view to attracting young women towards STEM careers.
- Member of POWERful Women (PfW), an organisation that promotes diversity in the energy sector, and of which ScottishPower's CEO is an ambassador. As a result of this collaboration, in 2018 ScottishPower joined a programme of tutoring and career support for 40 women in the industry.
- Participation in BITC's Opportunity Now campaign, in the National Women in Engineering Day, in Telegraph's Top 50 Women in Engineering campaign and in the "Top 50 Women in Engineering 2018" event.

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United States

- Collaboration with universities and local organisations to promote diversity, including the WomENERGY programme, focused on discovering and strengthening the talent of women at Avangrid through an action plan to train future leaders of the company based on five main pillars:
    - forging collaborations with associations promoting the role of women;
    - emphasising future leaders, the girls of today;
    - designing development, sponsorship and tutoring programmes;
    - respecting and disseminating the value of diversity and inclusion; and
    - creating networks for acquiring talent.

Brazil

- There has been a conference on female empowerment "Empodere-se", which analyses the current challenges and victories of women, and the "Estrelas" even to celebrate Women's Day, in which employees of Neoenergia gave a talk on female empowerment, as well as leading an internal campaign.
- The attraction of women to the electric market to balance gender presence is promoted through the "*Escola de Electricistas*".
- There is also six-month maternity leave and the hiring of 24-hour legal, financial and psychological support professionals.

Mexico

- Organisation of the "*Mujeres con Energía*" event with the participation of a group of 40 women leaders from Iberdrola Mexico, which also had a "job and personal competitiveness" workshop given by the Instituto Tecnológico Autónomo de México (ITAM) and the sponsorship of female football.

Furthermore, in cases of discrimination or conduct that could in any way hinder the egalitarian development of the professional career of men and women, Iberdrola has implemented a number of measures in the form of corporate policies, local policies, working groups and monitoring.

At the local level, there is the Diversity and Equality Governance Committee in the United Kingdom and the Equal Opportunity Committee in Spain, the principal mission of which is to engage in an appropriate review of the measures implemented to ensure equal opportunities and non-discrimination. A policy against workplace sexual harassment, a policy promoting a non-discriminatory work environment, and a policy on equal employment opportunities have been implemented in the United States. A policy on equal remuneration has been defined in Brazil.

Defend salary equality

Salary equality

Iberdrola guarantees respect for this right and has made it one of the commitments included in the Equal Opportunity and Reconciliation Policy. Monitoring salary equality is one of the keys to ensure the creation of an inclusive and respectful culture without differentiation based on gender, age, race or any other personal factor.

The remunerative structure for all categories of professionals and responsibility levels within the group is designed under the standard of gender neutrality.

Difference between salary gap and salary equality

It is important to understand the difference between the concepts of salary gap and salary equality:

- The salary gap shows the difference between the average salary received by men and women.
- Salary equality is the right of men and women to receive the same salary for the same work.

There is no salary gap at the Iberdrola group

The average salary of men and women within the consolidated group is quite similar. The ratio between the salary of men and that of women was 97.3% in 2018 and 100.9% in 2017, allowing for the conclusion that there is no salary gap within the group.

The underlying cause of the salary gap at certain age groups is the smaller presence of females within the staff, a common situation in the energy sector, which is accentuated in management and technical positions. This reality is more notable due to the scarcity of women specialising in STEM careers.

To mitigate this reality, Iberdrola is working in the following areas:

- On equitable professional development through the implementation of specific training plans for women.
- On the promotion of scientific careers among youth and women students, who will go on to form part of the talent pool that Iberdrola will access in the future.
- On the promotion of measures of reconciliation that equally benefit men and women, so that they can exercise co-responsibility in family duties and thus establish the conditions required for parity.

Iberdrola's defense of salary equality in the last two decades and its commitment to the reduction of the salary gap is seen in the segmentation of average remuneration by age groups and gender.

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Iberdrola[35]	Remuneration men/Remuneration women	
	2018	2017
Up to 30 years old	92.7	98.0
Between 31 and 50 years old	89.1	94.5
More than 50 years old	111.0	110.2
Total	**97.3**	**100.9**

Reconciliation of professional and personal life

The principles of conduct of the *Equal Opportunity and Reconciliation Policy* include the implementation of reconciliation measures that promote respect for the personal and family life of its professionals and facilitate the achievement of an optimal balance between the latter and the work responsibilities of both genders, particularly emphasising those intended to foster respect for the rest periods of its professionals and to avoid professional communications outside of working hours, when possible.

As stated above, it should be noted that in 2008 Iberdrola Spain agreed with its workforce to make the shortened workday universal. There are also various options offered in Spain for employees on non-school days like extra-curricular children's classes and summer camps for children of employees, especially taking into account those with different abilities. There has also been a continuation of the "Iberdrola Parents' School", which offers employees the opportunity to participate with their children in various programmes. There was the launch in 2018 of the first edition of the "Starters Bootcamp" programme, where adolescent children of employees had the opportunity to proactively and innovatively discover and develop key skills for their professional future at the San Agustín Campus.

In the United Kingdom, flexible work practices and policies have been implemented, promoting balance between work and non-work commitments. Apart from formal arrangements, flexible work without the limitations of formal arrangements is promoted, developing a culture of confidence and respect. This range of policies and practices includes:

- Improve leave and payment for caring for parents.
- Special leave for employees with responsibilities to care for third parties.
- Development leave for employees who want to take a career break.
- Health and well-being programme that offers a wide range of support and counselling regarding physical and mental well-being.

Avangrid also has the goal of facilitating the reconciliation of professional and personal life. Employees have access to needs-based flexible hours and tele-work options.

In Brazil, the companies of the Neoenergia group are concerned about the well-being of their colleagues, promoting reconciliation of personal and professional life. This includes an initiative in which all computers have a warning system that is activated after the 8-hour work period. Some companies of the group also have flexible working hours. Maternity leave is expanded to six months, two more than guaranteed by law. Some other benefits are: education incentives,

[35] Companies included: Iberdrola S.A., subsidiaries of: Iberdrola Spain, ScottishPower, Avangrid, Neonergia and Iberdrola Mexico.

co-participation in academies and associations, discounts through the Neoenergia benefits club (*Clube Neo*).

At Iberdrola Mexico, the flexible work hours are available to the work force and vacation days beyond what is required by Mexican law are offered. The company allows for a reduced workday due to maternity or other family reasons. Employees are entitled to reduce their normal working hours by 1 hour during the breastfeeding period, at the beginning or end of the workday. All workers can enjoy a period of maternity leave prior to giving birth, and after the legal maternity leave employees are entitled to a leave of absence with the right to return to the job. Special working hours are given for maternity provided that the established number of hours are covered.

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Leave and return to work due to paternity/maternity	2018		2017		2016	
	Men	Women	Men	Women	Men	Women
Employees entitled to maternity/paternity leave (no.)	26,117	7,961	26,229	8,026	25,925	8,157
Employees entitled to maternity/paternity leave (%)	100	100	100	100	100	100
Number of employees taking parental leave	441	444	345	440	434	463
Number of employees that returned to work after parental leave ended	516	366	363	349	N/Av.	N/Av.
Number of employees that returned to work after parental leave ended that were still employed 12 months after their return to work	373	337	328	411	N/Av.	N/Av.
Return to work rate	117.01[36]	82.34	105.22	79.32	N/Av.	N/Av.

Functional diversity

The main goals in this area during 2018 have focused on:

- The development of labour relations based on equal opportunity, non-discrimination and respect for diversity.
- The fostering of diversity and the social inclusion of vulnerable groups, particularly persons with diverse abilities, through the Corporate Volunteer Programme, which affords our employees an opportunity to participate in various solidarity initiatives to raise awareness of these groups and to improve the quality of their life. More detailed information can be found in the “Corporate volunteering programme” section of Chapter II.5.

To put the principle of diversity and equal opportunities into effect, in Spain the 7th Collective Bargaining Agreement includes an Equality Plan within the framework of labour relations (hiring, training, promotion, remuneration, etc.), which guarantees such principle. Within this Plan, an Equal Opportunity Committee has been created with the main mission of engaging in an appropriate review of the measures implemented to ensure equal opportunities and non-discrimination, and to encourage the inclusion of new activities in this area. A number of appropriate measures are also established for workers with disabilities in order for them to

[36] Greater than 100% because employees who were entitled to leave in 2017 returned to work in 2018.

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adjust to and access the work position, based on the requirements and characteristics thereof and on the needs in each specific situation, which facilitates their integration.

In addition, in order to comply with the principle of non-discrimination for reasons of diverse abilities, arrangements were made to obtain disability certificates for those employees who applied for them. 75 families have also benefited from the Family Plan, which is intended to facilitate the social and workplace integration of family members with a disability who are the dependent of an employee.

In turn, Iberdrola continues collaboration with the Diversity Charter, of which it has been a signatory since 2009, and has the category of patron member; as such, it respects prevailing legal provisions in terms of equal opportunity and non-discrimination, and puts diversity policies into practice.

Finally, donations have been made to entities or foundations whose purpose is professional training, entry into the job market or the creation of employment for persons with disabilities; and contracts have been signed with special employment centres, in excess of the amount required by law for investment in alternative measures, thus promoting protected employment.

In the United Kingdom, ScottishPower wagers on policies supporting people with disabilities to help ensure equal opportunity in employment. It has received the Disability Confident Standard award and holds one of the highest positions in the Carers Scotland ranking. It also began work in 2018 with Enable Scotland and Strathclyde Business School to offer qualified training to disabled youths in order to facilitate their integration into the labour force. The British subsidiary offers them a total of eight days of mentoring at its offices, which has broadened their professional horizons. This collaboration was awarded *Best Learning & Development Initiative* during the annual *National Diversity Awards for Power*, as well as the *Youth Employment Award* during the *National Diversity Awards for Scotland 2018*. It has also continued its work with the Business Disability Forum.

In the United States, Avangrid has four specific diversity policies: equal opportunity in access to employment, support for disabled persons or disabled veterans, promotion of a non-discriminatory work environment and combating sexual harassment in the workplace.

In Brazil, Neoenergia has continued the "*Programa Novo Olhar*", a pilot project to promote the labour insertion of Down Syndrome youth at the company through a mentoring system.

Iberdrola Mexico has financial assistance for the children of employees with physical and/or mental disabilities in order to be able to achieve full integration into society.

The following table shows the number of disabled employees within the group:

Employees with disabilities 2018			
Iberdrola total[37]	**257**	**145**	**402**

[37] Does not include employees in the United Kingdom or United States. The company has chosen not to request this information in the United Kingdom. In the United States, the employee has the option not to report on their disability, and at year-end 2018 no employee decided to exercise their right to share this information.

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Iberdrola, sponsor of women's sports in Spain

In 2016, after its agreement with the Ministry of Education, Culture and Sport, Iberdrola became the first company with a global commitment to encourage female participation in all areas of sport. It continues to promote equality through female sports within the framework of the *Women's Universe Programme*, working with different national federations.

The main goals of this project are to promote gender equality, drive the success and practice of women's sport and foster healthy habits from a young age. The company has thus become the main driver behind the "Woman's Universe" programme to develop initiatives that contribute to improvement and social transformation through the values of female sports. In this context, Iberdrola was a pioneer in making a global commitment to promoting the participation of women in all areas of sport.

In 2018 Iberdrola renewed its commitment to support the various national federations, including:

- by promoting and increasing female participation in all areas of sport.
- by the existence of programmes to promote sport at the grassroots level and other social projects.
- by their extraordinary level of success achieved and high participation rate.

Specifically, support for 16 federations has been ratified: gymnastics, badminton, handball, boxing, ice sports, hockey, karate, swimming, rugby, canoeing, triathlon, table tennis, surfing, volleyball and football. Together with each of the federations, Iberdrola also supports activities to promote women's sport like educational campaigns at high schools and national competitions.

In 2018 Iberdrola also organised five stages of the *Women, Health and Sport Tour*, touring various Spanish cities with the aim of promoting women's sport and transmitting the concepts of effort and improvement via the practice and exhibition of various disciplines.

In short, by supporting women's sports, Iberdrola reinforces its commitment to the promotion of talent, effective equality and social development, which form part of the company's key pillars. Its support for values such as teamwork and overcoming challenges materialises through various projects with the aim of reinforcing the social and cultural dimension of sport and activating support for women's sport.

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II.3. Fight against Climate Change and Protection of Biodiversity

- Iberdrola and sustainable management
- Efficiency in the use of natural resources
- Use of materials
- Efficiency in energy consumption
- Reduction of emissions
- Rational use of water
- Waste management
- Protection of biodiversity
- Environmental safety

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Iberdrola and sustainable management

The fight against climate change and the protection of the environment are goals that define Iberdrola as a company, with leadership in the development of clean energy and respect for the environment being significant aspects of its business model, a competitive element that distinguishes it in the industry as one of the leading companies worldwide.

Corporate policies

Iberdrola has a *General Sustainable Development Policy* that is further developed in detail by four specific corporate policies for environmental management, all approved by the Board of Directors:

- *Sustainable Management Policy*

The group has transformed its business model in recent years to make it more sustainable, achieving development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

To continue leading this transformation, the group follows a strategy with the following main pillars:

- leadership in the fight against climate change,
- development of clean energies that contribute to the decarbonisation of the economy,
- development of products that are increasingly competitive, cause the lowest possible environmental impact and are capable of assuring its customers of reliable supply.

This *Sustainable Management Policy* reflects the main principles of conduct regarding management that all companies of the group must comply with and that are a framework of reference for achieving the Sustainable Development Goals (SDGs) approved by the United Nations, as well as certain commitments that affect specific areas of group activity.

- *Environmental Policy*

Iberdrola, aware of the importance of the environmental dimension in carrying out its business mission for its customers and shareholders and for other significant Stakeholders with whom it interacts, commits to promoting innovation in this field and eco-efficiency (reduction of the environmental impact per production unit), i.e. to gradually reduce the environmental impacts of their activities, facilities, products and services, as well as to offer, promote and investigate eco-efficient solutions within their market.

The group optimises the management of water and hazardous and non-hazardous waste through systems that set objectives and goals on, among other aspects, waste reduction, the use of best practices in water usage and the use of recycled materials, thus contributing to the transition towards a circular economy.

102-11

Iberdrola's *Environmental Policy* establishes company's the principles of environmental conduct, defining its commitments. They set out the precautionary principle in environmental matters. The practical application thereof is reflected in the wager on more efficient and cleaner technologies and processes that contribute to confronting climate change and other environmental challenges, with a precautionary approach that allows for greater respect

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towards biodiversity and a more sustainable use of natural resources, from a broad circular economy perspective.

- *Policy against Climate Change*

Climate change is one of the most important challenges that humanity must face in the 21st century. The use of fossil fuels has caused a considerable increase in greenhouse gas emissions, which have accelerated global warming.

Iberdrola recognizes the seriousness of the threat that this global warming entails, which must be faced in a collective and coordinated manner by governments, multilateral agencies, the private sector and society as a whole.

Along these lines, the company commits to assuming a position of leadership in the fight against climate change, to promote a corporate culture focused on promoting awareness-raising among all of its Stakeholders regarding the magnitude of this challenge and the benefits associated with resolving it, identifying specific actions in the area of mitigation and adaptation.

This commitment is consistent with the goals of the Paris Agreement, with goal thirteen of the Sustainable Development Goals (SDGs) approved by the United Nations.

- *Biodiversity Policy*

The scientific community unanimously agrees in noting that there is currently a serious decline in biodiversity as well as a degradation of ecosystems. This loss of biodiversity, a direct consequence of the impact of human activities, is occurring more rapidly and generally, which entails serious environmental, economic and social risks.

Iberdrola is fully aware of these risks and of its responsibility as a leading company in the electricity sector, and works to adopt the measures allowing for the identification and eradication thereof, with a proactive attitude promoting biodiversity that goes beyond strategies of mitigating or containing damages.

Management of natural capital

The *Environmental Policy* contains the commitment to integrate the environmental dimension and respect for the natural environment into the strategy of the group. The company conceives of respect for the environment as one of the corporate values that determines its entire business strategy, as it is key to the configuration of a sustainable energy model.

The development of clean energy and investment in smart grids and in other energy efficiency technologies are the company's basis for protecting natural capital.

Iberdrola considers this environmental dimension as a priority in planning its businesses. This compels it to promote innovation, eco-efficiency and the gradual reduction of environmental impacts in the activities of the group, in order for energy to become a sustainable driver of the economy.

The commitment to renewable energy is the best way to approach this challenge, reducing the consumption of raw materials as well as the intensity of greenhouse gas emissions.

With a presence in disperse regions, especially due to its Networks and Renewables Businesses, the company also pays special attention to the protection of the biodiversity of the

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habitats in which its facilities are located, as explained in the “Protection of biodiversity” section of this chapter.

Circular economy

In its commitment to the environment and sustainable development, Iberdrola considers the circular economy to be a pillar of sustainability. Since 2014 Iberdrola has included in its management a focus on the life cycle, which is the basis for the transition towards the circular economy.

In 2017 Iberdrola signed the Spanish government’s circular economy agreement with the Ministry of Agriculture, Food and Environment (*Ministerio de Agricultura Alimentación y Medioambiente*) (MAPAMA), now Ministry for the Ecological Transition (*Ministerio para la Transición Ecológica*) (MITECO).

The group has committed to the circular economy, prioritising the reduction in intensity of resources, and wagering on decarbonisation and electrification of the economy, efficiency, R&D+i, digitalization, environmental traction and maximising waste recovery.

Environmental management system

The commitments made in the policies take shape in the Iberdrola group’s Environmental Management System. This system allows for alignment of the environmental dimension within the group’s sustainability model, integrating the Sustainable Development Goals and articulating the mechanisms to measure and evaluate the group’s environmental performance from the Life Cycle perspective, including in the management thereof the concept of circular economy and of natural capital.

The group’s Environmental Management System establishes a common, homogeneous, integrated and benchmark environmental framework for all of the Organisations. The system facilitates the development of an on-going, global and homogeneous diagnostic regarding the environmental behaviour of the company in each of its management levels.

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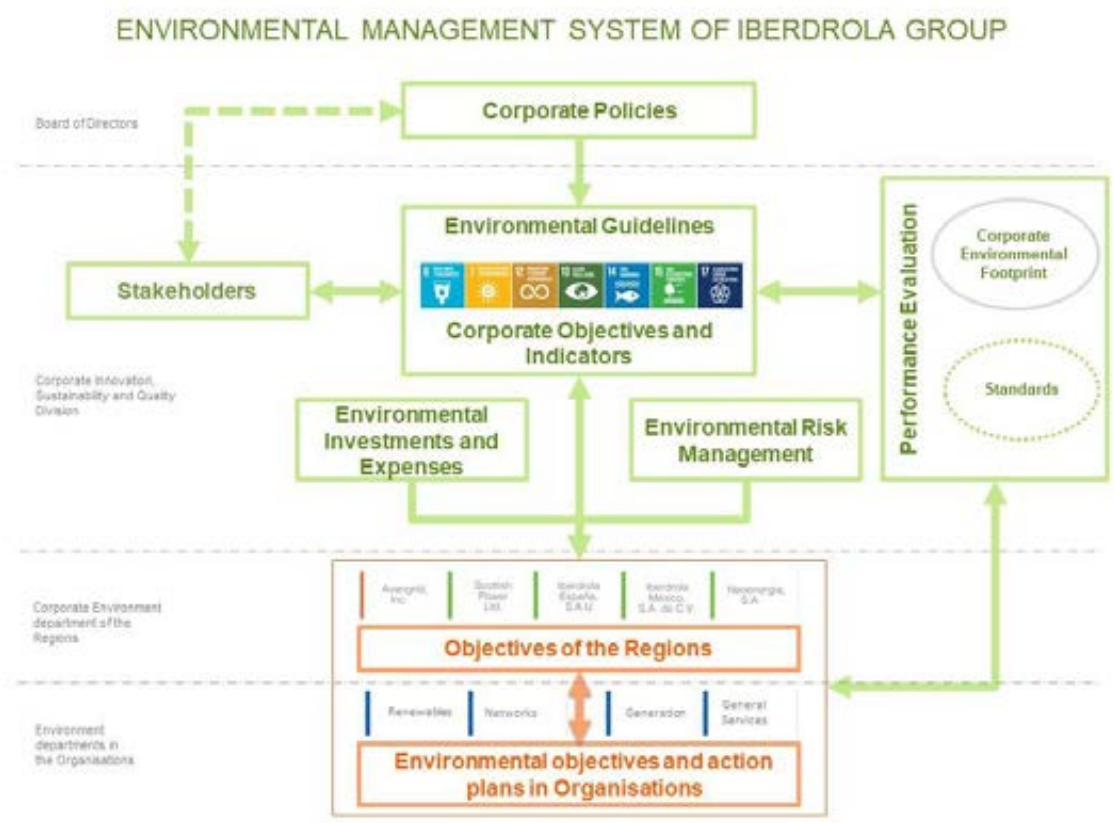

The System thus translates the corporate environment policies into environmental guidelines, which are deployed by the organisations of Iberdrola in environmental objectives and targets. Environmental guidelines aligned with the SDGs that define Iberdrola's strategic environmental lines are:

- Protect the environment and stop the loss of biodiversity.
- Combat climate change and its effects.
- Guarantee sustainable modes of production and consumption.
- Revitalise partnerships with Stakeholders for sustainable development.

102-11

The precautionary principle set out in the *Environmental Policy* takes shape through its environmental management system. Through its Environmental Management System, Iberdrola thus identifies the environmental risks and opportunities of the group and manages them through specific instruments of prevention and mitigation of risks, and action plans for opportunities.

Apart from reducing environmental risks and identifying opportunities, the management system also contributes very positive aspects, including:

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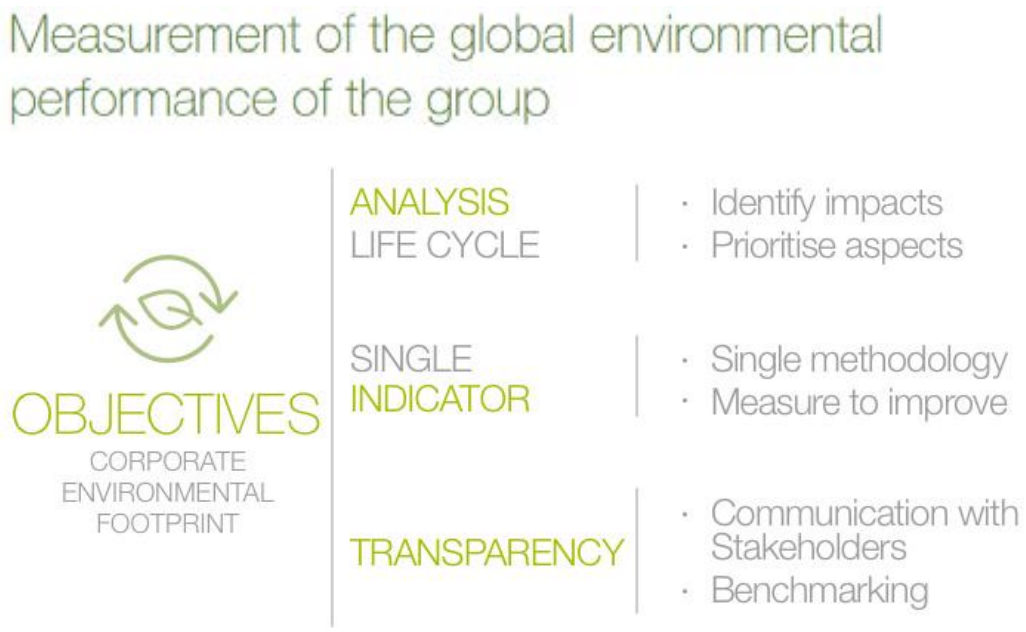
- Identification of environmental aspects throughout the entire life cycle and the impact thereof on the environment by calculating the Corporate Environmental Footprint (CEF).
- Exploitation of synergies between businesses and improvement of internal tools that result in a simplification of procedures.
- Improved environmental training and awareness-raising of employees. (A total of 12,537 hours of environmental training has been provided).
- Improved environmental training at suppliers.
- Strengthening of relations with Stakeholders.

The Iberdrola group's environmental management system is based on regional and organisational management systems for the various activities, businesses and regions of the group. The environmental function is thus distributed among all organisational and hierarchical levels of the group, from the Chairman's Office down to each person with local power over his or her surroundings. This complies with the "subsidiarity" principle of the *Environmental Policy*, pursuant to which all matters relating to the environment are dealt with and resolved in each region by the affected business, although they must all be included in Iberdrola's environmental management system.

Corporate Environmental Footprint (CEF)



Iberdrola's environmental management includes calculation of the CEF, which evaluates the effects of the company's activities on the environment from the lifecycle viewpoint (ISO/TS 14072:2014 standard). The objectives of the CEF are:

- To quantify, homogenise and unify the group's environmental performance.
- To determine the effect of Iberdrola's activities in the different environmental impact categories.
- To help monitor the organisation's environmental performance and allow for tracking of the objectives of the businesses and of environmental improvements.
- To identify and assess the environmental aspects having the greatest significance for Iberdrola's activities.

For more information, see Iberdrola's Environmental Footprint.

Certifications

Iberdrola's environmental management system is a strong system under the premise of continuous improvement, demonstrated by means of various certifications and verifications based on international standards (ISO14001, EMAS, ISO14064), and always validated by leading certification firms. They are the following:

- ISO 14001. The group's environmental management system groups together all of the partial certifications of each of the businesses and processes. 73% of the group's energy production is under this certification. Apart from generation, the group also has distribution and retail sale as well as its buildings and services under this standard.
- Eco-Management and Audit Scheme (EMAS). The thermal generation plants of the group have certificates under this standard.
- ISO 14064. Iberdrola verifies its greenhouse gas emissions under this standard.
- ISO TS 14072. Iberdrola verifies its Corporate Environmental Footprint under this standard, and is the only company in the industry to obtain this verification certificate.
- ISO 20121. Sustainable Event Management. Iberdrola certifies its General Shareholders' Meeting with this standard.

More information is available in the Certifications and Verifications section of the website.

Expenses and investments

Iberdrola generally considers all expenses or investments regarding projects that have a clear environmental impact, whether direct or indirect, to be environmental expenses or investments, as classified below:

- Treatment of emissions, which includes expenses or investments relating to emissions treatment equipment or systems.
- Treatment of waste, which includes investments and expenses relating to the management and treatment of waste, both hazardous and non-hazardous.
- Reduction of environmental impact through the removal of pollution or pollutants from the environment, soil, groundwater, sediment or surface water.
- Environmental prevention, which considers investments in new renewable energy facilities.
- Environmental management, which encompasses investments and expenses relating to the management of the environment that are not included in the above categories.

All of this is aimed at emphasising environmental activities and initiatives, which are undertaken in order to move towards a more sustainable energy model.

The expenses and investments of an environmental nature made by Iberdrola during 2018 to preserve the environment of the area in which it operates are set forth in the following tables:

Environmental investments and expenses (€ thousand)	2018	2017	2016
Environmental investments	2,132,586	2,239,917	2,262,237
Environmental expenses	549,666	513,233	527,140

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Reserves and insurance coverage for environmental risks

Iberdrola made 100 million euros of investments to prevent environmental risks (fires, spills, protection of avifauna, etc.) in 2018. It also makes accounting reserves to cover the materialisation of potential environmental risks.

Iberdrola also has coverage to cover the occurrence of environmental risks in the insurance that it has obtained. The main corporate insurance that the company has obtained with environmental coverage is:

- Environmental Liability Insurance: Contractual limit of 130 million euros per incident and in the aggregate per year.
- Civil Liability Coverage for Sudden Accidental Pollution in the general civil liability policy: Limit of 500 million euros per incident and in the aggregate per year.

Environmental Grievance Mechanisms

Iberdrola makes grievance mechanisms and tools and the management processes associated therewith available to its Stakeholders. All of this is described in the “Introduction” section of Chapter II.5.

Specifically focused on the environmental aspects of its activities, Iberdrola has an email mailbox medioambiente@iberdrola.es, which serves as a channel of communication with its Stakeholders, and which can be accessed in the contact section, offering the ability to ask questions, provide suggestions, place concerns or make complaints. The mailbox is included in the Environmental Management System of the company, and is certified under the ISO 14001 standard. 2,034 messages were received through this mailbox in 2018, of which only 3 were an environmental grievance, 2 of which were managed with those responsible and closed during the year. The third environmental grievance will be managed during 2019 as it was received at the end of December 2018.

In addition to the environment mailbox, and by way of supplement, Iberdrola can also receive messages relating to the environment through various channels that it maintains in social media.

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Efficiency in the use of natural resources

Contribution to SDGs of the performance described by the indicators of this section
(according to SDG Compass www.sdgcompass.org)

Electricity generation is one of the main activities carried out within the group. Iberdrola has continued to wager for years on the most efficient technologies per unit of production, with the lowest environmental impact. This is reflected in the following activities:

- Commitment to the development of renewable sources, especially onshore wind, offshore wind and solar photovoltaic.
- Proposed closure of the last two coal plants (in 2018 coal generation represented 1.3% of the group's production), pursuing a business strategy of replacing conventional technologies with others offering production with lower emissions.
- Selection of products having a reduced environmental impact.
- Sustainable management and use of consumables, always respecting the natural environmental and taking the necessary measures to reduce the risks of affecting it.
- Commitment to technologies with lower dependence on hydraulic resources.
- Sustainable management of water collected for cooling, optimising systems for reuse of water prior to return to the environment.

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Use of materials

GRI 301

The consumption of fuel from non-renewable sources over the last three years is shown below:

301-1

Use of raw materials	2018	2017	2016
Coal (t)	736,670	1,205,609	1,746,457
Fuel (t)	44,155	48,376	45,117
Natural gas (Nm^3)	11,657,294,804	12,293,944,087[38]	11,832,458,331
Gas-oil (m^3)	62,081[39]	15.217[38]	29,520
Uranium (kg)	44,625	65,407	56,915
Waste derived fuel (WDF) (t)	2,983	2,666	1,800

One can see the reduced weight of coal consumption in 2018, and a reduction thereof over the last 3 years as a result of the closing of the thermal coal generation facilities.

The use of waste derived fuel (WDF) represents 0.02% of all fuel consumed at thermal plants during the year. 301-2

The use of fuel (%) during 2018 by country was as follows 301-1:

Distribution of fuel consumption 2018 (%)	Coal	Fuel oil	Natural Gas	Gas oil	Uranium	WDF
Spain	100	100	13	7	100	100
United Kingdom	0	0	9	0	0	0
United States	0	0	5	0	0	0
Brazil	0	0	6	0	0	0
Mexico	0	0	68	93	0	0
Other countries	0	0	0	0	0	0

One can see that the consumption of gas is mainly concentrated in Mexico. In this country, the combined cycle gas plants have transitioned over the last decade from an electric system operated by the CFE and based on very old and polluting plants to a system highly weighted towards renewable sources, as provided by the industry reform they are undergoing. Iberdrola has a broad portfolio of renewable projects in the country, which portfolio continues to be developed.

Apart from fuels, there is also consumption to a much lesser extent of chemical products (in water purification, filtering of gases, etc.), oil and grease (as lubricants to maintain equipment) and office paper. As to this last consumable, it should be noted that implementation of electronic billing continued during 2018 in Spain and the United States, involving a savings of 474 t of paper compared to the prior year.

[38] Data recalculated with respect to the data published in 2017.
[39] Shutdowns of the plants in Mexico for maintenance work increased the use of gas-oil at those plants.

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Efficiency in energy consumption

GRI 302

The Iberdrola group ensures optimisation in the use of energy throughout its entire energy chain (production, transmission, distribution, supply and end use), contemplating energy efficiency from a three-fold perspective:

- As an electricity generator and distributor, it seeks to improve efficiency by introducing the most advanced technologies, equipment and digitalization.
- As an energy consumer, Iberdrola promotes the on-going improvement of energy efficiency across all its activities (offices and buildings, vehicles, water, mobility, employee awareness, etc.).
- As an electricity supplier, it hopes to contribute to a more efficient use of energy by consumers, through information, promotion and supply of solutions and technologies that help them improve their energy efficiency and reduce the environmental impact of their energy habits and consumption.

Energy intensity
302-3

The intensity of fuel consumption at the thermal generation plants (tep/GWh) in relation to net output and the intensity of internal energy consumption is shown in the following two tables:

Fossil fuel consumption (tep/GWh)[40]	2018	2017	2016
Total	**174**	**189**[41]	**189**

Intensity of internal energy consumption (GJ/GWh)	2018	2017	2016
Total	**2.75**	**3.26**[41]	**3.10**

The energy intensity of the group has been reduced as a result of the growing weight of renewable production. It should be kept in mind that the variability of wind and hydroelectric resources as a result of climate factors might cause a slight uptick in intensity in certain years (in 2017, due to the drought in Spain), as explained by the following data:

[40] Conversion factor used: 1GJ= 0.023888889 Tep.
[41] Data recalculated with respect to the data published in 2017.

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Generation technologies	% energy output		
	2018	2017	2016
Renewables	**42.4%**	**36.7%**	**39.6%**
Onshore wind	*25.1%*	*24.7%*	*23.1%*
Offshore wind	*1.1%*	*0.6%*	*0.0%*
Hydroelectric	*15.9%*	*11.4%*	*16.3%*
Photovoltaic solar and other	*0.3%*	*0.00%*	*0.2%*
Nuclear	**16.2%**	**16.9%**	**17%**
Combined cycle	**34.8%**	**39.3%**	**36%**
Cogeneration	**5.5%**	**5.0%**	**5%**
Coal	**1.1%**	**1.9%**	**3%**

As seen in the table above, the increase in renewable generation and the decrease in combined cycle and thermal coal production has caused energy intensity to decrease by 15.6% since 2017.

Energy consumption within the organisation 302-1

Energy consumption within the organisation (internal consumption) includes the consumption of energy at all of the Iberdrola group's facilities, buildings and offices, and is calculated as:

Energy consumption within the organisation (GJ) = Fuel consumption + Energy purchased - Energy sold (non-renewable) - Steam sold.

The fuel consumption figure in terms of energy (GJ) is obtained from direct measurement of the fuel used at each facility based on its calorific value (NCV):

$$Consumption(GJ) = Fuel\ consumption\ (kg) x PCI(\frac{MJ}{kg})/1000$$

The value of the energy purchased or sold is obtained by direct measurement at the facilities, buildings and offices.

$$Consumption(GJ) = \sum building/facility\ consumption(\ MWh)\ x\ 3.6\ GJ/MWH$$

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Energy consumption within the organisation in recent years is shown in the following table:

302-1

Energy consumption within the organisation (GJ)[42]	2018	2017	2016
Fuel consumption	**705,935,390**	**760,201,810**	**764,386,296**
By type of fuel			
Natural Gas	415,501,034	462,114,731	442,096,346
Uranium	265,340,801	262,902,924	274,800,068
Coal	20,786,260	33,020,919	45,338,800
Fuel-oil	1,801,267	1,899,317	1,919,103
Gas-oil	2,408,430	175,699	173,154
WDF	97,598	88,220	58,826
By type of technology			
Generating plants[43]	630,823,781	691,154,673	693,437,227
Cogeneration	74,427,358	68,440,622	69,893,794
Non-generating plants[44]	631,635	606,515	1,055,275
Energy purchased	**11,154,560**	**11,664,660**	**13,951,277**
Standby and pumping	10,443,459	10,886,544	13,096,768
Buildings	711,101	778,116	736,428
Energy sold (non-renewable)	**301,836,963**	**312,791,322**	**309,683,361**
Steam sold[45]	**14,694,432**	**18,527,684**	**26,484,009**
Total[42]	**400,558,556**	**440,547,464**	**442,170,204**

Reduction of energy consumption 302-4

Two fundamental blocks for reducing energy consumption are considered; on the one hand the energy savings from reduction in fuel consumption and on the other those associated with energy efficiency.

The consumption of fossil fuels for the generation of 237,008,460 GJ was avoided in 2018 through the generation of renewable energy and the supply of steam to industrial customers.

302-4

Reduction of energy consumption by the generation of renewable energy and steam				
Areas	Energy type	Energy saved (GJ)		
		2018	2017[46]	2016
Renewables	Annual primary energy savings through the production of renewable energy	222,314,028	182,689,200	205,089,621
Cogeneration	Annual savings through the supply of heat energy (steam) within the group	14,694,432	18,511,200	26,484,009
Total		**237,008,460**	**201,200,400**	**231,573,630**

[42] Energy consumption within the organisation (GJ) = Fuel consumption + Energy purchased - Energy sold (non-renewable) - Steam sold.
[43] Combined cycle, conventional thermal and nuclear plants.
[44] "Non-generating" facilities are Daldowie (thermal drying) and Hatfield (gas storage) in the United Kingdom.
[45] The reduction in the value of steam sold during 2017 is due to the sale of the cogeneration plants in Brazil.
[46] Data recalculated with respect to data published in 2017, decreased renewable generation and the sale of the cogeneration plant in Brazil.

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The reduction in energy consumption is equal to the savings of primary (non-renewable) energy generated by the production of renewable energy and cogeneration. This value of the energy saved is obtained by direct measurement at the output terminals of the facilities.

$$Consumption(GJ) = \sum generation\ (MWh)\ x\ 3.6\ GJ/MWH$$

Various measures were implemented in 2018 to improve energy efficiency at buildings and infrastructure. The energy savings produced by these measures is presented below:

Reduction of energy consumption associated with increases in efficiency				
Areas	Item	Energy saved (GJ)		
		2018	2017	2016
Efficiency in the distribution network	Savings due to efficiency in the grid	2,824,279	4,273,557	2,337,062
Efficiency in generation	Savings due to efficiency improvement at plants	9,117	44,744[47]	936
Efficiency at buildings	Savings due to efficiency at buildings	672	76,000	N/Av.
Total		**2,834,068**	**4,318,301**	**2,337,998**

Savings due to efficiency measures of the electricity grid

Energy savings from network efficiency derive from actions the company takes to control or reduce losses, including:

- Updates and modifications to reduce the length of lines through construction of new substations and increases in the power of existing substations, increases in voltage and improvement of power factor, implementation of remote management, and maintenance work.
- Improvements in contract management and supply point inspections: replacement of electromechanical meters with electronic meters, inspection of facilities and regulation of customers and clandestine connections.
- Increase in top-level reviews and strengthening of field activities with supply point inspections to reduce administrative and non-technical losses.

[47] The increase in savings over 2016 is due to the placement into service of more efficient equipment at the generating plants in 2017.

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The table below shows transmission and distribution network losses:

EU12

Transmission and distribution network losses (%)	2018	2017	2016
Transmission			
United Kingdom	1.52	2.12[48]	1.13
United States	4.68	4.72[49]	4.71
Distribution			
Spain	6.60	6.70	6.89
United Kingdom	6.43	6.32	6.22
United States	5.25	3.59	4.79
Brazil[50]	13.21	12.24	12.46

Loss reduction programmes are implemented each year in all regions to improve the reliability and availability of the supply network, which has made it possible to reduce, or at least maintain in most cases, the level of losses.

Efficiency in thermal generation

As in prior years the company continues to take action to improve the efficiency of the plants, avoiding leaks, decreasing emissions, reducing internal consumption, optimising start-up time and procedure and installing recirculation systems, among other things. The calculation of savings from efficiency in generation is obtained by measuring the reduction in consumption of fuel by MWh due to the improvements made.

The table below shows the average performance of the thermal generation facilities:

EU11

Average performance[51] at thermal generation facilities (%)	2018	2017	2016
Combined cycle	54.22	53.57	51.82
Conventional thermal	34.28	34.38	33.00
Cogeneration	55.62	53.81	56.14
Total	**53.83**	**52.76**	**51.08**

Combined cycles, which are the most efficient thermal technology, represent 60% of the group's thermal production[52], as derived from the information reported in the "Key operational figures" section of Chapter I "About Iberdrola" of this report.

Information on the average performance of the thermal generation facilities in the various countries is described Annex 1 Supplementary Information.

[48] Derived from surcharges on lines from adjustment due to closing of Longannet.
[49] 2017 and 2016 data recalculated due to new methodology.
[50] All Iberdrola group networks in Brazil are classified as distribution.
[51] Average of efficiencies weighted by the annual production of each thermal power plant.
[52] Includes nuclear generation.

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Efficiency at buildings

Iberdrola continues to implement energy efficiency measures at the buildings and offices of the company all over the world. Energy audits of the buildings allow it to determine the actions to take at the buildings: optimising acclimatisation (heating and air conditioning) performance, improving thermal insulation, efficiency in the lighting of buildings, and automation of the facilities associated therewith.

The savings by application of these measures compared to the prior year was 672 GJ.

Reductions in energy requirements of products and services

Iberdrola fosters efficiency, gradually reducing the environmental impact of its products and services. It also offers advice to its customers, encouraging and researching eco-efficient solutions.

In addition to electricity and gas, Iberdrola sells new products and services to encourage energy and financial savings by its customers, efficiency, and care for the environment.

302-5

Energy savings of green products and services (GJ)	2018	2017	2016
Photovoltaic solar energy	20,336	1,899	605
Energy audits and plans	46,545[53]	100,375	199,980
Gas maintenance service	875,326	790,441	809,507
Other savings and efficiency activities	99,970	158,113[54]	87,459
Green energy supplied	42,700,000[55]	49,874,302	51,764,036
Total	**43,742,176**	**50,925,130**	**52,861,587**

More information about these and other initiatives is available at the websites of Spain, Brazil, United Kingdom, United States (through NYSEG, RG&E and CMP) and Portugal.

Energy consumption outside of the organisation 302-2

The most significant consumption of energy outside of the organisation is consumption associated with the transport of fuel by motorway, with trips to/from work by group employees, and with business travel (planes and motorways). All of this information forms part of scope 3 of the calculation of greenhouse gas emissions. Energy consumption outside of the organisation is estimated based on the distances travelled by each means of transport and is transformed by means of conversion factors from official sources[56]. The energy consumption for these items is around 847,440 GJ.

[53] The energy audits and plans are in effect for 5 years, giving rise to the reduction they produce
[54] Recalculated data.
[55] No data available from Brazil as at the date this report is issued.
[56] Defra: Department for Environment, Food and Rural Affairs (United Kingdom).

PUBLIC

Reduction of emissions

Contribution to SDGs of the performance described by the indicators of this section
(according to SDG Compass www.sdgcompass.org)

GRI 305

Iberdrola recognises the fight against climate change as a strategic pillar of its activity in its corporate governance system, and has updated its *Policy against Climate Change* in 2018. To put this commitment into practice, Iberdrola has a climate action plan with various lines of action dealing with both mitigation and internal adaptation to climate change, its active participation in the global agenda, the promotion of a corporate culture focused on promoting awareness-raising and the engagement of all of its Stakeholders in this area. This work is coordinated through an internal working group, which integrates the various areas of the company involved in this area.

As part of its climate action, Iberdrola has ambitious emission reduction objectives that will bring us to be emission neutral by 2050 and which are recognised as Science Based Targets (SBTi). It also has an investment plan and innovation policies focused on decarbonisation of the energy mix and consolidating our leadership in renewable energy, smart grids and clean technology, and is progressing with its commitment to implement the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).

Furthermore, it is working to participate in domestic and international institutions, entities and events to support the definition of climate policies and promote the significant participation of the private sector, contributing with analyses and positions on decarbonisation strategies.

Iberdrola has once again registered its footprint with the Carbon Footprint, Carbon Offset and Carbon Dioxide Absorption Projects Register of the Spanish Ministry for Ecological Transition (*Ministerio para la Transición Ecológica*) (MITECO).

The main source of direct emissions, which contribute to the company's Greenhouse Gases (GHGs), is the emission of CO_2 arising from combustion at the thermal generation plants.

Other atmospheric emissions deriving from the combustion of fossil fuels are NO_x, SO_2 and particulates. These are trending downward thanks to improvements in combustion processes.

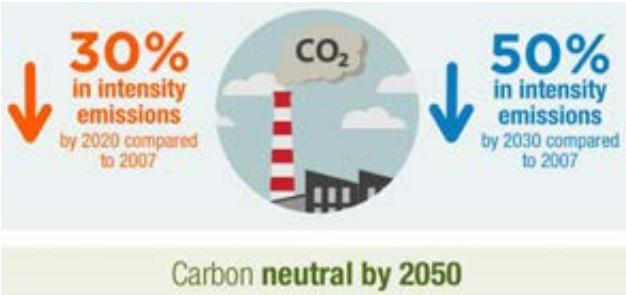
More information is available in the climate change and emissions section of the website.

PUBLIC

Leaders against Climate Change

The electric industry plays a key role in achieving the purpose set out in the historic Paris Agreement to limit the increase in the planet's temperature to below 2º C. The Iberdrola group, a world leader in the fight against climate change (goal 13 of the Sustainable Development Goals (SDGs)) and an active participant in the various Climate Conferences, is fully aligned with this international agreement. Iberdrola is publicly committed to maintaining its position as one of the leading European companies with the lowest CO_2 emissions per kWh produced.

Iberdrola has thus set itself an environmental goal to reduce the intensity of its CO_2 emissions to 50% below those of 2007 (to below 150 grams of CO_2 per kWh) by 2030, and to be carbon-neutral by 2050. These goals have been recognised as being based on science in accordance with the Science Based Targets initiative (SBTi).



The strategy to achieve this target is based on gradually reducing the intensity of GHG emissions through a commitment to close its last two coal plants and continuing to pursue electricity generation based on renewable sources, progressively introducing more efficient and less carbon-intensive technologies at existing facilities, and improving the energy efficiency of its activities.

In its commitment to maintain a position of leadership in the fight against climate change, Iberdrola has established the following foundations for action:

FOUNDATIONS FOR CONDUCT
1. Contribute to the mitigation of climate change and to the decarbonisation of the energy model.
2. Support international climate change negotiation processes and significant private sector participation in the global agenda.
3. Maintain global leadership in renewable energy, smart grids and efficient technologies.
4. Integrate climate change into internal decision-making processes as well as in the analysis and management of long-term risks for the group.
5. Actively foment a culture that promotes the efficient and responsible use of energy.
6. Promote climate training and awareness-raising among stakeholders and the adoption by suppliers of similar policies.

68% of the group's total installed capacity was emission free by year-end 2018. Some of the milestones reached during the year include the conclusion of the STAR Project for digitalization of networks in Spain, the inauguration of the Wikinger offshore wind farm, which will avoid the annual emission of almost 600,000 tons of CO_2, and the sale of conventional generation assets in the United Kingdom, which makes ScottishPower the first 100% renewable energy company in this country.

Commitment and raising awareness against Climate Change

During 2018 Iberdrola has shown clear leadership in the private sector's participation in the principal milestones of the global climate agenda, including: the Katowice Climate Change Conference (COP 24), the events associated with the United Nations General Assembly, the activities of the *Marrakech Partnership for Global Climate Action* and the various phases of the *Tanaloa Dialogue.*

The *Talanoa Dialogue* is a space for debate designed to encourage the participation of governments and civil society in the achievement of the climate goals agreed to at the 2015 Paris Conference. Iberdrola is the only Spanish company and the only energy company present at the debates both during the technical and political phase of this Dialogue, having also participated in the organisational sessions at the European level. On all these occasions, the company has offered a constructive view[57] regarding the opportunities arising from compliance with the climate goals through a sustainable energy model.

Iberdrola's support for an ambitious focus on decarbonisation of the economy became quite visible in a public position paper submitted by the *Corporate Leaders Group at the Climate Action Summit in San Francisco.* In this Declaration, its members (including Iberdrola) supported climate policy frameworks that will lead to an economy with net zero emissions by 2050. Support for this Declaration is in addition to a multitude of public positions within the framework of the various organisations with which we work (*We Mean Business, World Business Council for Sustainable Development, World Economic Forum, etc*.) and those promoted by governments or international bodies (e.g. the Support for the Electro-Mobility Declaration[58] launched by the COP Presidency).

In the area of awareness-raising, we know that fight against climate change, and all that it entails, is the work of all of us. Achieving it will require greater awareness and an increased disposition towards action by all of society's players. As part of this commitment, in 2016 Iberdrola included a *Plan to Raise Social Awareness on Climate Change* as an additional linchpin of its action for the climate, which it has since been carrying out with various activities directed towards different public audiences.

This plan consists of four main focus points for action to be implemented globally:

1) internal action directed towards employees,
2) external communication through the development of specific products, climate awareness-raising events and dissemination activities,
3) actions directed towards youth due to their particular importance as present and future consumers, and
4) establishment of alliances with the public and private sector as an accelerator and enhancer of action.

[57] Iberdrola's formal contribution to the Talanoa Dialogue is available at the following link: https://unfccc.int/documents/65018

[58] https://cop24.gov.pl/PRESIDENCY/INITIATIVES/DRIVING-CHANGE-TOGETHER-PARTNERSHIP/

PUBLIC

The most notable activities performed during 2018 include:

- A global online course on climate change, its causes and solutions, which was completed by more than 16,150 employees by its close in June 2018.
- Together with the youth and student association AIESEC, we have carried out the Climate Volunteers programme, a revolutionary experience in which we gave the opportunity to 29 youth from the various countries in which Iberdrola does business to live a global volunteer experience, working on social projects relating to climate action in Brazil, Colombia and Costa Rica.
- On-site school workshops on climate change by Iberdrola volunteers, more than 150 of which were presented during the 17-18 school year, reaching approximately 6,000 students in Spain, Mexico and Brazil.
- Technical advice and support on the dissemination of the documentary "Vigilantes del Planeta" (Vigilantes for the Planet), which was broadcast on various Spanish television stations and in various countries of the Americas, and was seen by more than one million viewers in 2018.
- Collaboration with the Centro Superior de Estudios de la Defensa Nacional (CESEDEN) in preparing a Strategy Workbook focused on climate change and its impact on defence[59].

For the third consecutive year, the *Moving for Climate NOW* awareness-raising initiative took place, organised by Iberdrola and Red Española del Pacto Mundial (Spanish Global Compact Network). This third year, the electric bicycle route covered 650 km from Vienna to the Katowice COP24 conference, where the cycling team, made up of more than 40 people from various organisations and countries, delivered a statement with a call to action and climate aspirations to the authorities of the UN Climate Change Secretariat and of the COP24.

As a result of all these activities, the organisation InfluenceMap (a British non-profit organisation) has once again put Iberdrola in the A-List of positive global leaders on climate change in its 2018 report. InfluenceMap notes the active and positive pressure of Iberdrola on the energy and climate policies of the European Union, also noting its desire to reduce the EU's GHG emissions in line with the objectives of the Paris agreement, as well as to defend the financial instruments helping to finance the transition towards renewable energy.

Another recognition of this work was the award given to Iberdrola by the *Climate Reality Project Awards* in the "Companies" category for its valiant efforts in the fight against climate change and for putting this issue on the first line of the social agenda.

[59] http://www.ieee.es/en/publicaciones-new/cuadernos-de-estrategia/2018/Cuaderno_193.html?__locale=en

PUBLIC

Intensity of greenhouse gas emissions

The intensity of CO_2 emissions is calculated based on direct emissions from the production facilities [see "Direct greenhouse gas emissions. Scope 1 (per GHG Protocol)" below] divided by the group's net output, including steam. The following table shows this intensity.

305-4

Intensity of CO2 emissions	2018	2017	2016
Specific emissions from global mix (kg/MWh)	163	187	177
Specific emissions from global mix (kg/€)[60]	0.694	0.854	0.908

In 2018, CO_2 emissions per MWh generated remained among the lowest among domestic and international energy companies. It should be noted that Iberdrola's emissions intensity in Spain was 82 kg/MWh in 2018.

Inventory of Greenhouse Gas Emissions (GHGs)

Iberdrola's inventory of emissions is calculated using the emissions set forth in disclosures 305-1, 305-2 and 305-3. In April 2018, for the ninth consecutive year, Aenor verified Iberdrola's greenhouse gas emissions inventory, covering the direct and indirect emissions from all activities, pursuant to the UNE ISO 14064-1:2006 standard.

Set forth below is the inventory (as of the date of approval of this report) to be submitted for verification in 2019 pursuant to the *Greenhouse Gas Protocol* of the World Business Council for Sustainable Development (WBCSD) and the World Resources Institute (WRI).

CO_2 equivalent emissions to be verified in 2019 (t)	Spain	United Kingdom	United States	Brazil	Mexico	Total
Scope 1: Direct emissions	4,958,842	2,242,114	1,202,792	1,310,724	14,930,626	**24,645,098**
Scope 2: Indirect emissions	1,081,958	532,699	377,332	486,073	1,773	**2,479,834**
Scope 3: Other indirect emissions	1,581,743[61]	3,343,814	9,101,788	4,473,919	2,872,670	**21,373,934**

Updated information is available in the Greenhouse Gas (GHG) Inventory on the corporate website.

[60] Direct emissions from energy generation facilities (305-1) compared to net revenue in €.
[61] Information on energy sold is not available as at the date of approval of this report.

PUBLIC

Direct greenhouse gas emissions. Scope 1 (per GHG Protocol)

Direct emissions are those from sources of GHGs that are owned or controlled by the company. They include:

- Emissions from electric power generation facilities (fuel consumption).
- Emissions from non-generation facilities (storage of gas and sludge drying).
- Fugitive emissions of methane (CH_4) (storage and transport of natural gas).
- Fugitive emissions of sulphur hexafluoride (SF_6) in distribution networks.
- Emissions from facilities that provide services to buildings (fuel consumption).
- Emissions from mobile combustion sources, associated with road transport of employees with fleet vehicles for work purposes.

The emission factors used in calculating each of these emissions are obtained from official sources.

Iberdrola has reduced its direct emissions (Scope 1) by 8% over the last two years[62] from 26,691,055 to 24,645,098 t CO_{2eq}. This is mainly due to the reduction of emissions at the thermal generation plants, which decreased 8.3% since 2016, as shown in the following table:

305-1

CO_2 emissions at production facilities Scope 1 (t)	2018	2017	2016
Thermal generating plants[63]	20,329,419	23,027,444	22,812,513
Cogeneration	4,005,405	3,693,748	3,728,577
Total	**24,334,824**	**26,721,192[64]**	**26,541,089**

68.2% of the group's installed capacity is emission-free. Direct emissions other than the above emissions from production facilities are less than 1% of the total of Scope 1.

305-1

Other Scope 1 emissions (t $CO_{2eq.}$) in 2018	2018	Source of emission factors
Non-generation emissions (Gas storage and sludge drying)	44,858	DEFRA[65]: United Kingdom.
CH_4 Fugitive Emissions (Gas storage and transmission)	178,519	IPCC[66]
SF_6 Fugitive Emissions (Electricity distribution)	35,340	IPCC
Emissions at buildings (Fuel consumption)	10,126	MITECO: Spain. DEFRA: United Kingdom, Mexico and Brazil. EPA[67]: United States, Mexico and Brazil.
Emissions from mobile combustion (fleet vehicles)	30,181	DEFRA: Spain and United Kingdom. EPA: United States, Mexico and Brazil.
Total	**299,024**	

[62] Considered the base year for calculating the greenhouse gas emissions inventory.
[63] The emissions data for the thermal generating plants includes the consumption of an auxiliary group of nuclear plants, which is not included in the breakdown of Annex 3.
[64] Data updated in the verification of the GHGs.
[65] DEFRA: Department for Environment, Food and Rural Affairs (United Kingdom).
[66] IPCC: Intergovernmental Panel on Climate Change.
[67] EPA: Environmental Protection Agency (United States).

PUBLIC

For more information, go to the climate change and emissions section of the corporate website.

Indirect greenhouse gas emissions. Scope 2 (per GHG Protocol)

Indirect emissions are those emissions deriving from the company's activity but generated by other entities, including emissions from the generation of electricity acquired for the company's consumption. These emissions are:

- Emissions associated with the consumption of electric energy by standby systems during shutdowns at the thermal, renewable and nuclear plants and during pumping at the hydroelectric plants.
- Emissions associated with the consumption of electricity in buildings.
- Emissions associated with network losses.

The emission factor of the generation mix of the respective country is used to calculate CO_2.

- Spain: Red Eléctrica de España
- United Kingdom: DEFRA
- United States: U.S. Energy Information Administration
- Mexico: SEMARNAT[68]
- Brazil: Ministry of Science, Technology and Innovation for Brazil

There will be work in 2019 on the additional calculation of the footprint according to the "market based" methodology as requested by some environmental experts.

Iberdrola has reduced its direct emissions (Scope 2) by 45% over the last two years[69] from 4,503,670 t CO_{2eq} to 2,479,834 t CO_{2eq}. This is mainly due to the improvement in efficiency of the facilities and distribution networks made in recent years.

305-2

Scope 2 emissions (t CO_{2eq})	2018	2017[70]	2016
Emissions associated with network losses.	1,763,941	2,464,981	3,714,179
Emissions from consumption of electric energy during shutdowns and pumping	666,791	897,732	749,628
Emissions associated with the consumption of electricity in buildings	49,101	52,484	39,863
Total	**2,479,834**	**3,415,197**	**4,503,670**

More information is available in the *GHG Report*, which is audited annually under the ISO 14064 standard.

Other indirect greenhouse gas emissions. Scope 3 (per GHG Protocol)

Iberdrola has incorporated the life cycle perspective into its management model, which includes knowledge of the long-term impacts of the value chain. New elements are thus included each year in the calculation of its Scope 3, indirect emissions that are a result of the company's activities at sources not owned or controlled thereby. They include the following:

[68] SEMARNAT: Secretaría de Medio Ambiente y Recursos Naturales (Secretary of the Environment and Natural Resources) in Mexico.
[69] Considered the base year for calculating the greenhouse gas emissions inventory.
[70] Data updated since those published in the 2017 Sustainability Report according to audit performed in 2018.

PUBLIC

- Emissions associated with the transport of employees for work purposes (hire vehicles and personal vehicles, planes, trains and ferries) (Category 7 GHG Protocol).
- Emissions associated with the transport of employees *in itinere*, from their home to their work place (Category 6 GHG Protocol).
- Emissions associated with the transport of fuel (Category 4 GHG Protocol).
- Emissions associated with the supply chain (Category 1 and 2 GHG Protocol).
- Emissions associated with energy purchased from third parties for sale to end customer (Category 3 Activity D GHG Protocol).
- Emissions arising from upstream (suppliers) and downstream (customers) activities (Category 3 Activity A GHG Protocol). Excludes transport of fuel, as this is specified in Category 4 and emissions scope 1 and 2.

The emission factors used in calculating each of these emissions are obtained from official sources. More information is available in the *GHG Report*, which is audited annually under the ISO 14064 standard.

Scope 3 emissions were the following in 2018:

305-3

Scope 3 emissions (t CO_{2eq})	2018	2017	2016
Emissions from employee business travel	15,907	21,033	15,311
Emissions associated with the transport of fuel[71]	71,290	92,167	88,743
Emissions associated with the supply chain[72]	1,789,382	1,636,912	705,499
Emissions associated with the transport of employees from their home to their work place[73]	62,288	79,703	70,495
Emissions associated with energy purchased from third parties for sale to end customer[74]	15,864,855	18,761,881	17,457,573
Upstream (WTT) emissions from fuel acquired and consumed	3,570,211	3,893,731	N/Av.
Total	**21,373,934**	**24,485,427**	**18,337,621**

Emissions from employee travel per employee in 2018 were 0.45 t CO_{2eq}.

[71] Calculated for the transport of fuel by motorway, train and ship. Fuel transport activities in 2018 only occurred in Spain.

[72] Estimated based on the Supplier Awareness and Greenhouse Gas Measurement Campaign that Iberdrola sends to the group's suppliers.

[73] Estimated using a survey is sent each year to the employees of the Iberdrola group in order to record their emissions through an emissions calculation tool.

[74] The energy purchased for sale to the end customer is calculated based on the difference between the energy supplied at market prices and the internally produced energy. The emissions from such energy result from CO2 emissions obtained by applying the emission factor of the generation mix of the corresponding country and adding it to the upstream emissions of such energy, using the DEFRA WTT (Well To Tank) emission factor.

PUBLIC

Reduction of GHG emissions

Initiatives to reduce emissions are undertaken through a broad range of products and services promoting energy efficiency and savings. Some examples of actions taken in 2018 are given below:

305-5

Areas	Actions and initiatives	CO_2 avoided 2018 (t)
Renewables	Primary energy savings through the production of renewable energy	16,122,652
Cogeneration	Savings through the supply of heat energy (steam) within the group	559,326
Network efficiency	Savings from distribution network efficiency in Spain, the United Kingdom and Brazil	114,023
Commercial	Energy savings and efficiency from green products and services (Spain, United States and Brazil)	2,683,218
Group	Use of videoconferencing (t CO_{2eq})	5,450
Total		**19,484,669**

There were 50,923 videoconferences in 2018 that avoided employee travel, entailing a reduction of approximately 5,450 t of CO_{2eq}.

In total, the emission of 19,484,669 t CO_2 was avoided, equal to the amount of CO_2 absorbed by 975 million trees over the course of a year[75].

The operating regimen of the group's production facilities led to the level of CO_2 emissions described in the section "Direct greenhouse gas emissions. Scope 1 (per GHG Protocol)". The section "Reduction of energy consumption"[76] and "Direct greenhouse gas emissions. Scope 2 (per GHG Protocol)" provide additional information in this area.

[75] The estimated amount of CO_2 absorbed by an average tree 20 kg. of CO_2 per year.

[76] In addition to the reductions described in "Reduction of energy consumption", the group's nuclear production prevented emissions of 5,089,685 t CO_2, taking into account the emission mix. Source: RRE.

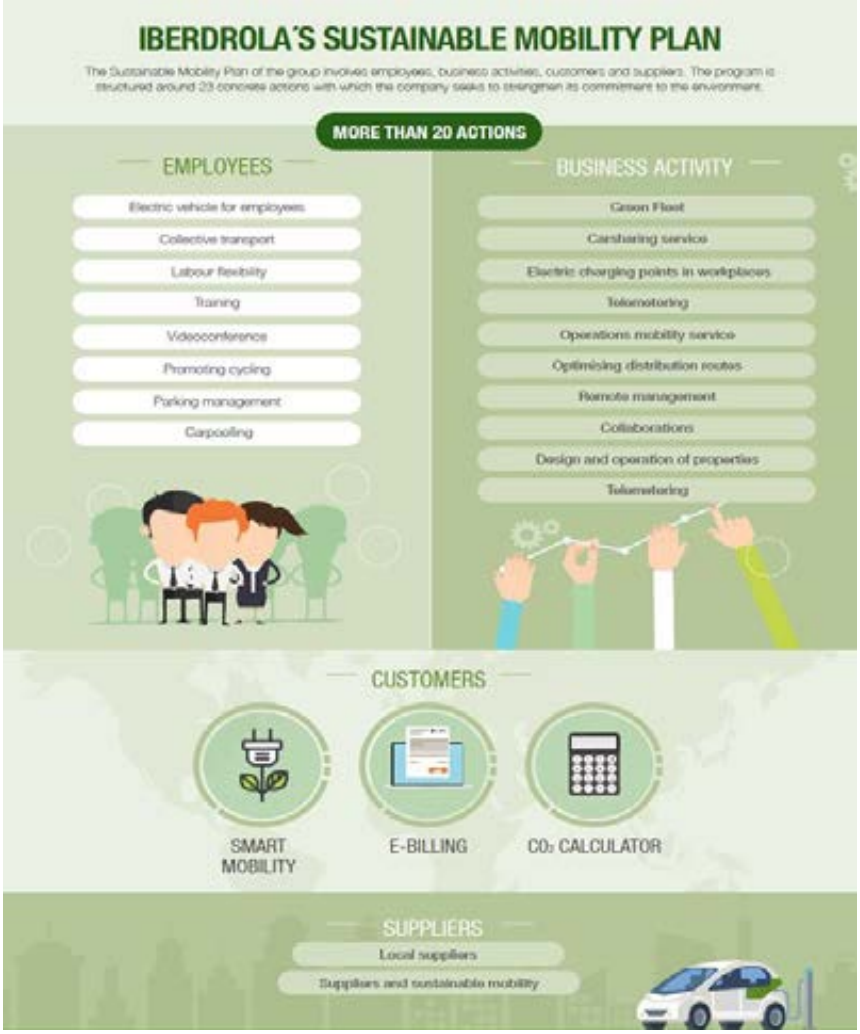
PUBLIC

Sustainable Mobility Plan for employees

A Sustainable Mobility Plan has been developed in order to reduce emissions relating to employee travel and travel from home to work, contributing to a rational use of the means of transport. This plan is included in the commitment made by the company in its *Sustainable Management Policy*.

The inclusive nature of the programme involves employees, the business activity, customers and suppliers, covering approximately 23 specific actions in which the company seeks to strengthen its wager on sustainability.

These initiatives include Iberdrola's launch of a new edition of the *Electric Vehicle for Employees* programme in Spain and the United Kingdom and the pilot project launch in the United States, which consists of special advances and financial assistance for the purchase of electric vehicles. Thanks to this initiative, the local emission of 277 t CO_{2e} in employee travel to the work place in Spain and the United Kingdom was avoided in 2018.



Allocation of CO_2 emissions allowances or equivalent

EU5

Only the generation facilities located in Europe are subject to an emission rights trading system, for which reason this indicator does not affect the thermal generation facilities in Mexico, Brazil or the United States.

The facilities located in Europe (Spain and United Kingdom) have not received free trading rights since 2013, for which reason they have to acquire the necessary rights at auction to offset the emissions produced.

Only the Tarragona Power facility has been assigned 24,394 emissions rights, within the emissions trading system (ETS) market.

After closing its last coal plant in the United Kingdom, Iberdrola also intends to close the last two coal facilities that are currently in operation in Spain.

Other atmospheric emissions

305-7

Emissions[77] of sulphur dioxide (SO_2), nitrogen oxides (NO_x) and particulate matter are also created by the burning of fossil fuels. The changes in the generation profile discussed in the emissions section tends to reduce them with the incorporation of renewable energy and the support of modern technologies for monitoring combined cycles. This management focus is supplemented with a plan to invest in improvements in the combustion process and in the dismantling of less environmentally-efficient units.

To comply with *Directive 2001/80/CE*, which limits the atmospheric emissions of SO_2, NO_x and particulates from large combustion facilities, investments have been made in combustion control systems at the thermal plants, both in Spain and the United Kingdom.

Emissions of oxides of nitrogen (NOx)

NO_x emissions (t)	2018	2017	2016
Generating plants	6,549	7,613[78]	12,934
Cogeneration	6,202	8,539	8,037
Total	**12,751**	**16,152**	**20,971**

Intensity of NO_x emissions (kg/MWh)	2018	2017	2016
Specific emissions from global mix	**0.085**	**0.113**	**0.140**

[77] These emissions are obtained either by direct measurement or through conversions of fuel consumption using emission factors from official sources.
[78] The reduction in 2016 is due to the closing of the Longannet thermal plant.

PUBLIC

Emissions of sulphur dioxide (SO_2)

Sulphur dioxide (SO_2) emissions (t)	2018	2017	2016
Generating plants	2,733	4,143	6,510
Cogeneration	782	1,249	578
Total	**3,515**	**5,392**	**7,088**

Intensity of SO_2 emissions (kg/MWh)	2018	2017	2016
Specific emissions from global mix	**0.023**	**0.038**	**0.047**

Emissions of particulates

Particulate emissions (t)	2018	2017	2016
Generating plants	745	1,114	1,067
Cogeneration	141	158	141
Total	**886**	**1,272**	**1,208**

Intensity of particulate emissions (kg/MWh)	2018	2017	2016
Specific emissions from global mix	**0.006**	**0.009**	**0.008**

Emissions of ozone-depleting substances

305-6

Ozone-depleting substances have a very limited presence within the Iberdrola group, and are located primarily in fire-extinguishing equipment (Halon) and some cooling systems (chlorofluorocarbons, CFCs). These systems and equipment are maintained in accordance with the provisions of applicable laws and regulations.

The only atmospheric emissions originating from these products would be those arising from potential losses, which are identified by the volumes used to recharge the equipment. Although Iberdrola's goal is to eliminate the presence thereof in its facilities, these substances continue to be used where their use is authorised and a better market substitute has not been found. Thus, 39.5 kg of CFC-11 equivalent was recharged in 2018, consisting of: 34.4 kg of CFC-11 equivalent in Spain and 5.1 kg in Mexico.

Emissions of mercury (Hg) and other compounds

The emission of mercury (Hg) during 2018 from the combustion of coal was 29.8 kg.

Furthermore, 335.03 t of volatile organic compounds (VOCs) were emitted in Spain, the United Kingdom, Mexico and the United States; and 4.30 kg of hazardous air pollutants (HAPs) were emitted in the United States.

PUBLIC

Rational use of water

GRI 303

Water is a basic and irreplaceable natural resource in many of Iberdrola's activities. The company's awareness of this dependency and of the risks arising from water shortages has led it to set itself the objective of ensuring an increasingly rational and sustainable use of this resource.

The main actions taken by the group for a more sustainable use of water are:

- Limiting the volume of withdrawal and consumption of inland water in all technologies.
- Establishing and controlling limits on ecological flows at the hydroelectric generation reservoirs.
- Continually improving processes at facilities to reduce consumption and impact.
- Avoiding withdrawal of water in water-stressed areas.
- Reusing and recycling water at facilities.
- Conducting awareness-raising campaigns to achieve a more efficient and responsible use of sanitary water by employees at offices.

Total water withdrawal by source

The following table breaks down the group's total water withdrawal by source:

303-1

Source of gross water withdrawal (hm^3)	2018	2017	2016
Surface water (sea, rivers, lakes, reservoirs, wetlands)	1,966	1,962	1,839
Groundwater	1	2	1
Rainwater directly withdrawn and stored	0	0	0
Purified wastewater	15	15	13
Municipal water supply or supply from other water companies	4	5	6
Total	**1,986**	**1,984**	**1,859**

Total water withdrawal is the sum of the various sources, and is obtained by direct measurement (flowmeters) or by estimating the performance of the water withdrawal pumps.

The 99.5 of total water withdrawn is used in cooling process and other auxiliary services of the generation plants. The rest of the water withdrawn (0.5%) is consumption in offices and other uses.

PUBLIC

The group's use of water is summarised in the following table:

Water use[79]	2018	2017	2016
Total water use (hm^3)	89	80	82
Water use/overall production (m^3/GWh)	610	597	573
Water use/overall sales (m^3/$k)	2.14	2.15	2.35
Water use/overall sales (m^3/€k)	2.53	2.56	2.79

The following shows the total intake and discharge of water at the thermal generation facilities (coal, combined cycle, nuclear and cogeneration) in 2018.

Water use in generation (hm^3)	Total thermal generation 2018
Withdrawal	
Withdrawal for standby process and services	12
Withdrawal for cooling	1,973
Discharge	
Evaporation of water used for cooling	80
Discharge into receptor environment [80]	1,897
Water use (withdrawal less discharge)[81]	**87**
Percentage of water returned	**96%**

After use in cooling and other auxiliary processes, 96% of the water withdrawn at thermal generation and cogeneration facilities returns to the receptor environment in a physical/chemical condition allowing it to be utilised by other users without affecting the natural environment. The other 4% has been consumed and/or retained in the various processes, or returned to the environment in the form of steam generated in the cooling systems of the thermal power plants.

The following table shows the different sources of withdrawal for cooling:

Source of withdrawal of cooling water	Gross water withdrawal (hm^3)[82] 2018	Gross water withdrawal (%) 2018
Sea and salt water	1,229	62%
Rivers and groundwater	336	17%
Lakes and reservoirs	395	20%
Purification of wastewater	9	1%
Total	**1,969**	**100%**

All water withdrawal is strictly regulated by government authorities, which assign permits and determine the maximum permissible volumes of withdrawal to ensure that there are no significant impacts.

[79] Use of water is defined as water withdrawn minus water discharged into the natural environment.
[80] The total discharge figure includes the return from cooling, the return of water used in processes, and rainwater collected at some thermal facilities without an independent storm sewer system.
[81] Withdrawal less discharge into the receptor environment is considered water use.
[82] Gross water withdrawal: total volume of gross water withdrawal for cooling.

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No withdrawals are made that significantly affect water resources or habitats relating to the water withdrawal points. The Iberdrola group does not have any plants located in areas considered to have water stress. As can be seen in the preceding table, 62% of the water withdrawn is salt-water or brackish water. These areas can be seen in the FAQ.

Water cycle in hydroelectric generation[83]

Water used for hydroelectric generation is not considered withdrawn and thus it is analysed separately. The table below shows net water used in hydroelectric generation in Spain, the United Kingdom and Brazil, defined as turbined water less pumped water.

Water use in hydroelectric generation (hm^3)	2018	2017	2016
Net water use	245,918[84]	49,824	101,368
Volume of pumped water	2,710	2,807	3,623
Annual increase of reservoir water	2,547	-1,179[85]	-1,941

Additional information, such as withdrawal locations and discharges from the thermal facilities, can be found at Water use.

Water reused

303-3

At the thermal plants with closed or semi-open cooling systems, water withdrawn is reused in the cooling towers an average of approximately three to five cycles per m^3 before being purged. The total volume of this reuse was approximately 2,253 hm^3 in 2018.

Water recycled

At some of the thermal generation plants in Spain, Mexico and the United States, waste water is also used in their cooling systems.

Use of waste water or recycled water in cooling systems		
	hm3	% of total country
Mexico	11,397	4%
United States	3,284	95%
Spain	79	0.01%

In addition, at some of ScottishPower's wind farms the control buildings have rooftop rainwater collectors and storage tanks to use the water.

[83] Hydroelectric generation in the United States, which is 1.15% of installed hydro capacity, is not included (information not available).
[84] 2018 was a year with high levels of precipitation and high hydroelectric generation in Spain.
[85] Substantially reduced net water volume due to low precipitation in Spain during 2017.

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Effluents management

GRI 306

Withdrawal, use and return to the environment is the water cycle needed for the generation of power at the thermal generation plants. The quality of this returned effluent is strictly controlled and is kept below the maximum acceptable values established by the government based on the characteristics of the withdrawal and discharge point (sea, reservoir or river).

Ensuring compliance with law and seeking methods to minimise the risk of spills is applicable to all of Iberdrola's facilities, including generating plants, renewable facilities and distribution substations.

Iberdrola has treatment plants and water quality measurement systems at its facilities that allow it to ensure a return to the environment (sea, reservoir or river) in the desired condition, reducing the risk of polluting discharges through the use of preventive control tools:

- Consolidated systems for reporting anomalies and incidents in order to establish plans to minimise spillage risks, by implementing predictive, preventive and corrective actions that ensure the proper condition of the water.
- Certificates in ISO 14001 and EMAS, as tools for continuous improvement.

The company also has emergency plans and protocols to ensure proper and rapid response in the event of discharges or spills with negative effects on the surrounding environment.

The thermal power-generation plants treat residual water before discharging it into the natural receptor environment.

- Water from the process undergoes physicochemical treatment, which includes the separation of hydrocarbons and temperature monitoring.
- Wastewater is treated in compact treatment systems with biological aerobic processes.
- Coal plants have a treatment system for slag from the plant, and a decantation/coagulation process that prevents the entry of particulate coal or coal in suspension into the receptor water.

After being treated, the process water and the sanitation wastewater are diluted with the water returned from the cooling system and are discharged into the receptor environment, with continuous monitoring of various parameters (temperature, turbidity, conductivity, etc.). An accredited organisation analyses these discharges and regularly reports to the government.

In Mexico, the combined cycles have separate and independent networks for industrial and sanitary water. The latter receive final treatment in biodigesters whereas industrial water is discharged into the natural environment or sent to municipal treatment plants or to the customer for treatment. The La Laguna power plant captures sanitation wastewater for all processes, for which reason the water discharged by this facility is of better quality in some parameters than the water that is collected.

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The data regarding the discharge of water into the environment for all facilities and offices is as follows:

306-1

Total water discharged (hm^3)	2018	2017	2016
Ocean	1,221	1,289	1,171
Rivers	325	249	274
Lakes and reservoirs	348	360	326
Purification network	6	6	5
Total	**1,900**	**1,904**	**1,776**

Water collection and discharges by the facilities during 2018 were within the limits indicated by the relevant comprehensive environmental permit for each facility, and no anomalies were detected that could materially affect water resources or related habitats.

306-5

The company's activities can even be beneficial for the ecosystem, as seen in the following examples:

- In Spain, above and beyond the Integrated Environmental Authorisation requirements, at times additional quality control analyses are conducted on water upstream from hydroelectric generation facilities, with a view to improving, where necessary, the quality of this water once it has passed through the plant and is returned to the environment (see disclosure 304-3).
- In Mexico the discharge from the Altamira III and IV plant has been re-directed over the Garrapatas estuary, which is allowing it to recover its salinity and thus the specific characteristics of this habitat and the species of fauna and flora adapted thereto. This estuary was losing its brackish nature due to salt-water entry being blocked after the construction of a pipeline, with the resulting desalination of the ecosystem.

For more information, see the Water Usage section of the corporate website.

PUBLIC

Waste management

Contribution to SDGs of the performance described by the indicators of this section
(according to SDG Compass www.sdgcompass.org)

GRI 306

Iberdrola's goal is to reduce the generation of waste for any process or activity (construction, operation, maintenance of facilities and work centres), and to prioritise recycling and the reuse thereof. Iberdrola commits to the concept of "circular economy" for all players within its activities, having joined the Circular Economy Pact of the Spanish Ministry for Ecological Transition (*Ministerio para la Transición Ecológica*) (MITECO).

The management of waste conforms to the following principles:

- Minimise the generation of waste at source.
- Maximise the reuse, recycling and recovery of waste.
- Promotion of awareness-raising campaigns regarding the minimisation of waste.
- Specific treatment and management of hazardous waste.

306-2

Two types of waste are differentiated within the Iberdrola group's activities:

- Waste arising during the energy production process.
- Waste generated at facilities and offices.

The various areas and businesses of the company perform activities to minimise waste and improve waste management, within the framework of the certified environmental management systems.

Waste from the production process

1. Fly ash and slag

In the generation process at coal plants, fly ash and slag are the most typical types of waste. The following table shows the production and reuse thereof:

Production and reuse of ash at Iberdrola's thermal power plants	2018	2017	2016
Ash produced (t)	92,440	174,523	256,399
Ash reused (t)	61,459	76,034	87,260
Percentage of product reused (%)	66	44	34

Reused ash was used for the production of cement as filling in infrastructure work and to produce compost.

PUBLIC

2. Nuclear waste

Further to its commitment to transparency of information for Stakeholders, Iberdrola provides additional information on its nuclear plants (*General Radioactive Waste Plan*, Enresa[86]). The processes of reduction, reuse, segregation, recycling and recovery is applied to radioactive waste in the safe management thereof.

Iberdrola's nuclear power plants are included within the *Environmental Radiological Monitoring Programme* of the Nuclear Safety Council of Spain, the purpose of which is to monitor the dispersion in the environment of controlled discharges from facilities and to determine and monitor radiological quality throughout the country[87].

Low-low level and low-medium level radioactive waste generated during 2018 is shown in the following table:

Hazardous waste generated at nuclear facilities 2018	Net output (GWh)	Low low level waste		Low medium level waste	
		Produced (m^3)	Produced (m^3 / GWh)	Produced (m^3)	Produced (m^3 / GWh)
Cofrentes nuclear plant	8,823	32	0.004	163	0.018
Partially-owned nuclear plants	14,713	255	0.017	311	0.021

As to high level waste, 99 spent fuel assemblies were generated during 2018.

Other waste

1. Hazardous waste

Hazardous waste that is generated is regularly delivered to authorised handlers for proper processing. Not all of the waste generated is deposited or recycled immediately, as there are temporary warehouses for hazardous waste at the facilities.

Hazardous waste generation (t)	2018	2017	2016
Produced	13,169	9,193	10,579
Deposited and/or incinerated	4,161	3,023	2,148
Recovered, recycled, reused	8,839	7,288	7,353

Hazardous waste produced includes PCBs, batteries, dissolvents, lighting, etc. The company has minimisation, reutilisation and recycling plans as well as awareness-raising campaigns to promote good environmental practices by its employees.

There are residual PCBs at the group's facilities in Spain, the United States and Brazil. However, no pyralene transformers with more than 500 ppm of PCBs remain. The company's policy is to eliminate equipment containing PCBs from its facilities. 168 t of oil with pyralene in Spain, 2 t in the United States and 135 t in Brazil were managed during 2018.

[86] Enresa: Empresa nacional de residuos radioactivos, S.A.

[87] For more information, see the technical report issued by the Nuclear Safety Council "Environmental radiological monitoring programmes. 2014 Results" ("Programas de vigilancia radiológica ambiental. Resultados 2014"), available at www.csn.es.

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2. Non-hazardous waste

Non hazardous waste generation (t)	2018	2017	2016
Produced[88]	549,146[89]	1,053,671	978,845
Deposited and/or incinerated	247,256	543,254	443,752
Recovered, recycled, reused	294,845	449,920	470,832

Non-hazardous waste produced includes inert waste from construction and demolition, electronic equipment, wood, metals, plastics, paper, etc. The company has minimisation, reutilisation and recycling plans as well as awareness-raising campaigns to promote good environmental practices by its employees.

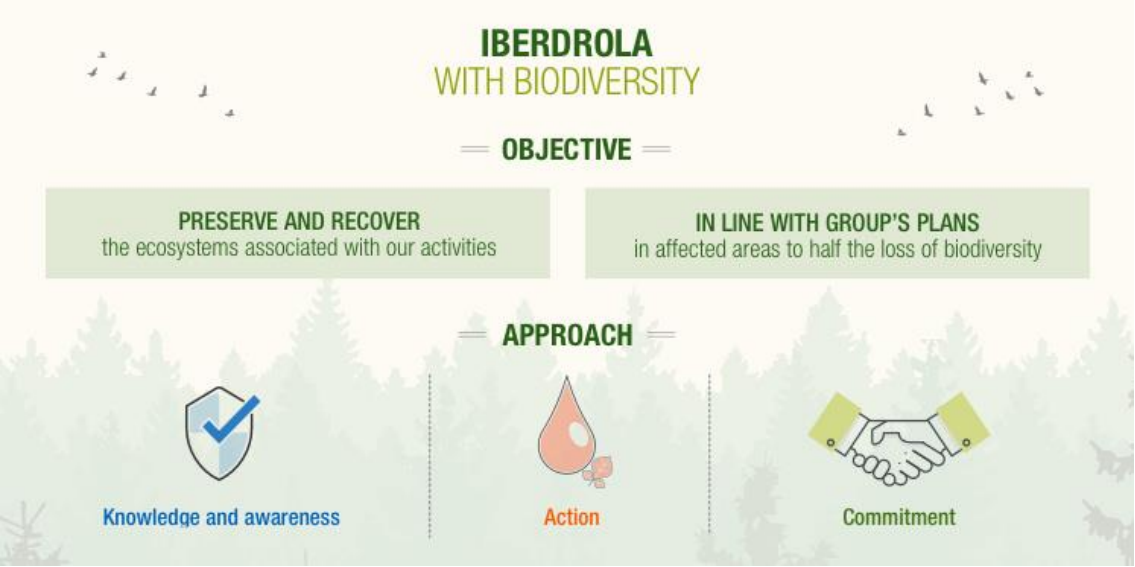
To promote the reuse of waste, Iberdrola has been working for several years on the optimisation of the management and recovery in value thereof, selling it to companies that put it back on the market after transforming it. During 2018, this exercise produced income of 2,449,758 euros from the sale of non-hazardous waste.

[88] Total value of waste produced, also includes the total value of waste managed.
[89] Due in large part to the reduction in inerts because of lower construction activity in the United Kingdom.

PUBLIC

Protection of biodiversity

Contribution to SDGs of the performance described by the indicators of this section



GRI 304

Biodiversity is a fundamental component of natural capital, and can be affected by the company's activities. The company considers it to be one of the fundamental assets for the Iberdrola group's creation of value, and a fundamental asset for all of its Stakeholders.

During their respective life cycles, generation, transmission, distribution and sales activities cause interactions with various ecosystems, landscapes and species. Therefore, these ecosystems occupy a leading role in the business strategy through the *Biodiversity Policy*, approved by the Board of Directors, defining four priority lines of action:

- Encouragement of the protection, preservation and sustainable use of natural capital.
- A preventive focus on the environmental impact evaluations of new projects and the adoption of best practices throughout the entire life cycle.
- Engagement with the Stakeholders, considering their needs and expectations regarding biodiversity for the integration thereof in action plans, and collaborating with research projects.
- Commitment to internal and external training, awareness-raising and communication regarding the significance of biodiversity.

PUBLIC

Various instruments are used to carry out these lines of action, including:

- *Biodiversity Policy*, applicable in all of the geographic areas in which the Iberdrola group does business, the basic principles of which are developed by various lines of action.
- *Stakeholder Relations Policy* and the company's Stakeholder Relations Model.
- *Corporate Environmental Footprint*, allowing for evaluation of the group's impact on biodiversity.
- The environmental management system of the group and its organisations, certified under ISO 14001 or EMAS, which implement biodiversity commitments in action plans establishing the monitoring and control thereof.
- Environmental committees with the environmental heads of the organisations dealing with biodiversity risks and opportunities.
- Biodiversity plans based on avoiding and/or mitigating impact, restoring natural capital (if required), assessing impacts, organising the relationship with affected Stakeholders, and awareness-raising.

Biodiversity plans		
Cross-sectional plan	Sub-Plan for understanding the environment.	
	Sub-Plan for communication.	
Principal plans	Reduction of direct impacts on biodiversity	Plan for direct protection of fauna.
		Plan for direct protection of flora.
		Plan for improvement of habitats.
	Reduction of indirect impacts on biodiversity	Plan for edaphic environment management.
		Plan for hydrological environment management.

102-11

Based on the precautionary principle, Iberdrola wagers on knowledge of the environment and encouragement of the restoration of natural capital, participating in various studies to understand the behaviour of species in the habitats in which it operates, like the "Bird Migration" project[90], the objective of which is to study the migratory movements of birds in Spain, and studies focused on the assessment of eco-systemic services, like the pilot *Cumbernauld Living Landscape Pilot Project: Natural Capital Assessment.*

There is also a collaboration on preparing a Practical Guide to Ecological Restoration[91], a methodological tool intended to guide decisions to encourage Ecological Restoration in actions to strengthen and recover natural capital.

Iberdrola also applies mitigation hierarchy (avoid, minimise, remediate and, as a last option, compensate) in the environmental impact assessments (EIAs) that it performs for new projects. These analyse alternatives, with a view to avoiding placing new infrastructure in protected areas or areas with a high biodiversity value, even if they are not officially protected. Before beginning the process, Iberdrola consults the various Stakeholders regarding new projects and

[90] Collaborative project of Fundación Iberdrola and Sociedad Española de Ornitología, SEO/BirdLife.
[91] Mola, I., Sopeña, A. and de Torre, R. (editors). 2018. Guía Práctica de Restauración Ecológica. Biodiversity Foundation of the Ministry for the Ecological Transition. Madrid. 77 pp (available at https://ieeb.fundacion-biodiversidad.es/ content/guia-practica-de-restauracion-ecologica)

incorporates best construction practices, going beyond applicable legal requirements in each case. Afterwards, and during construction, Iberdrola continues to work together with the Stakeholders, seeking for the environmental impact to be as low as possible, and restoring the affected areas.

Iberdrola identifies and evaluates the potential impacts of new projects in this way, through the EIA processes. The following links show some examples in Spain, SP Networks, SP Renewables and Avangrid.

304-2

The following table shows the actions that might have more significant impacts during the various phases of a project:

	Actions during the phases of a facility's life cycle
Construction phase	Entry of vehicles and machinery.
	Opening of pathways and changes in vegetation.
	Prolonged human presence (which temporarily affects the behaviour of species of fauna, and is generally reversible).
	Changes in landscape.
Operation phase	Emissions.
	Changes in the natural system of rivers and barrier effect of hydroelectric developments (affecting the ecosystems and habitat of certain species).
	Animal mortality due to collisions and electrocution.
	Changes in vegetation to maintain power line corridors, etc.
	Discharges and spills.
Decommissioning phase	Use of machinery and vehicles to remove and demolish existing facilities.
	Prolonged human presence (which temporarily affects the behaviour of species of fauna, and is generally reversible).

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Based on these actions, we can single out a number of significant potential effects on biodiversity, arising from the activities, products and services of the group:

Potential impacts	
General impact	Loss of habitat and species.
	Increase in greenhouse gases and climate change.
	Pollution of the atmospheric, edaphic and/or aquatic environment.
Impact on avifauna	Electrocutions.
	Collisions.
Impact on terrestrial fauna	Electrocution, trapping, etc.
Impact on ichthyofauna	Changes in water quality.
	Discharges/spills into hydrological environment.
Impact on flora	Production and spreading of fires.
	Deterioration in the edaphic environment.

If significant impacts are identified during the evaluation process, the project is modified to the extent possible, and the best available techniques and any measures identified as necessary are employed to correct and minimise these impacts. Where full avoidance or mitigation is not possible, remedial measures are implemented.

EU13

The following table shows the principle activities in this regard during 2018:

Country	Technology	Actions	Results
United Kingdom	North Wales Wind Farms Connection Project	The planting of 13,231 m^2 of forests and brushwood and planting of 8,970 m^2 of brushwood is proposed. A total of approximately 7,993 m^2 would be left for natural regeneration. This planting will be monitored for a period of 5 years.	North Wales Wildlife Trust has been designated to make the more than £100,000 in environmental improvements in the areas of the North Wales Wind Farms Connection.
	Wind farms	Continued management of the Habitat Management Plans, managing more than 93 km^2 to date, with the monitoring of species like the hen harrier (*Circus cyaneus*), blackcock (*Tetrao tetrix*) and crested newt *(Triturus cristatus).*	Improvement of the conditions of the offset habitats. Example of management serving as a guide for other projects.

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Country	Technology	Actions	Results
United States	Power lines and substations	The CCTP project resulted in the conversion of 0.26 acres of forest wetlands into bush and the permanent loss of 0,096 acres of wetland for the substation. To mitigate these impacts, 0.8 acres of forest wetland improvements, 0.16 acres of improvement to 160 linear feet and improvement to 1.23 acres of highland areas. Preservation of 2.19-acre mitigation area.	These improvements were completed at the end of 2018, consisting mainly of plantings. Annual reports are required to document the success of the improvements for 5 years.
		12.6 acres of wetlands were created within a 36-acre parcel to offset the elimination of portions of forest wetlands. General mitigation index of 1 : 1.5 for the cleaning of forest wetlands in NY.	The recently created wetland has areas with ponds, shrubbery and tree plantings. Annual reports are required to document the success of the improvements for 5 years.
		The disturbed areas in the RARP transmission line project will be restored and planted. The additional mitigation for this project will include the conversion of forest wetlands and <1 acre of permanent fill in a wetland area.	Mitigation work will be performed in 2019.
	Wind farms	Continued monitoring and maintenance of habitats (grasslands, meadows, wetlands, deserts, etc.) within and around the area thereof.	Improvement of adjacent habitats and protection of associated fauna.
Brazil	Baguari (hydroelectric)	Recovery of 1.77 km^2 of forestry commenced in September 2018	Improvement of adjacent habitats, strengthening of soil absorption capacity and reduction of risk of losses due to erosion.
	Corumbá (hydroelectric)	With the reforestation of 295,000 trees in 2018, there has been a total of approximately 1,300,000 trees since it began.	One also sees a significant improvement in the quality of the soil, in the physical and chemical structure, increasing the rainwater absorption ability and reduction in erosion and compacted soil layers.
	Dardanelos (hydroelectric)	Strengthening of natural recovery in 5 ha and reforestation of the area around the plant.	Improvement of adjacent habitats, strengthening of soil absorption capacity and reduction of risk of losses due to erosion.
	Baixo Iguacu (hydroelectric)	192.1 ha will be reforested to establish connectivity with the forest areas of Iguaçú National Park (*Parque Nacional del Iguazú*) (PNI) with the areas to be expropriated and reforested in the Direct Influence Area (DIA) of the Baixo Iguaçu HPP, covering the biodiversity corridor.	Creating an ecological corridor to connect the remaining existing forests in the Area of Influence of the site of the National Park at Iguaçú (PNI) together with the actions described in the Biodiversity Corridor Consolidation Programme at the Baixo Iguaçu plant.

PUBLIC

Country	Technology	Actions	Results
	Power lines	Reforestation of degraded areas with plants at various stages of growth. There will be compensatory reforestation with native species from the region in accordance with the environmental permits for the installation and operation of transmission lines (69 kV to 138 kV), substations (69 kV to 138 kV) and distribution networks (13.8 kV to 34.5 kV). 70,000 plants were replanted in 2018, out of the 168,000 that have been planted since 2017.	There is constant natural regeneration as a result of maintenance work connected to the presence of fragments of native vegetation on the banks of the Aguapeí river, factors that favour the recovery of a large number of native species.

304-1

Iberdrola currently has group infrastructure in protected areas or areas with great biodiversity value, most of which was built prior to such declarations of protection by the government authorities.

Facility	Location with respect to protected area	Affected surface area/length	Type of protection[92]
Spain			
Reservoirs	Inside	30,758 ha	Biosphere reserves, Ramsar wetlands, Nature 2000 Network, national parks and nature parks.
Power lines	Inside	19,314 km	Nature 2000 Network, Ramsar wetlands, National Parks, Natural Parks and Biosphere Reserves.
Substations	Inside	144 units	Nature 2000 Network, Ramsar wetlands, National Parks, Natural Parks and Biosphere Reserves.
Transformer centres	Inside	8,793 units	Nature 2000 Network, Ramsar wetlands, National Parks, Natural Parks and Biosphere Reserves.
Wind farms	Inside	374 ha	Nature 2000 Network
United Kingdom			
Power lines	Inside	3,677 km	NSA, SPA, SAC, Ramsar, NNR, SSSI.
Substations	Inside	367 units	NSA, SPA, SAC, Ramsar, NNR, SSSI.

[92] Names of principal protected areas:
SPA: Special Protection Area for birds, pursuant to the *EC Birds Directive*.
SCI: Site of Community Importance, pursuant to the *EC Habitats Directive*.
SAC: Special Area of Conservation, pursuant to the *EC Habitats Directive*.
Ramsar: Wetlands of international importance, pursuant to the treaty signed in Ramsar.
SSSI: Site of Special Scientific Interest (UK).
NSA: National Scenic Areas (UK).
NNR: National Nature Reserve (UK).

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Facility	Location with respect to protected area	Affected surface area/length	Type of protection[92]
Transformer centres	Inside	8,608 units	NSA, SPA, SAC, Ramsar, NNR, SSSI.
Wind farms	Adjacent	3 ha	Nature 2000 Network and SAC, SSSI.
Wind farms	Partially inside	9,321 ha	Nature 2000 Network and SAC, SSSI.
United States			
Wind farms	Inside or nearby	0	Protected areas designated by each state, which may be Biosphere Reserves, forests, national parks or national wildlife refuges, and those with high ecological value even though they may not have the same level of protection.
Power lines	Partially inside	384 km	
Brazil			
Power lines	Inside	1,881 km	Environmental protection areas.
Substations	Inside	19 units	Environmental protection areas.
Transformer centres	Inside	4,388 units	Environmental protection areas.
Hydroelectric plants	Inside or nearby	293 ha	Areas protected by Brazilian law.
Mexico			
Generating plant	Adjacent	1 production centre	Environmental protection areas.
Wind farms	Adjacent	1 wind farm	Environmental protection areas.
Greece			
Wind farms	Inside	15.64	Nature 2000 Network.
Hungary			
Wind farms	near	1 wind farm	Near Nature 2000 Network areas.
Portugal			
Wind farms	Inside	1 wind farm	Nature 2000 Network area and Natural Park.
Romania			
Wind farms	Near	1 wind farm	Near Nature 2000 Network areas.

Iberdrola identifies threatened species included in the UICN Red List and national and regional lists of the areas in which it does business through its environmental management systems and/or its monitoring programmes.

304-4

IUCN Red List Classification	No. of species
Critically endangered (CR)	18
Endangered (EN)	74
Vulnerable (VU)	173
Near threatened (NT)	48
Least concern (LC)	247
Not on UICN List	32

PUBLIC

Habitats protected or restored

304-3

Based on the needs of each facility and during the life cycle thereof, Iberdrola carries out the following:

- Flora and fauna monitoring (especially of protected or vulnerable species).
- Forest treatments.
- Forestry restoration with indigenous plants.
- Landscape integration and accommodation, etc.

The various activities commenced in 2018 or prior years and that have continued during this financial year are shown below:

Spain:

Project/ Technology	Actions	Objectives
Power lines	Within the ALETEO project, the goal of which is to reduce the risk of damage to avifauna from pylons in protection zones, 4,127 pylons have been corrected and 6,659 are being adjusted.	Reduce the risk of damage to avifauna
	Performance of 132 environmental actions, before and during the construction of substations and power lines (restoration and accommodation of terrain, protection of vegetation, avifauna and the landscape, control of invasive species, training on fires and spills, etc.).	Reduce impact on biodiversity and ecosystem services.
	Performance of 1,152 preventive actions to protect fauna (modification and improvement of supporting services).	Reduce impact on fauna.
	Performance of 1,610 actions to improve the network to protect vegetation.	Reduce impact on flora.
	Management of 34.4 km^2 of vegetation-covered surface to reduce the risk of fire at facilities.	
Hydroelectric plants	Limnological control of the most eutrophicated reservoirs in the Douro and Tagus basins (pollutant loads caused by agents unrelated to Iberdrola that travel along these rivers before they flow into the reservoirs).	Prevent potential impacts on fauna located downriver of reservoirs.
	Ensure turbined waters contain the minimum amounts of dissolved oxygen essential for aquatic life.	Avoid levels that are harmful to ichthyofauna.
	Performance of activities to prevent pollution, improve the environment and recover/restore the natural environment around the plants, including: restoring the ecological flow; environmental adjustment of canals; and environmental recovery around the town of la Rasa (dismantling of buildings and recovery of land).	Reduce impact on biodiversity and ecosystem services.
	Performance of studies on feasibility of devices for ichthyofauna to pass through the Doña Loba, San Lázar, Cernado, Vozqueimado, Casteligo and Parafita waterwheels.	Reduce impacts and avoid levels that are harmful to ichthyofauna.

PUBLIC

Project/ Technology	Actions	Objectives
	Replacement of auxiliary services transformers (with PCB-contaminated oil) with dry transformers.	Prevention of pollution and potential effects on flora and fauna.
	Maintenance and conformance of spill containment systems to prevent environmental pollution at Esla plant.	
Thermal plants	Collaboration of the Escombreras Combined Cycle plant with the "El Valle" Wildlife Recovery Centre in recovering birds like the bittern and kestrel for treatment and return to their natural habitat after any physical or psychic problems are treated.	Reduce impact on fauna.
	Perform an evaluation study of the ecological status of the Majaceite river in the area of the Arcos de la Frontera combined cycle plant using biological, hydro-morphological and physicochemical quality indicators.	Knowledge of the surroundings for proper action regarding the habitat.
	Performance of activities to prevent pollution, improve the environment and recover/restore the natural environment at the Lada Plant: measures to minimise outside noise, channel storm waters, research contaminated soil.	Prevention of pollution and recovery of the environment

United Kingdom:

Project/ Technology	Actions	Objectives
Thermal and gas storage plants	Implementation UK Biodiversity Action Plans (UK BAP) at each facility. E.g.: Create nesting, shelter and feeding habitat for native species. Provide habitat for nesting bird populations. Communication, enabling and monitoring of ecological activity. (More information is available at ScottishPower Wholesale Energy Markets and at www.iberdrola.com).	Recover and promote regeneration of natural habitats and of the flora and fauna characteristic of facilities' environments.
Wind farms	62 activities in 20 areas included in the *Habitat Management Plan*, mainly consisting of the monitoring of birds and follow-up on reforested areas, and 39 management activities like restoration, removal of invasive species, management of vegetation by grazing, etc.	Recover and improve terrain affected by construction activities.
		Reduce impact on fauna.
Galloway (hydroelectric)	Continued monitoring by means of the installation of antennae at the Loch Doon Vaki fishing port.	Maintenance of the two fish pathways at the Tongland, Earlstoun, Loch Doon and Carsfad reservoirs allows fish like Atlantic Salmon to cross potential barriers to their migration posed by the plan's reservoirs.
	Management of vegetation around the substation and control and elimination of the invasive *Fallopia japónica* species.	Improvement of adjacent habitats.

PUBLIC

United States:

Project/ Technology	Actions	Objectives
Power lines	Water treatments in collaboration with land owners in two river basins, treating runoff from impermeable areas in the basins prior to its entry into the river.	Improve water quality and improve the aquatic habitat of the riverbank.
	Conditioning of power lines.	Minimisation of the impact on the nesting and reproductive processes of the osprey.
	Acquiring wetlands in financial collaboration with the organisation Ducks Unlimited, via financial collaboration, deriving from the *Aubern Transmission Project.*	Improve quality of the aquatic habitat and stimulate species.
Wind farms	Recover natural habitats and foster their regeneration, avoid the displacement of indigenous species, monitor species, raise awareness and train local communities. 20 monitoring and mitigation activities were carried out in 2018.	Reduce impact on flora.
		Raise social awareness of the area's rich biodiversity

Brazil:

Project/ Technology	Actions	Objectives
Hydroelectric plants	Reforestation of affected areas.	Ensure the success of programmes to recover and offset impact on Permanent Conservation Areas (APPs) and degraded areas (quarries, tips).
	Continuation of environmental biodiversity conservation programmes based on the impacts of plant operation: monitoring of fauna (ichthyofauna, herpetofauna, avifauna, mammalian fauna, entomofauna, etc.); monitoring of flora in reforested areas; water quality control; monitoring of erosive processes, etc.	

Mexico:

Project/ Technology	Actions	Objectives
Thermal plants	Development of the *Garrapatas Estuary Rescue Project*.	Improve the habitat, fostering indigenous species, and raise social awareness of the area's rich biodiversity.
	Development of the *Feline Support Project in the Altamira region*.	
Wind farms	Follow-up of reforesting carried out during construction of the La Ventosa wind farm.	Ensure the success of reforesting work.
	Commencement of reforestation of an area covering approximately 25 ha in the area of the La Venta III power line.	Improve the habitat.
	Commencement of reforestation of an area covering approximately 19 ha in the area of the La Venta III wind farm.	Improve the habitat.

For more information regarding the biodiversity protection measures taken by the Iberdrola group, see Iberdrola and biodiversity, which sets out the management approach, strategies and progress in the activities conducted by the various businesses and regions in which the company has a presence. Also see Iberdrola's *Biodiversity Report 2014-2017*.

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Environmental safety

Contribution to SDGs of the performance described by the indicators of this section

(according to SDG Compass www.sdgcompass.org)

Disaster/emergency planning and response

As in any industrial activity, situations of risk to the facilities or the public at large may occur at power generation plants and in electricity grids, either because of an accident or due to loss of electricity supply.

Where this occurs, the subsidiaries of the Iberdrola group and the companies in which the company has an interest have put contingency plans, procedures and other mechanisms in place in order to try to minimise the consequences. Such measures include preventive measures that have been jointly established with local authorities, as well as training both for its own and subcontracted staff and ongoing education, and regular safety drills with on-site audits.

The Wholesale and Retail Business and the Renewables Business have various documented emergency management procedures in place at its facilities: for example, in Spain and Mexico there is an *Emergency Response Organisation* (*Organización de respuesta ante emergencias*) (*ORE*) procedure, which involves personnel of all levels and is put into operation in the event of emergencies that jeopardise the assets of the company or its employees. In the United Kingdom, ScottishPower has a Business Continuity Management System for the management and minimisation of emergency situations, which is externally certified and audited under ISO 22301, and has implemented a *Black Start* plan coordinated with the Wholesale and Retail businesses to restore ScottishPower's transmission area. In the United States and Canada, each facility has a Prevention, Control and Countermeasures Plan, which includes preventive and reactive actions, and also has an Emergency Response Plan. There are also emergency plans at the generation plants in Brazil.

In addition, there may be specific plans based on each technology; for example, hydroelectric generation facilities also have an internal process to monitor a Reservoir Emergency Plan implemented at all of the Cuenca Units, which optimises the safety of people and of the facilities in the event of a serious rupture or breakdown of the dam and is known by civil protection authorities, municipalities and other government organisations.

Nuclear power plants have specific emergency plans in order to ensure that emergency systems are operational and to guarantee the safety of employees and the public, which include both an *External Emergency Plan* (*Plan de emergencia exterior*), for which the governmental authorities are responsible (called the Nuclear Emergency Plan (*Plan de Emergencia Nuclear*) (PEN) of the Province in which each plant is located), and an Internal Emergency Plan (*Plan de emergencia interior*) (PEI), compliance with which is the responsibility of the companies that own the power plant. The PEI is known by the public authorities and municipalities of the region, which participate in its adoption and verify its effectiveness through annual emergency drills supervised by the Nuclear Safety Council (*Consejo de Seguridad Nuclear*) (CSN), as well as tests and internal exercises performed at the facility itself. The Basic Nuclear Emergency Plan

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(*Plan Básico de Emergencia Nuclear*) (PLABEN) provides for an interface to coordinate both Emergency Plans.

Another example of emergency management is the cooperation of the company with the authorities responsible for the operation of the national electricity grids and of connections with other countries in order to deal with the possibility of a global supply failure. System operators are responsible for guaranteeing the reliable and safe operation thereof and for restoring service following severe incidents in a controlled manner and within the shortest possible time. To that end, they draw up detailed plans and procedures that determine the responsibilities and guidelines for action by geographic areas. Concurrently therewith, Iberdrola conducts tests at its facilities to ensure that the main generation centres can resume production in the event of a power grid failure.

The Networks Business also has various management plans and procedures to facilitate the restoration of electric service in the case of a major outage, such as the electric emergency plans of the distribution subsidiaries of Avangrid in the United States, like CMP's Service Restoration Plan, for which drills are performed every year. Also noteworthy are the operations centres of the distributors in Brazil, which standardise safety in operations and the procedures to restore supply and for the maintenance of the electricity system. Monitoring the system in real time controls the conditions of the electric system and responds to scheduled and emergency requests for service, ensuring the restoration of service as quickly as possible, while respecting safety and quality. In the United Kingdom, ScottishPower actively communicates with vulnerable groups during power outages to ensure that they are provided the assistance that may be required.

Significant spills

306-3

Iberdrola has an Environmental Management System, and prevention is one of its key objectives. To this end, multiple preventive measures have been implemented in all of the group's businesses. These measures are set out in organisational and technical manuals. Plans to minimise risk have been established in the group's various businesses (emergency guides and procedures, regular drills, etc.), as have reporting and environmental incident management systems; these are used to prevent and to control accidental spills and to inform the relevant authorities whenever necessary.

One example of safety and containment measures taken to mitigate damage are those implemented in Spain, where 889 preventive actions were performed in 2018 to prevent and mitigate the impact of potential spills. These included the construction of 19 oil collection reservoirs in case of a major discharge at the substations and 870 trenches/oil collection trays at transformer stations.

Of all the leaks and spills recorded within the Iberdrola group in 2018, 23 incidents were significant[93], with a total spill volume of 16.4 m^3. All cases were resolved in a satisfactory manner thanks to the emergency response team; the contaminated area was cleaned with appropriate management of any waste. In the case of minor accidents or incidents that did not have permanent environmental impacts on the surroundings, it was not necessary to adopt corrective or compensatory measures.

[93] The term "significant spill" means a spill that causes damage to the external surroundings of the facility or a significant risk thereof and that must be reported to the governmental authorities. Small spills may occur within the facilities during the operation and maintenance thereof, which are properly handled and reported as required.

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Environmental compliance

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Iberdrola has a Global Environmental Management System that encompasses all of the partial certifications of each of the businesses that make up the group, reaching 80% of the group's production. Certified environmental management systems identify the legal requirements applicable to the activities carried out by the group and establish an assessment of compliance therewith for purposes of assurance. Below in disclosure 307-1 of this report, supplemental information is provided regarding ongoing environmental legal proceedings directed at companies managed directly by Iberdrola.

Incidents relating to the environment during 2018 involved the following fines and monetary sanctions:

307-1

Fines relating to the environment (€)	2018	2017	2016
Total amount of fines imposed	**7,538,539**	**3,881,246**	**2,375,559**

Of the total amount of fines imposed during the financial year, 6,510,236 euros were in Spain, 964.816 euros in Brazil and 63,486 euros in the United States. In Spain, 63% of the total amount were for three sanctions cases for the loss of three specimens of protected species in Spain. In Brazil, they were due to a breach of environmental conditions affecting ichthyofauna and improper pruning.

307-1

Non monetary sanctions, sanction proceedings and arbitrations (no.)	2018	2017	2016
Non-monetary sanctions	41	14	2
Proceedings commenced	212[94]	57	86
Cases being resolved through arbitration or similar mechanisms	0	0	9

All non-monetary sanctions correspond to Brazil. The proceedings correspond to the network businesses in Spain and Brazil.

[94] Of the 212 proceedings commenced, 104 are in Spain. 82% of them are proceedings commenced without financial penalties, mainly in relation to actions to modify electric lines.

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II.4. Innovation, Digitalization and Quality for our Customers

- Products and services
- Digital transformation
- Innovation projects

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Products and services

Contribution to SDGs of the performance described by the indicators of this section

(according to SDG Compass www.sdgcompass.org)

Iberdrola operates an organisational structure in relation to its customers in which:

- the Networks Business manages the activities of transmission and distribution in Spain, the United Kingdom, the United States and Brazil, and the regulated sale of energy in the United States and Brazil and any other regulated activity that the group carries out in these four countries.
- the Wholesale and Retail Business manages non-regulated activities in Spain, the United Kingdom, Brazil, Mexico and continental Europe.
- for its part, the Renewables Business manages long-term power purchase agreements (PPAs) with large companies in the United States.

In the liberalised retail markets, Iberdrola mainly provides its customers with two products: electricity and natural gas, trying to ensure competitive supply, operational and service excellence, continuous improvement of efficiency in operations, together with safety and respect for the environment. Although the Iberdrola group engages in other activities (see “Main products and services” section), due to the nature and scope thereof, these activities are insignificant in connection with customers for purposes of the information presented in this report.

As a whole, the distribution companies of the group manage a total of 31.6 million energy supply points, of which 30.6 million correspond to electric power and 1.0 million to gas supply. This information is described in this report by type of supply point in the “Key figures” section.

Customer satisfaction

Iberdrola has various mechanisms to measure customer satisfaction levels and to gather their opinions, verify compliance with its quality standards within the customer service and sales channels, and implement suggestions for improvement. The most significant studies by country are:

- In Spain, in the Wholesale and Retail business, there are various mechanisms to measure the satisfaction level of users, including the *Voice of the Customer Study.* On a quarterly basis, it generally measures satisfaction with the service received by the customer and offers detailed information regarding attributes like agility, training and treatment within the channels, clarity of the invoice, management of claims, quality of supply, price competitiveness and electronic billing, whether for large customers, companies, small businesses or residential customers. Overall satisfaction in 2018

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exceeded 7 out of 10 for the fourth consecutive time, with large customers being the segment most satisfied with Iberdrola.

For the most part, the studies use the *NPS (Net Promoter Score) Index*, which evaluates the recommendation that Iberdrola's customers would make on a scale of 0 to 10. This index has increased from 25.6 in 2017 to 27 in the third quarter of 2018.

There is also a Gas Maintenance Service Satisfaction Survey, conducted on a yearly basis, with 90% of customers satisfied (2 percentage points more than in 2017) and a Study on satisfaction with the Electrical Emergencies and Home Electric Protection Service, with an average satisfaction with the service of 8.5 and 8.4, respectively.

A Voice of the Customer Measurement Programme was also implemented in 2018 allowing for the centralisation of satisfaction surveys, and collecting unstructured information thanks to text analytics. All of the above allows for more agile detection of the opinion of customers and implementation of improvements.

Iberdrola engages in two types of studies with respect to the Networks Business: for new supplies, reaching 3.3 out of 5 in 2018, and for retailers of electric power and customers with direct rates: in this case the results for 2018 are at 3.7 for retailers and 3.8 for direct rates on a scale of 5.

- In the United Kingdom, customer satisfaction is measured by a series of internal and external studies within the *Customer Insight* department. These analyses include various satisfaction surveys that vary in frequency, from monthly to annually.

  At the external level, the key comparative studies measuring the satisfaction of ScottishPower's customers as compared to its competitors are uSwitch, Which? (with annual surveys) and UK-CSI, which is published twice per year. These studies analyse specific areas like customer billing, campaign follow-up and complaints. ScottishPower obtained a general customer satisfaction rate of 70.6% (compared to 69.4% in 2017) in the *uSwitch*, from among more than 17,000 customers surveyed. UK-CSI places the British subsidiary as one of the 6 companies with the most improvement during the year, obtaining 70.5% in 2018 compared to 68% the year before.

  The most significant internal analysis is *Pulse,* which is performed monthly and measures confidence, loyalty, ease of use, value, etc., showing an overall satisfaction level of 49 out of 100. The result is along the same line as other customer satisfaction studies like "Which?" Measures are being applied to improve the processing of customer complaints. At the internal level, there is also *YouGov*, which is used to compare the various competitors in terms of brand reputation and intent to purchase.

- In the United States, the subsidiaries of Avangrid measure service perception and customer satisfaction, which are evaluated through telephone surveys on a weekly basis. The companies of Avangrid obtained the following results in 2018: 90% (NYSEG), 91% (RGE), 88% (CMP), 96% (UI), 89% (SCG) and 85% (CNG). All of the distributors have fixed customer service quality standards, although only NYSEG and RG&E have regulatory targets, which are 89.5% and 88%, respectively.

- There are two types of annual satisfaction surveys in Brazil. The Brazilian Association of Electric Power Distributors (*Associação Brasileira de Distribuidores de Energia Elétrica*) (ABRADEE), in association with Fundación Instituto de Investigaciones Económicas (FIPE), is responsible for classifying and giving awards to companies

based on an evaluation of performance in the following areas: operational excellence, economic/financial management, customer assessment, social responsibility and management quality. The Perceived Quality Satisfaction Index (Índice de Satisfação da Qualidade Percebida) (ISQP) of the services is obtained through evaluations by the customer via surveys performed by Instituto Innovare, which evaluates the quality of the services provided, classified into supply of energy, information and communication, energy bill, customer service, image, etc., and the results obtained from the ISQP in 2018 are 63.2% (Celpe), 73.7% (Coelba), 81.1% (Cosern) and 78.7% (Elektro).

As to research by the National Electric Energy Agency (ANEEL), which measures the Customer Satisfaction index (IASC), the measurement of the attributes of perceived quality, perceived value, satisfaction, trust and loyalty have not yet been disclosed by the agency.

Supply quality

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Improvement in the quality of the service is an essential element of electric supply and one of the main goals of Iberdrola's business activity. A quality system allows for the achievement of objectives linked to continuous improvement. The implementation thereof also involves strict internal and external audit procedures, which ensure compliance with the established quality standards.

Iberdrola monitors service quality in the various countries. However, the measures in each company are taken according to different rules, following the respective legal requirements or customs, for which reason the company does not currently have a homogeneous measure of service quality in the various countries in which it operates. The figures are as follows:

- Installed Capacity Equivalent Interrupt Number (Spanish acronym "NIEPI") is used in Spain.

NIEPI	2018	2017	2016
Spain	0.91	1.14	1.04

- Customer interruptions per 100 connected customers ("CI") is used in the United Kingdom.

CI	2018	2017	2016
United Kingdom	43.4	36.0	42.7

- System average interruptions frequency index ("SAIFI") is used in the United States.

SAIFI	2018	2017	2016
United States	1.22	1.15	1.15

- Equivalent duration of interruption by consumer unit (Portuguese acronym "FEC") is used in Brazil.

FEC	2018	2017	2016
Brazil	5.81	7.15	7.44

Throughout this "Innovation, digitalization and quality for our customers" chapter, additional information is offered regarding the development of smart grids to improve the quality of electric supply, among other things.

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Similarly to the preceding section, the figures for average duration of electric supply outages are as follows:

- Installed Capacity Equivalent Interrupt Time (Spanish acronym "TIEPI") is used in Spain.

TIEPI	2018	2017	2016
Spain	44.6 min	52.7 min	54.0 min

It should be noted that the 2018 figure is the best historical record for the company in the country.

- Customer minutes lost per connected customers ("CML") is used in the United Kingdom.

CML	2018	2017	2016
United Kingdom	35.4 min	31.0 min	33.8 min

- Customer average interruption duration index ("CAIDI") is used in the United States.

CAIDI	2018	2017	2016
United States	2.07 h	1.91 h	1.84 h

- Equivalent duration of interruption by consumer unit (Portuguese acronym "DEC") is used in Brazil.

DEC	2018	2017	2016
Brazil	12.24 h	15.96 h	17.14 h

Marketing communications

GRI 417

Iberdrola observes the laws and abides by the regulations governing its advertising and marketing communications, and adopts mechanisms and voluntary codes that cause such communications to be transparent and truthful, and the *Code of Ethics* also applies in this area for all employees regardless of their area of responsibility.

In Spain, Iberdrola is a member of the Association for Commercial Self-Regulation (*Asociación para la Autorregulación Comercial*) (Autocontrol), the Spanish Association for Digital Economy (*Asociación Española de la Economía Digital*) (Adigital), the Spanish Advertisers' Association (*Asociación Española de Anunciantes*) (AEA) and the Marketing Association of Spain (*Asociación de Marketing de España*) (MKT), and has subscribed to their respective codes of ethical conduct, which entails the assumption of a commitment to offer responsible advertising to society that complies with the codes of conduct, and accepts the decisions of an Advertising Jury (*Jurado de la Publicidad*) regarding complaints that may be filed by consumers or competitors with such body.

ScottishPower in the United Kingdom complies with all advertising rules and also follows a structured internal approval procedure for all advertisements, which includes legal aspects, prices, product development and marketing. All advertisements are approved by the legal department, which compares them to current advertising practices codes of the Advertising Standards Association to ensure compliance therewith. They also conform to the conditions of

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supply license SLC 25 and SLC 7B for a more simple, clear and just market for domestic consumers and microentrepreneurs, treating all customers equally.

The companies of Neoenergia in Brazil follow the basic rules defined by advertising ethics in accordance with the principles of responsible advertising of the National Council on Advertising Self-Regulation (*CONAR-Conselho Nacional de Autorregulamentação Publicitária*) (Conar Statute), such as to not produce deceitful or abusive advertising that cause distress to customers or companies or that accentuate social or racial differences. They also follow the Rule on Management of Institutional, Commercial and Internal Communications and Relations, which give guidance regarding eternal communications and Advertising and the Corporate Policy on Social Media Usage.

The following table sets forth the incidents that occurred due to non-compliance regarding marketing, advertising, promotion and sponsorship during financial year 2018, when 5 incidents occurred in Spain resulting in a fine.

417-3

Incidents of non compliance concerning marketing, advertising, promotion and sponsorship (no.)	2018	2017	2016
Resulting in a fine	5	0	2
Resulting in a warning	0	0	0
Relating to voluntary codes	0	0	0
Total incidents	**5**	**0**	**2**

Information on and labelling of electricity sold

GRI 417

417-1

As regards labelling, in Spain Iberdrola informs its customers about the source of the energy sold by the retail supplier and the associated environmental impact thereof by means of a label included in the electricity bills and in advertising to customers. This information is presented using standard model images and labels established by the National Markets and Competition Commission (*Comisión Nacional de los Mercados y la Competencia*) (CNMC), which also provides a breakdown of the mix of national production technologies to compare the average national percentages with those corresponding to the energy sold by the company together with the company's energy mix. The CNMC has launched a System for Guarantees of Origin of energy produced in order to create the labels and images. This information is also available in the electricity labelling section of the retail website.

In the United Kingdom, ScottishPower reports the origin of its energy each year and the environmental impact thereof. New customers receive this information as part of their *Welcome Cycle* communications, and existing customers receive this information in the *Important Information* section of each invoice or notice, in accordance with the guarantees of origin rules established by Ofgem. All information about the label is also available in the Where we get our energy section of the website.

There is no obligation to label electricity in the United States or Brazil. Gas is not currently labelled in the countries in which the company sells this product.

Finally, such additional information as may be of help for consumers to make a more rational, efficient and safe use of these products is set forth at the beginning of the "Digital transformation" section.

The following table sets forth the incidents related to information and labelling that occurred during financial year 2018, during which none have occurred.

417-2

Incidents relating to information and labelling (no.)	2018	2017	2016
Resulting in a fine	0	2	8
Resulting in a warning	0	0	0
Relating to voluntary codes	0	0	0
Total incidents	**0**	**2**	**8**

Health and safety of customers and of the general population

GRI 416

For Iberdrola, the safety of the users of the network is of the utmost importance. For this reason, it makes information and training available to the various emergency services and security forces in order to explain possible conflicts that they may find in the performance of their work and how to act in situations involving electricity risks.

All stages of the life cycles of electricity and gas are highly regulated because they are basic products for the development of a country's economy and entail an improvement in the quality of life of people.

Therefore, in the *planning* stage for the facilities, the community participates through its social and political representatives in broad discussions concerning the energy model to be adopted in the country. During the *approval* stage, citizens can participate during public information periods, taking into consideration economic, environmental and health and safety aspects, as well as the reliability of supply, generating public policies that lay the groundwork for the companies within the Iberdrola group to adopt investment strategies that are consistent therewith.

In the countries in which Iberdrola engages in electric power *production activities*, there are extensive environmental and labour regulations aimed at ensuring that existing risks to human health and safety remain within the limits established thereby. The companies thus provide the information required to verify that the operating conditions established in the regulations and in the technical specifications for generation plants are observed in their construction, operation and maintenance.

Likewise, the electricity and gas *transmission and distribution* stages are subject to extensive regulations governing the construction, operation and maintenance of these facilities, and therefore the companies provide the human, physical and financial resources needed to minimise electricity risks and those associated with the handling of natural gas.

During the *retail* stage, the company also believes that the most effective way of protecting public health and safety in the use of power and gas is the provision of training and information to customers. There are also gas maintenance operating procedures to ensure safety in Spain. In the United Kingdom, devices have been developed to improve the safety of customers, such as carbon dioxide alarms, fire alarms and devices preventing hypothermia. In the United States,

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the evaluation and control of electrical risks for customers is thoroughly regulated at the state level.

As a complement to the foregoing, the Iberdrola group voluntarily adopts various measures to improve aspects relating to product safety. Specific internal regulations have been developed at distribution networks in this regard and there are also training seminars for third parties so that they understand electricity-related risks (fire brigade, Guardia Civil, Civil Protection, Military Emergency Unit, students, etc.).

Finally, Iberdrola has various means to inform and train the public through actions and programs that are explained in more detail under the "Access to adequate information" section in this chapter. There are also direct channels of communication with customers, as described in the "Stakeholder engagement" section.

416-1

All processes required for the supply of electricity and gas at all stages, described above, ensure that such products arrive at the consumer with an appropriate level of assurance for their health and safety. The impacts on health and safety of 100% of the categories of major products and services are evaluated in order to make improvements.

The table below sets forth incidents regarding the impacts of products and services on the health and safety of customers during 2018, of which there were 0 incidents.

416-2

Incidents stemming from non compliance with regulations or voluntary codes regarding health and safety (no.)	2018	2017	2016
Resulting in a fine	0	6	1
Resulting in a warning	0	0	0
Relating to voluntary codes	0	2	0
Total incidents	**0**	**8**	**1**

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Furthermore, as described above, the construction, operation and maintenance of electric infrastructure involves certain risks, which may at times give rise to incidents affecting people outside of the company. In most of the cases detected, the incidents are related to third parties working without safety measures in the areas around the distribution facilities, as well as accidental contacts with the network.

The following table shows the accidents of this kind that occurred during 2018. 6 of the persons who suffered accidents were in Spain, 15 in the United Kingdom, 17 in the United States and 151 in Brazil. Of the accidents that have occurred, 1 caused a fatality in Spain and 40 in Brazil.

Accidents of persons not belonging to the company (no.)	2018	2017	2016
Accident victims	229	333	261
Fatalities	41	50	45

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The claims listed in the table below have been filed against companies of the group on these and other similar grounds not resulting in injuries and are following the relevant legal procedures applicable in each jurisdiction. Annual legal proceedings finished and pending by year-end 2018 amounted to 61 in Spain, 51 in the United States and 122 in Brazil.

Annual legal proceedings (no.)	2018	2017	2016
Settled and pending, stemming from those accidents	234	408	258

Electric and magnetic fields

The possible influence of electric and magnetic fields on the health of human beings has historically been a topic of certain public debate. However, the different studies performed in this regard show that there has been no identification of detrimental effects on human health with respect to the maximum emission figures established by applicable law. Iberdrola, inspired by the precautionary principle, applies the rules in this regard and is willing to work with the public authorities in adopting such preventive or mitigating measures as may be deemed appropriate to avoid risks or harm to health.

There are differences in the practices relating to this issue in the various countries in which the company does business:

In Spain, two reports are prepared regarding electric and magnetic fields at facilities, which are audited by Aenor: *Emissions of electric and magnetic fields at distribution facilities 2018* and *Radioelectrical emissions of relay stations 2018.* Both reports show that the emissions of electric and magnetic fields meet legal requirements and that all facilities are below the levels set by law.

In the United Kingdom and the United States, the facilities comply with applicable regulations and measurements are not taken at the facilities unless requested by the customer. However, they offer an advisory service and perform surveys that gather the concerns of customers. During 2018, 35 such requests were received in the United Kingdom from England, Wales and Scotland, and there was no pending action for breach of maximum levels. For the 35 requests for information, there were 32 field visits, and safety advice and information was given to the customer on 3 occasions. In the United Kingdom, there is also monitoring of applicable legislation, changes therein and research through working groups within the Energy Networks Association. In the United States, a complaint has been received through CMP for a dispute regarding electromagnetic field (EMF) levels.

In Brazil, the law requires a number of measurements and simulations of electromagnetic fields above 138 kV, which are below the reference values established under federal law, with one complaint being received during 2018 from the neighbourhood of the Setúbal substation of the municipality of Guararapes in the state of Sao Paulo regarding high levels of electromagnetic field emissions. Cosern has also been asked to measure a facility in the municipality of Caicó (Río Grande).

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Access to adequate information

Contribution to SDGs of the performance described by the indicators of this section

(according to SDG Compass www.sdgcompass.org)

Apart from commercial information, the safety of users of the electricity grid or the promotion of the efficient use of energy is an on-going concern at the companies of the group. To progress in all these areas, information and training plans, programmes and activities are developed in each geographic area.

Accessibility of information

The Iberdrola group's distribution and supply companies develop various initiatives to make communication with customers having specific difficulties, whether idiomatic or sensory, simpler and more agile. With these services, Iberdrola puts into practice its policy to guarantee equality of opportunity, non-discrimination and universal accessibility, within the framework of its focus on sustainable development, especially with respect to disadvantaged groups. This initiative is also due to the company's commitment to offer individualised services covering the needs of all customers.

Iberdrola continues to offer a pioneering sign language video-interpretation service in its customer service area thanks to the collaboration initiative with Fundación CNSE that began in 2012, and that was renewed in 2018. In this way, persons who are deaf or hard of hearing can contact the company through sign language interpreters, the application of which is available on the customer website and is also included in a tool for the exchange of written messages, thus covering the needs of all deaf persons, regardless of the degree or type of disability or whether or not they know sign language. Furthermore, the On-line Customer Office is available in Spanish, Basque (Euskera) and English, and the website is also available in English. Communications (invoices, letters, policies, etc.) are issued in ten languages: Spanish, English, Italian, German, French and Portuguese and the regional languages Valencian, Basque (Euskera), Gallego and Catalan.

The Accessibility Certificate issued by Ilunion Tecnología y Accesibilidad was renewed for the corporate website in 2017, proof of its commitment and of the work of auditing, consulting and certification of both the corporate and customer websites, and is available at *Accessibility Certificate.* It thus complies with the Web Content Accessibility Guidelines 2.0 of the W3C (World Wide Web Consortium), as well as the requirements to satisfy the UNE 139803:2012 Standard governing the degree of accessibility applicable to the websites of public utilities. Audits are performed on a half-yearly basis to ensure that the website meets the relevant requirements. Ilunion has also given Iberdrola an additional award for its efforts in the area of universal accessibility and service to disabled persons (*see Accessibility diploma*).

Furthermore, to facilitate communications, a video-call customer service tool (Whisbi) has been included on the website in which treatment and communication with the customer are much closer and more human. In addition, in My Customer Area, a webchat has been launched that offers direct and efficient real-time customer service during online navigation. This tool helps to

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reduce calls and emails received at the *Contact Center*, is available at no additional cost to the customer and increases their level of satisfaction and loyalty.

Finally, Iberdrola promotes information and training campaigns regarding safety and energy saving measures amongst disabled groups and underprivileged groups or those at risk of social exclusion, in order to contribute to the equality of these persons, removing barriers to communication.

In the United Kingdom, ScottishPower has an interpreting service to facilitate communications in cases where customers find it difficult to make themselves understood in English. Also, for customers who choose Welsh as the language in which they wish to receive service, invoices are offered in this language, and they are offered the mechanisms required to communicate effectively. In addition, the *Customers Requiring Additional Support* programme offers additional services to customers who are visually or hearing impaired, suffer from chronic illness or are over sixty years old. This service includes the provision of bills in Braille, large print, compact disc and audio cassette format. ScottishPower offers multiple alternatives so that customers with hearing or speech impairments can communicate without needing to call: changing account details through the website, chat function on the website itself, Facebook Messenger for private communications, e-mail, etc. With the new *Next Generation Text Services (NGTS)* initiative, the company also offers a range of tools and services that can help customers with difficulties to call using a smart phone, tablet or computer.

In the United States, the U.S. companies CMP and NYSEG, subsidiaries of Avangrid, have a special communication service for hearing-impaired people called *Telecommunication Device for the Deaf (TDD/TYY),* to facilitate communication through written messages and *Telecommunication Relay Service for Hearing Impaired-711* through which users can make 711 calls from any telephone in each state of the United States, without needing to remember area codes. NYSEG also provides special printed invoices for visually-impaired customers, as well as the ability to designate a third person at NYSEG to receive important notices, called *Third Party Notification*.

Avangrid also has a service to help people with special needs and advise them on choosing services that might be useful. The company also has customer service for Spanish-speaking customers through the *In-house Spanish Speaking Representatives* service. CMP and RG&E also make available to customers employees who know other languages for those persons who request information in a language other than English (*Bilingual employee list*).

In Brazil, Neoenergia makes improvements in physical accessibility at customer service locations and preferential treatment for persons with diverse abilities. They also implement programmes to provide service, information and access to billing to persons with visual and hearing impairments, which include: accessible websites, bills in Braille, a dedicated phone line for service to those with hearing or speech problems, special documentation and signage, and the availability of employees trained in sign language.

Education in the safe use of electricity

Through the group's websites, Iberdrola makes recommendations and information available to consumers regarding the safe use of electricity and gas, as well as guidelines to follow in case of an electrical accident. They also publish informational booklets regarding the potential risks of electricity affecting the proper use thereof.

In Spain, Iberdrola promotes informational and educational campaigns on safety measures and energy saving directed towards the general public. It also offers its customers products and

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services that provide additional safety in the home or business. It also collaborates with consumer associations and special groups in order to contribute to communication on matters relating to safety, training and education. Iberdrola also spreads information messages regarding safety and energy savings via its customer profile on Twitter (@TuIberdrola).

Iberdrola's suppliers are also required to comply with strict security measures, even sealing off facilities where there are clear risks to people or their property. In addition, upon the passage of 15 days from the notice of sealing a facility, the company requires gas maintenance suppliers to visit again to verify whether the problem is remedied and the facility is in proper operational status, thus avoiding dangerous situations or irresponsible activities by customers.

Along with the *Electrical Emergencies, Gas Maintenance Service, Gas Protection, SME Assistance, Home Assistance, Appliance Protection, Home Electric Protection, Home Electric Protection Plus, Air Conditioning Protection* and *Iberdrola Gas Comfort* services, the *Appliance Protection 10* service was launched in 2018 whereby a qualified technician will repair 9 kitchen appliances and the home TV so that the customer can avoid unexpected expenses, ensuring safety and the proper operation of the equipment.

Also noteworthy is the entry into the Italian residential market, with the launch of two services for the home: *Electricity Maintenance Service* and *Gas Maintenance Service,* focused on emergency breakdown assistance within three hours and the performance of small electricity or gas jobs, respectively. Breakdown prevention consisting of maintenance visits together with fast response to repair breakdowns, thus providing improved safety for customers.

In Portugal there has been an expansion of the Products and Services offered to Customers with the launch of the *Home Electric Protection* service, which covers breakdowns of kitchen appliances and of home electric service, the *Appliance Protection* service covering breakdowns of kitchen appliances, and the *Gas Inspection* service, providing gas installation inspections.

Also noteworthy is the entry into the French residential market in 2018, with the launch of two services for the home: *Electricity Additional Comfort* and *Gas Additional Comfort*. These services are focused on the diagnosis and maintenance of electric and gas installations, respectively, and breakdown assistance.

In the United Kingdom, ScottishPower has maintained its *PowerWise* website program regarding electrical safety for parents, teachers and students, with 9,369 visits in 2018. It has also continued with extensive campaigns to promote electrical safety, with programmes such as children's visits to *DangerPoint* in Northern Wales and *The Risk Factory* in Edinburgh, with a total of 13,962 visits. Further, 6,744 children also attended the *Crucial Crew* event, 200,000 attended the *Royal Highland Show,* 80,000 attended the *Cheshire Show* and 55,000 the *Anglesey Show,* especially dedicated to farm workers and their families. ScottishPower is also the service partner of *Stayenergysafe*, launched by Crimestoppers in order for the public to report energy-related crimes, where the manipulation of meters could endanger property and life. Welcome packages for new customers as well as ScottishPower's website offer emergency-related information, and it provides safety-related pamphlets, seminars and tweets.

In the United States, information and recommendations are provided regarding how to act in an emergency, such as adverse weather conditions, poisoning or health risks, as well as safety advice in case of storms or outages causing lines or equipment to fall. *Storm Safety Information* provides safety information regarding potential public safety risks. In 2018, the Emergency Preparation Unit held a meeting with employees and officials from the 17 cities in which UIL provides its services to safely remove public easements and restitution for affected customers.

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In addition, CMP has an *Outreach Campaign* targeting at-risk groups such as school children, safety personnel, contractors and emergency personnel.

In Brazil, Neoenergia provide information on the bill, in customer service areas, through conferences on the proper use of electricity and building safety, messages on the website, on social media, and while on hold with the call centre, so as to reach all consumers, in addition to awareness-raising campaigns. There were more than 500 safety awareness activities in 2018 by the companies of the Neoenergia group directed towards all sectors: farmers, children, industrialists, freelance construction professionals, etc.

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Innovation and digital transformation projects

Contribution to SDGs of the performance described by the indicators of this section
(according to SDG Compass www.sdgcompass.org)

In the future, new technologies, innovation and people will be the foundations upon which the new energy model will be built:

- **Disruptive technologies** that are increasingly efficient, sustainable and environmentally friendly, and that allow for optimisation of the operation of facilities and processes.
- **New products and competitive services** that respond to customer needs, with more personalised content and offers.
- **Digitalization and automation.** Between 2018 and 2022, Iberdrola plans to invest 4,800 million euros in digital transformation and will focus its investment efforts on improving the operation and maintenance of its assets and on increasing the availability of its generation plants.
- **Innovation with start-ups, entrepreneurs and suppliers**, in order to develop new disruptive business models, favour the exchange of knowledge and be a driving force among its partners.
- **Culture of innovation and talent.** Iberdrola promotes a culture of innovation through the transfer of knowledge, attraction of talent and promotion of the entrepreneurial spirit. Of note is the Universities Project, which involves the development of various initiatives: university chairs, R&D+i projects, training of students, internal training and young entrepreneurs.

Thanks to human and financial efforts (267 million euros in 2018) allocated to research, development and innovation (R&D+i), Iberdrola is in the vanguard of developing new products, services and business models that are transforming the energy sector.

As evidence of its commitment to innovation, on 23 May 2018 Iberdrola held the first *Innoday 2018* event, the energy sector's major innovation roadshow, on the company's international campus.

Some of the innovative initiatives are set out below, classified by major category:

Renewable energy:

- Improved efficiency at wind farms, photovoltaic plants and hydroelectric facilities. Includes the *Doctor PV* projects, aimed at reducing costs in photovoltaic plants though predictive maintenance strategies, the *ROMEO* projects, coordinated by Iberdrola, and *ASPA*, aimed at developing models and tools for early detection of failures based on artificial intelligence and big data techniques. The *Renewables Digital Evolution Plan (2018-2022)* and the *Renewables Accelerator* project for the promotion of new ideas to

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foster increased efficiency and global competitiveness of renewable energy have also been launched.

- Projects of note in the hydroelectricity area are *HIDRODEMAND*, targeted at the implementation of operating efficiencies, and *HIDROSMART*, for the development of new technologies to be exploited at the Cuenca Operation Centres (COCs).
- Improved integration of renewable energy, including the registration of Avangrid Renewables as a Balancing Authority (BA).
- As to innovation in offshore wind projects, the Wikinger wind farm was inaugurated and construction of East Anglia One has started in the United Kingdom.

Clean generation technologies:

In 2018, efforts in the generation area centred on operational flexibility and efficiency, respect for the environment and improved safety at facilities:

- Projects in the nuclear area included *OFF-GAS, RESHAND* and *FILTRABRIS,* which were collaboratively developed with *GDEST4S* within the framework of Iberdrola's *Innovation Programme for Suppliers*, and all of which are oriented toward operational efficiency and nuclear safety.
- The thermal generation area includes the *OCTAVE* project, which is intended to develop technologies for the diagnosis and control of the combustion process to make our plants more flexible. This project is key to ensuring the resilience and safety of the Spanish electricity system, permitting the integration of renewables.

Retail - New projects and services:

Innovation is essential in retail activities, in order to be able to offer customers the products and services best suited to their needs. In this regard, in 2018 Iberdrola has worked on:

- New initiatives to improve the customer's experience. New projects were launched in 2018, focused on increased personalisation of content and offers, together with a new *Customer App* in Spain, France and Portugal and a new website. It is now also possible to enter into contracts and procure products online, without prior registration.
- New products and functionalities. In 2018 we launched new packs in *Smart Home,* which combines energy, products and services and tools focused on improving energy management in the home without charge. We have also improved the functionalities of *Smart Home*, so that one can get an "online offer" on the website thanks to the analysis of consumption curves, expected insulation, location and orientation of the installation.

  Smart Mobility includes the launch of the new *Iberdrola Public Recharge App*, which allows one to reserve and use recharging stations on the Iberdrola network, and also launch the *Smart Mobility Home* application to control the recharging of domestic equipment.

  In Brazil, Neoenergia has made available to customers a mobile application that allows them to check their consumption, see bills and make payments; and in the United States Avangrid has launched *NYSEG Smart*, an online store where customers can search for, compare and safely buy efficient energy products (smart thermostats, lighting, electric vehicle chargers, etc.).

Smart grids

The group's R&D+i activities in electric energy distribution focus on optimising the distribution grid, with special attention on the development of smart grids, with various projects in all of the

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countries in which it distributes electricity.

In Europe, the company continues to participate in the *ASSURED* project to develop rapid charging solutions for heavy duty electric vehicles, and in the *INTENSIS4EU* project, which seeks a new focus in the area of smart grids and energy storage.

In Spain, Iberdrola will continue pushing the digital transformation of the electricity grid of the Basque country thanks to the *Bidelek 4.0* project. There is a continuation of the *LAYCA* project, which seeks to develop a system for locating breakdowns and identifying failures in medium-voltage networks, and has launched the *Caravaca BESS* project in order to achieve integration of a battery energy storage system (BESS) in operation.

In the United Kingdom, development continues on the *Fusion* and *LV Engine* projects, directed towards the optimisation of low-voltage grids. There is also the *SPEN* project, conceived to manage restrictions on the high-voltage grid at the Dunfries and Galloway plants.

In Brazil, there is the *Bid Monitor* project, which seeks to develop a support system for decision-making in electricity sales, and *Smart City* project for the implementation of innovative solutions for automation and operation of the electric grid. The *TITAM-BT* project also seeks to develop equipment that would allow for a reduction in fraud and ensure proper billing for customers.

In the United States, the *Woodbridge Microgrid* seeks to develop a micro-network with fuel cell to strengthen the grid under extreme climate conditions. There has also been a continuation of initiatives included in the *Energy Smart Community* programme, like the *ADMS* project to develop an advanced system for managing the distribution system and distributed resources.

Of note is the inauguration in 2018 of *Iberdrola Innovation Middle East*, a technology centre focused on responding to the challenges of the digitalization of the energy system, and focusing on three key areas: smart grids, integration of renewables and energy efficiency.

Iberdrola Ventures – Perseo

Iberdrola Ventures - Perseo is Iberdrola's start-up programme with 70 million euros to promote the development of a dynamic ecosystem of start-ups and entrepreneurs in the energy sector. Since its creation in 2008, more than 50 million euros have been invested in start-up companies in the energy sector worldwide. The main achievements in 2018 included:

- Recognition by the European Commission within the framework of the *Start-up Europe Partnership* initiative, by naming Iberdrola for the second consecutive year one of the top 12 European corporations that work best with start-ups. Iberdrola also received the special "*Start-up Procurement Award".*
- More than 10 pilot projects with start-ups in technological areas like Artificial Intelligence, Big Data, Internet of things (IOT) and blockchain, in order to improve both the planning and the management of assets and optimise operation and maintenance.
- In the investment area, there is the company Atten2, dedicated to developing solutions for online monitoring of critical assets to improve the operation and maintenance thereof, as well as prolong its useful life through predictive maintenance and better operation thereof.

Further information on the R&D&i projects in which Iberdrola participates can be found in the Innovation section of the corporate website.

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II.5. Contribution to the Well-being of our Communities

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- Introduction
- Access to energy
- Protection of human rights
- Support to local communities
- Contributions to society (LBG)
- Corporate volunteering programme
- Foundations
- Iberdrola and the Global Compact

Introduction

Iberdrola establishes firm and permanent bonds with its Stakeholders, taking into consideration the needs and expectations of its workforce, shareholders and the financial community, regulatory bodies, customers, suppliers, the media, society in general and the environment. The development of a relationship model with each of them, and maintenance of fluid channels of communication, are significant goals to which Iberdrola dedicates numerous resources, as described in more detail in the "Stakeholder engagement" section of Chapter II.7 Good governance, transparency and Stakeholders engagement" of this report.

Within the company's explicit commitment to the sustainable creation of value and the maximisation of the social dividend, and always looking to the long-term future, Iberdrola has an impact on local development, generating employment and wealth in all of the communities in which it is present through the design and preparation of specific programmes focused on promoting education, art and culture, research, protection of the environment, protection of vulnerable groups, etc.

In relation to Iberdrola's commitment to defend human rights, the main goal is to incorporate the management thereof into all of the group's operations, thus forming an integral part of operating procedures. This focus is included in the *Policy on Respect for Human Rights* approved by the Board of Directors in February 2015 and last revised in October 2018. To this end, the company has a set of tools that promote the protection of and respect for human rights, mitigating the risk of violation thereof. The company's practices are in line with the *Guiding Principles on Business and Human Rights: Implementing the United Nations 'Protect, Respect and Remedy' Framework*, the principles of the *United Nations Global Compact*, the *OECD Guidelines for Multinational Enterprises*, the International Labour Organization's *Social Policy* and the *Tripartite Declaration of Principles Concerning Multinational Enterprises and Social Policy*.

Within the framework of its *Human Rights Management Model*, Iberdrola is performing diagnostics to identify the actual and potential risks of its activities affecting human rights in all of the countries in which it does business, paying special attention to those countries in which the risk of impact might be higher due to lax legislation in this area. The analysis also evaluates the extent to which current due diligence procedures of the company are sufficient to manage these risks and comply with the provisions of the Guiding Principles and industry guidelines in this area. The company also has other tools approved by the Board, like the *Code of Ethics*, approved in February 2002 and last revised in October 2018, which serves as a guideline for the conduct of directors, professionals and suppliers, establishing control measures as well as disciplinary measures in case of non-compliance.

Consultation and complaint mechanisms

As provided by Iberdrola's By-Laws, the corporate website (www.iberdrola.com) is a permanent channel of communication to serve the *Stakeholder Relations Policy*. For this reason, the website contains the main channels for responding to potential claims, as set out below:

- From any page on the corporate website, one can use the new navigation menu to directly access pages dedicated to customers and to the distribution networks of the countries in which Iberdrola does business.

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- The “Iberdrola group” link in this menu also offers a complete map from which one can access all of the websites of the various country subholding companies and head of business companies of the group, as well as those of the Foundations of each country.
- The navigation menu can also be used to access the “Contact” section, in which the following appear in an organised and accessible form:
    - The main contact channels (Corporate Communication, Brand, Social Responsibility, Investor Relations Office, Office of the Shareholder, CDI an ADR Holders, Sustainability and Environment, Supplier Service Centre, Employment Channel, etc.).
    - The addresses of the Iberdrola group’s offices in the various countries.
    - Customer service centres in the various countries.
    - Subject-specific query mailboxes.
- Finally, the Corporate structure of the group section within Corporate Governance shows the corporate diagram with corresponding links to all of the country subholding companies and head of business companies of the group.

The company’s Stakeholders have the channels described above, which are handled in the various countries, businesses and corporate areas, to make their complaints and suggestions regarding business activities with a specific impact on the environment, labour relations, human rights, local communities, competition or market power, and such complaints will be attended to following established internal procedures.

There are various specific mechanisms for identifying and investigating unethical behaviour or behaviour that might lead to situations of fraud or corruption in any form: the ethics mailbox, the professionals’ ethics mailbox, the shareholders’ ethics mailbox, the suppliers’ ethics mailbox, through which employees, shareholders and suppliers can channel grievances, questions or complaints with the assurances of resolution and confidentiality that such channels require to be effective.

The court claims of which Iberdrola is aware are set forth in “Environmental safety” section of Chapter II.3 and in the “Socio-economic compliance” section of Chapter II.7 of this report.

Incidents relating to discrimination in the labour area during 2018 are set out in the “Protection of human rights” section of this chapter. Iberdrola has not received any complaint during financial year 2018 regarding other aspects relating to human rights through the channels established for this purpose, nor is it aware of court claims that might have a specific social impact.

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Access to energy

Contribution to SDGs of the performance described by the indicators of this section

(according to SDG Compass www.sdgcompass.org)

Access to energy for off-grid customers

EU26

For the companies of the Iberdrola group in Spain, the United Kingdom and the United States, the electrification level covers practically the entire population. In Brazil, in the Neoenergia distribution area (around 835,500 km^2, with a resident population of slightly more than 33.6 million people), 200,563 persons do not have electricity, representing around 0.6% of the total population within the area of the Neoenergia group companies.

The companies of the Neoenergia group have continued to develop rural electrification programmes, undertaken jointly with government authorities, with the goal of extending the electricity infrastructures in order to facilitate economic and social development and minimise inequalities among the various regions and between rural and urban areas. These programmes represent a fundamental component for development of the most disadvantaged sectors of Brazil's population.

In 2018, the aggregate funds allocated to rural electrification programmes in Brazil represented a total of 189.6 million euros on a consolidated basis for the group.

Electrification programmes 2018	(€ thousands)
Neoenergia	189,636

For some populations with difficulties accessing the network, such as indigenous populations or *quilombolas*, they also receive various assistance programmes from Neoenergia and the installation of off-grid photovoltaic systems and other actions to ensure universal access to the distribution network.

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Electricity for All programme

The Sustainable Development Goals (SDGs) 2015-2030, to which Iberdrola has linked its business strategy, define universal access to energy as essential and frame sustainable energy as an opportunity that transforms life, the economy and the planet. To meet the challenges and opportunities currently faced by the world, energy has a central role, whether to foment employment, safety, climate change, food production or to increase income.

A lack of access to the supply of energy is an obstacle to human and economic development. The *Electricity for All* programme is Iberdrola's response to the call of the international community to ensure universal access to energy services that are accessible, reliable and modern, focused on sustainable electrification activities, linking the purpose thereof to SDG 7.1.

Upon launching the programme, the company set itself the goal of reaching four million beneficiaries of the *Electricity for All* programme by 2020. Iberdrola announced this goal at the UN SE4ALL Forum held in New York in May 2015. This objective was revised in 2018, and within the framework of the Iberoamerican Conference on the Sustainable Development Goals held in Salamanca, Iberdrola launched an ambitious 2030 goal of providing access to electricity to 16 million persons without it in emerging countries.

There are 5.4 million beneficiaries of the *Electricity for All* 2014-2018 programme with 3 areas of activity:

- Financing of projects through capital investment, using the PERSEO investment fund. Iberdrola has invested in Sunfunder and in Iluméxico within the framework of this programme.
- Activities with a social impact: investments promoted by businesses in the countries in which Iberdrola has a presence. This is the case with the *Light for All* Programme of the distribution companies in north-eastern Brazil and their rural customers.
- It develops projects with a high social component, through NGOs and corporate volunteers.

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Access for vulnerable customers

The *General Sustainable Development Policy* approved by the company's Board of Directors assumes as a principle of conduct that attention is paid to customers who are economically disadvantaged or in any other situation of vulnerability, establishing specific procedures of protection and collaborating in providing on-going access to energy and gas supply according to the policies established by the competent government authorities in each case.

Thus, the companies of the group have procedures to protect customers at risk of exclusion or in vulnerable situations to facilitate access for the most disadvantaged groups, including the following:

- In Spain, there is application of the *Vulnerable Customer Protection Procedure,* which allows for an increase in collection periods, making payment terms more flexible, and providing personalised advice. Iberdrola has also prompted the signing of agreements with various public entities and other organisations, establishing mechanisms to prevent the suspension of electric and/or gas supply due to non-payment of the invoice by economically disadvantaged citizens, and to ensure the immediate restoration of service if already suspended. The company also has a free exclusive telephone service line for customers in vulnerable situations: 900 100 752. The agreements signed by the company protect 100% of Iberdrola's residential customers in Spain that might be in situations of vulnerability.

  There are also subsidised electricity rates (known as *Bono social*) that apply lower electricity prices to electricity consumers considered to be vulnerable on the basis of certain social, consumption and purchasing power characteristics. In 2017, the Government regulated and defined the figure of vulnerable customer, subsidised rates (*bono social*) and other measures of protection for energy consumers. During the year, the publication of Decree 15/2018 specified, among other measures, the conditions of the subsidised rates and expanded coverage to special groups (family units with disabled members, victims of gender violence or terrorism). At the end of 2018, Iberdrola had 404,540 customers with subsidised rates.

  To facilitate access to subsidised rates, Iberdrola has implemented a broad communication plan to get information to all people, like the creation of a new website of the retailer, where customers can obtain all information through the website www.iberdrolacur.es/bonosocial. It has also sent information to more than 1,500 Consumer heads, and has had meetings with consumer associations. The company has made available to customers a consultation inbox, 512 onsite service points with more than 1,000 agents, and 24-hour telephone service with personnel specifically trained to serve customers with respect to the *Bono Social*. It has also created a leaflet and has sent more than 18 million informational letters in the invoice to all customers of Ibercur, together with an informational video distributed on social media, and informational notes and subject-specific meetings with the principal media outlets.

- In the United Kingdom, ScottishPower has signed the *Energy UK Safety Net for Vulnerable Customers* agreement, which includes a commitment to not disconnect those customers who have been declared vulnerable due to reasons of age, health, disability or other serious reasons, and to reconnect them, if applicable, on a priority basis. A *Warm Home Discount* scheme for households at risk of poverty, implemented by the government in 2011, is also still in operation. The *"Extra Care"* programme provides "extra care" to the most vulnerable customers, ensuring that they receive the support they need, adjusting payment methods to their individual circumstances and providing them with additional services if necessary. They also have "*Hyper Care*",

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which offers support to customers who show signs that their circumstances might be changing and that they might be entering into payment difficulties.

- In the United States, agreements have been signed with the government to help customers at risk of exclusion and vulnerable customers, and there are energy assistance programmes for these groups at the federal level, such as the *Home Energy Assistance Program* (*HEAP*), *CMP's Electricity Lifeline Program* (*ELP*) (with credits to pay bills based on income and consumption) and the *Energy Assistance Program* (*EAP*) with two levels of assistance: *Basic Energy* (monthly bill credit) and *Limited Benefit* (to cancel debts for delayed payment). At CMP, the ELP programme also guarantees a connection for people with limited resources who depend on an oxygen tank or ventilator.

- In Brazil, the group's subsidiaries have a special different rate for low-income customers (TSEE) and advantageous prices and special terms for persons in difficulty. In 2018, Aneel (*Agência Nacional de Energia Elétrica*, or National Electric Energy Agency) continued with an update of the registry, selecting beneficiaries therefrom who meet the low-rent criteria of the consumer units determined by the Brazilian regulator.

Information regarding disconnection for non-payment and subsequent reconnections in accordance with the *Electric Utilities Sector Supplement* of the Global Reporting Initiative (GRI) is shown in the following table:

EU27

Residential disconnections for non payment (no.)	2018	2017	2016
Paid up to 48 h after disconnection	1,270,849	1,304,986	1,182,466
Paid between 48 h and one week after disconnection	253,559	236,436	237,576
Paid between one week and one month after disconnection	239,246	226,654	214,745
Paid between one month and one year	197,422	181,141	188,504
Paid after more than one year	8	7	0
Outstanding and unclassified	0	0	48,606
Iberdrola total	**1,961,084**	**1,949,224**	**1,871,897**

Residential reconnections following payment of unpaid bills (no.)	2018	2017	2016
Less than 24 h after payment	1,640,500	1,612,578	1,561,202
Between 24 h and one week after payment	162,744	184,780	191,332
More than one week after payment	124,722	116,395	102,068
Unclassified	0	0	14,634
Iberdrola total	**1,927,966**	**1,913,753**	**1,869,236**

Information on disconnections and reconnections in the various countries is described in Annex 1 Supplementary Information.

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Protection of human rights

Contribution to SDGs of the performance described by the indicators of this section

(according to SDG Compass www.sdgcompass.org)

Iberdrola's commitment

GRI 407 GRI 408 GRI 409 GRI 412

The group has a firm commitment to the defence of human rights, and has a set of tools that ensure and promote the protection of and respect for human rights, in order to prevent, mitigate and repair any possible impact on human rights. Therefore, the company's practices are in line with the principles underlying the *United Nations Global Compact*, *Guiding Principles on Business and Human Rights: Implementing the United Nations 'Protect, Respect and Remedy' Framework (hereinafter the GPHR)*, the *OECD Guidelines for Multinational Enterprises*, the *Tripartite Declaration of Principles Concerning Multinational Enterprises* and the *Social Policy* of the International Labour Organization.

Iberdrola has a *Policy on Respect for Human Rights* approved by the Board of Directors in 2015 and last revised in October 2018, the principles of which must be followed by all professionals of the group, regardless of the place in which they carry out their activities. With this policy, apart from formalising its public commitment, Iberdrola wants to send all of its Stakeholders a clear message that the company is committed to respecting the human and labour rights recognised by domestic and international law.

The company has adopted the measures necessary to comply with this policy in all countries in which it operates. And it has made the following commitments, among others:

- Respect the human and labour rights recognised by domestic and international law, as well as adhere to international standards in those countries in which human rights law has been sufficiently developed.
- Reject child labour and forced or compulsory labour, and to respect freedom of association and collective bargaining as well as non-discrimination, the right to freedom of movement within each country, and the rights of ethnic minorities and of indigenous peoples in the places in which it carries out its activities.
- Promote a culture of respect for human rights and awareness among its professionals in this field at all of the group companies and, in particular, at those in which there may be a higher risk of violation of such rights.

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During 2018, it has updated its risk map by country and business using an internal methodology which makes assessments based on the countries ratifying or joining the following international conventions and treaties:

- Forced Labour (C029, C105), Right to Organise and Collective Bargaining (C087, C098), Child Labour (C138, C182) and Non-discrimination (C100, C111).
- Convention C169 on Indigenous and Tribal Peoples.
- The 2018 report of the International Labour Organisation (ILO) entitled *Report of the Committee of Experts on the Application of Conventions and Recommendations*.
- International Covenant on Civil and Political Rights.
- International Covenant on Economic, Social and Cultural Rights.
- American Convention on Human Rights signed at the Inter-American Specialized Conference on Human Rights (Treaty B-32).
- European Social Charter (Turin, 18 October 1961).

The position of countries on the following indexes and studies has also been taken into account:

- UNDP Human Development Index (2017 data, the latest available during the study).
- Transparency International (Corruption Risk, 2017 data, the latest available during the study).
- Countries involved in armed conflict (*Report on Conflicts, Human Rights and Peace Processes. 2018 Alert*. School for a Culture of Peace).

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Once the risk map was updated, the data were cross-checked against the analysis identifying the significant locations of operation in 2018, in order to know what locations might have a possible risk of violating these rights.

Of the 150 significant locations of operation (detailed information in the “Key figures” section) covered by analysis or impact evaluations in the area of human rights (100% of the significant locations), 57 of them (38% of the group total) are in Brazil and Mexico, countries considered to be at risk for violation of these rights.

As a result of this analysis, the United States and Canada could also be considered countries at risk, as they have not yet ratified or joined several of such labour conventions. However, given the socio-political characteristics of these two countries and taking into account the internal procedures defined for the subsidiary Avangrid, Iberdrola does not believe there is a risk of violation of these rights for the group’s workers.

Beginning of the project for a new human rights due diligence strategy

During 2018, Iberdrola developed the first stage of a new approach to human rights due diligence. Further developing its *Policy on Respect for Human Rights*, it followed the advice of the Guiding Principles (principle 18.a of the HRGP) and has drawn on the advice of experts who are recognised internationally for their advice on human rights due diligence processes. The due diligence project seeks to adjust the HRGP to the size of the company, the diversity and peculiarities of facilities in the various countries and the complexity of implementing the human rights management system at a company like Iberdrola.

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The entire project focuses on persons, specifically on the company's relationship with affected persons, and for that reason it is essential to know the needs of all Stakeholders first-hand (principle 18.b of the HRGP). For the same reason, concurrently with the human rights due diligence project, Iberdrola has developed a Stakeholder relationship model that ensures there are appropriate communication channels for each of them, which will help to better identify important matters and to both prevent and mitigate possible impacts and allow the company to respond with the required agility.

The greatest progress in the methodology used to date has been in the considerable increase of the number and quality of the sources for the identification of actual and potential impacts on its activities, and in the boost given to the full and detailed review of due diligence mechanisms.

Efforts during 2018 focused on:

- building a new methodological and analysis framework to carry out this task, and
- compiling the information required to identify human rights impacts and gaps in due diligence using the new methodology.

The final results and recommendations derived from this work will be presented in 2019 and an Action Plan will be prepared to solve the possible weaknesses in existing due diligence processes, both at the corporate level and at the companies forming part of the group.

In summary, the methodology applied adopts the recommendations of the HRGP at three successive levels of refinement and depth in the identification of human rights impacts:

1. *potential impacts* for the sector, affected by country risk (principle 17).
2. *significant impacts* for the company, based on the severity, possibility of remediation and linkage of impacts (principle 19.b).
3. *priority impacts* for the Action Plan, giving preference to the elimination of due diligence gaps (principle 19.a).

Progress on and results of the human rights due diligence project

The potential impacts on the electric power industry have been identified, thus defining, extensively but precisely, the area with respect to which Iberdrola must be vigilant as regards human rights. This has made it possible to enlarge the focus of what the *Policy on respect for Human Rights*, the *Code of Ethics* and other corporate documents have considered to date were human rights issues, following the advice of the HRGP to take the entire spectrum of internationally recognised human rights into account (principle 12).

To facilitate analysis, in the resulting inventory of potential impacts, they have been classified into categories that include those that share the same aspect relating to the organisation and operations of the company:

- Impact on local communities
- Small-scale environmental impact
- Large-scale environmental impact
- Public insecurity
- Labour practices

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- Quality of supply and services
- Universal access to energy
- Privacy and data protection
- Ethics and integrity

Furthermore, various areas of business activity were detected in this phase that are potentially affected by human rights issues but that were not included (at least not explicitly) due to issues of simple terminology or strategic formulation. Thus, progress has also been made in raising sensitivity on human rights across the entire company.

At a second level, an in-depth study has been undertaken to determine which of such potential impacts the company is specifically generating or runs the risk of generating. This study is carried out taking into account the particular characteristics of different contexts and, for that reason, a specialised team has visited work centres and facilities in Spain, Brazil, Mexico and the United Kingdom, while visits to centres in the United States are scheduled for the first few months of 2019. In addition, a survey directed at the heads of the 150 main activity centres was prepared to complete the compilation of information. During the visits made in the reporting period, more than 60 conversations were held with various areas of the company, in which both the consulting team and the Social Responsibility area participated. Thanks to these activities, the significance of the human rights impacts specific to each country is being assessed, based on standards of frequency, severity, scope, possibility of remediation and connection.

Due diligence framework

A general human rights due diligence framework has been determined that is in line with existing management mechanisms.

- The Iberdrola group's corporate governance model, which allows for independence among the various companies of the group while ensuring consistency regarding their commitment to human rights.
- The group's control model, based on three lines of defence that assigns clear prevention, monitoring and assessment responsibilities, thus allowing for an on-going improvement model.
- The regulatory framework for corporate responsibility, which is the basis for policies to guide the responsible management of the business and provide due diligence guidelines across the entire group:
    - *General Sustainable Development Policy*
    - *Innovation Policy*
    - *Human Resources Framework Policy*
- Integration of the due diligence systems within a human rights logic.
- Review of the reporting channels of the *Code of Ethics*.

The following diagram illustrates the foregoing:

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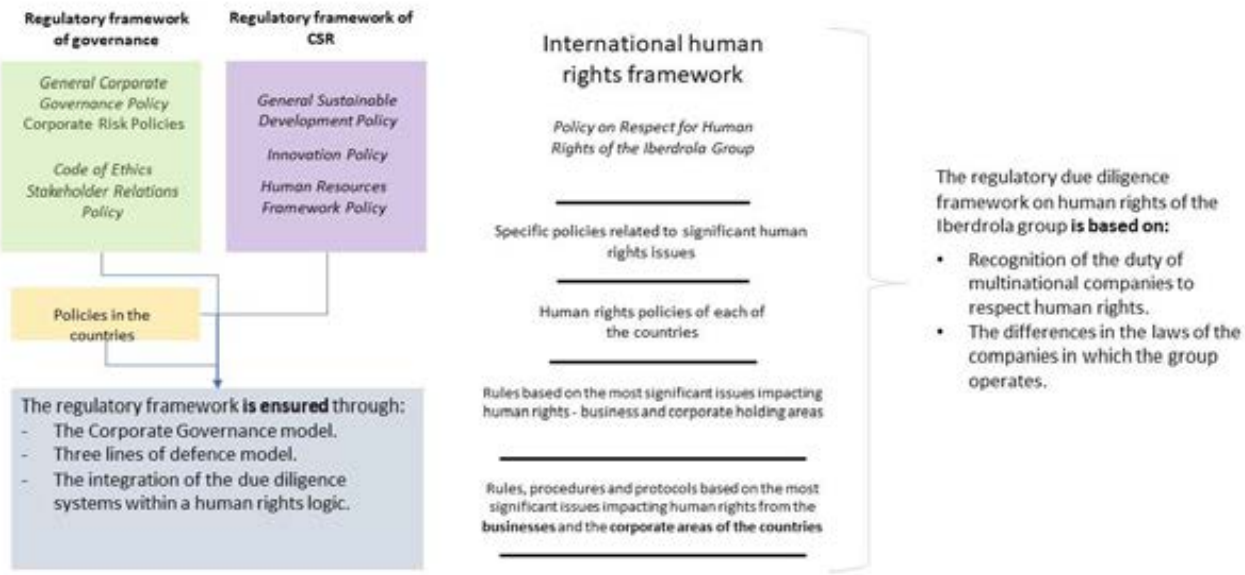

Progress has been made in documenting existing commitments, procedures and controls, including both those that have been formally established and those that are customary practices and informal management methods. This task has highlighted the existence of many commitments, procedures and control mechanisms at Iberdrola that are in line with HRGP objectives which, while not explicitly mentioning their connection with respect for human rights, are consistent with a framework of prevention, mitigation and reparation of human rights impacts. Two clear examples are environmental management processes and privacy and data protection policies.

This framework has allowed the company to undertake a gap analysis, which will be the basis for the process to prioritise human rights actions. These actions will be set forth in a short-, medium- and long-term action plan that will take into account the differences at the corporate level and in each of the countries in which the company operates.

Prioritisation

The HRGP recommend prioritising impacts when scheduling initiatives to prevent and mitigate them. That is a third level of analysis. Preliminary results of such assessment indicate that there are differences in the issues that are most significant not only for each country, but also for the various operations and areas of activity. The next step during 2019 will be to assess the differences and the different human rights management models in each country in which the company does business, based on the same human rights due diligence model and gap analysis.

Significant issues for our Stakeholders

Below are some examples of how Iberdrola is managing specific human rights issues that are significant for its Stakeholders.

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a) Related to labour practices

In connection with labour practices, an issue that was particularly significant for Stakeholders was non-discrimination.

GRI 406

The principles of non-discrimination and equal opportunity applied at the Iberdrola group are contained in both the *Code of Ethics* and in the global policies and procedures that have been approved and implemented (*Recruitment and Selection Policy*, *Equal Opportunity and Reconciliation Policy*, etc.), and its mission is to avoid any discrimination for reasons of race, colour, gender, language, religion, political opinion, national origin, social status, membership in an indigenous community, disability, health, marital status, pregnancy, sexual orientation or other condition of the person that bears no relationship with the requirements to perform their work. It also has collective bargaining agreements and local policies, including:

- Equality and Reconciliation Plan and Anti-Harassment Action Plan for companies of the *7th Collective Bargaining Agreement* in Spain.
- Policies on equal opportunity and reconciliation, anti-age discrimination, people with disabilities, equal pay, harassment and flexible working policies, as applied in the United Kingdom.
- Equal remuneration policy at Neoenergia, in Brazil.

By applying all of these instruments, Iberdrola ensures that the selection processes are based solely on the merits of the candidates and that the promotion of equality within the group as regards access to employment, professional training and promotion and working conditions is guaranteed.

During 2018, the group received a total of 26 grievances regarding labour discrimination through the various channels. 10 of them are pending. Of the grievances that have already been closed, i.e. 16, 4 ended confirming the existence of improper action in this area and the rest, 12, did not find evidence of such impropriety. Of the former, 3 led to a written reprimand and the fourth led to dismissal.

406-1

Reported incidents of discrimination (no.)	2018	2017	2016
Iberdrola total	**26**	**12**	**7**

b) Related to an impact on local communities and the rights of indigenous peoples

GRI 411 411-1

In relation to local communities, the issue of relations with indigenous peoples has been a concern of the Stakeholders.

In applying the *Code of Ethics* and its corporate policies (especially the *Policy on Respect for Human Rights*), Iberdrola and its employees undertake to respect both ethnic minorities and the internationally recognised rights of indigenous peoples, in accordance with applicable law and the obligations set out in Convention 169 of the International Labour Organization (ILO).

Employees belonging to indigenous communities

During 2018 in Brazil, only the electricity distributor Celpe (Neoenergia group) has employees that declare themselves to be of indigenous race, but since they do not reside in an indigenous community, they do not belong to one. However, at the Belo Monte hydroelectric plant (owned by Norte Energia, a company in which Neoenergia has an indirect 10% interest, without exercising control or management thereof), outside labour has been hired from the various indigenous communities in implementation of the Medio Xingu Territorial Protection Plan (*Plano de Proteção Territorial do Médio Xingu*) (PPTMX). Furthermore, in the United States Avangrid has employees who identify as Native Americans or Native Alaskans. There is no evidence of employees belonging to indigenous communities at the other companies of the Iberdrola group.

It should be noted that there were no incidents relating to the violation of the rights of employees belonging to indigenous communities during 2018.

Presence of the company in indigenous territory

The company, with a presence in 3 countries where there are indigenous communities (Brazil, Mexico and the United States) wants business activities to be carried out with respect for different cultural identities, traditions and environmental wealth, as many times these communities depend on natural resources for their subsistence. Therefore, it establishes pathways of dialogue with the participation of the State and of the various organisations representing these communities, in order to report on the projects with due transparency and integrity. However, there may occasionally be direct or indirect impacts on these communities at some facilities, which is why there is an attempt to promote ethical practices with the goal of preventing conflicts, being competitive and generating mutual benefit, which in the long term is the base social value.

The activities performed in indigenous territories is describe below:

- In Brazil, in August 2017 Iberdrola became the majority shareholder of Neoenergia, S.A., a company that already held 10% of Norte Energía, S.A., which is the company responsible for the construction and operation of the Belo Monte hydroelectric plant, where there have been impacts on the indigenous communities occupying the region of Medio Río Xingu, in the state of Pará, affecting a total of 9 ethnicities (around 3,857 indigenous persons). In order to mitigate, compensate and/or prevent these impacts, Norte Energia, S.A. prepared an ethnological study, and based on that study prepared a Basic Environmental Plan for the Indigenous Component (Projeto Básico Ambiental-Componente Indígena) (PBA-CI) made up of nine programmes: i) Environmental Supervision Programme; Indigenous Territory Management Programme; ii) Works and Infrastructure Programme; iii) Productive Activities Programme; iv) Integrated Indigenous Health Programme; v) Indigenous School Education Programme; vi) Institutional Strengthening Programme; vii) Tangible and Intangible Cultural Heritage Protection Programme; viii) Relocation and Resettlement Programme; and ix) Indigenous and Non-Indigenous Communication Programme. It also prepared the Medio Xingu Territorial Protection Plan (*Plano de Proteção Territorial do Médio Xingu*) (PPTMX) based on the relocation of populations called “riparians” (*ribereños*). The actions to protect the riparian population are included in the General PBA, now connected to the Rural Resettlement Project. Through December 2018, approximately 313 families have been relocated, seeking the re-establishment of the traditional life style with the

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preparation of sites on the edges of the dam (a total of 121), always taking into account applicable environmental law as well as environmental sustainability.

The PBA-CI will be developed during the period of the concession, i.e. 35 years. The plan will be reviewed every 5 years in order to update it and thus ensure that indigenous rights are respected. For more information regarding the environmental permit programmes of Below Monte, see:
https://www.norteenergiasa.com.br/pt-br/sustentabilidade/licenciamento-ambiental

- Neoenergia, S.A. also holds 50.1% of Companhia Hidrelétrica Teles Pires, responsible for the construction and operation of the Teles Pires hydroelectric plant, located on the border of the states of Pará and Mato Grosso, on the Teles Pires river, an affluent of the Tapajós river, next to the municipalities of Jacareacanga and Paranaíta. This plant is located 60 km from the border of the nearest indigenous lands. Although there is no direct impact, under Brazilian law there must be socio-environmental studies and programmes, for which reason the company has established a joint dialogue with the National Indigenous Foundation (*Fundación Nacional del Indio*) (FUNAI), the Federal Public Ministry and indigenous leaders of each ethnicity affected by the project in order to respond to the demands and expectations of each community. The Basic Environmental Plan for the Indigenous Component (PBA-CI) was jointly prepared and approved along with 19 socio-environmental programmes to mitigate and sustainably encourage the cultural, social and economic activities of the ethnicities of the area.

  The plan is being implemented according to the timetable approved by the Teles Pires hydroelectric company, and the works approved for the Kayabi have already been completed, the works for the Munduruku are being finalised, and the works for the Apiaká have started. For more information on the indigenous components of the Teles Pires environmental action plan, see:

  - P 45 - PBAI_APIAKÁ
  - P 45 - PBAI_KAYABI
  - P 45 - PBAI_Munduruku

- As regards network construction activities, various distributors of the Neoenergia group have engaged in construction in indigenous land areas in Brazil. The distributor Coelba built two medium-voltage projects (Medida Provisoria - Faz Renascer - Región Sapucaeira y Medida Provisoria - Faz Bela Cascata) which were processed by the governmental environmental authority to obtain the Vegetation Suppression Approval (VSA) and Declaration of Intervention in Permanent Preservation Area (DIPPA) and FUNAI was also consulted. The distributor Celpe also built a substation and transmission lines in the Fulni-ô indigenous territory, in the municipality of Águas Belas (Pernambuco). Finally, the distributor Elektro is bidding on two sub-transmission lines, Línea de Transmisión Manoel da Nobrega-Mongaguá and Línea de Transmisión Mongagua-Perúíbe, located near certain indigenous villages on the southern coast of the state of Sao Paulo, and it is also working with FUNAI and a specialised company to prepare the Indigenous Component of the environmental licensing study to mitigate the impacts.

  It is important to note that all of these electricity grid construction activities adhere to the principle of the Clean Production technique, which seeks to lower the local environmental impact of the operations, with reduced suppression of native vegetation, prioritising the plotting of lines through areas that are already

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transformed by human activity or on existing motorways, as well as the use of protected cables for greater co-existence with existing forestation.

- In the United States, in the State of California, the Tule Wind Project reached commercial operation at the beginning of 2018, and the Tribes of the Kumeyaay Nation were affected by the project, as various new cultural resources were found, but no incident arose with these communities because each of the impacts was timely handled by the company, which formally consulted with tribal representatives and the Bureau of Land Management (BLM). As part of the agreed mitigation efforts, a consultant specialising in cultural resources was hired to design a District Nomination request pursuant to the provisions of Section 106 of the National Historic Preservation Act in order to document and help to preserve the cultural resources discovered near the project site. There was also work together with tribal representatives to determine both the location of the pavilions as well as the text of the panels to be placed in public places with specific information on the history of the region and its tribes, managed by the BLM.

- The activities of Iberdrola Mexico did not lead to incidents with indigenous communities during the reporting period.

c) Relating to public insecurity and labour practices in the hiring of security services

Another issue that is significant to the Stakeholders has been the management of security services.

GRI 410

The *Corporate Security Policy* approved by Iberdrola's Board of Directors and the specific security procedures adopted by the Corporate Security Division for each situation and country are compatible both with international human rights provisions and with the laws of each country.

With the certification granted by Aenor and IQNet since 1999, renewed based on the new ISO 9001:2015 standard, the action protocols are defined and implemented in all activities and services provided.

The hiring of security and monitoring services providers is handled by the Procurement and Insurance Division using competitive tender processes in accordance with the corporate Procurement Policy, model and procedure currently in effect. The Corporate Security Division is responsible for setting the technical specifications and standards to be met by such suppliers in order to be hired, in terms of physical security, resources, training, cybersecurity, etc.

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Security personnel trained in human rights	2018	2017	2016
Company personnel			
Company personnel (no.)	173	140	130
Company personnel trained in human rights (no.)	172	139	120
Company personnel trained in human rights (%)	99	99	92
Subcontracted personnel			
Subcontracted personnel (no.)	1,448	1,483	1,242
Subcontracted personnel trained in human rights (no.)	909	1,240	1,059
Subcontracted personnel trained in human rights (%)	63	84	85

The reduction in the number of subcontracted security personnel with human rights training is due to the tender for security and monitoring services in Spain and Mexico in 2018, with the resulting subrogation to the companies providing the services. The new companies have committed to provide a specific online human rights training course for security personnel in 2019.

d) Employee training on human rights

412-2

Due to the importance that respect for human rights has for the company, there are various training initiatives to inform the entire organisation of the social and labour rights affecting the activities of the company and to train all employees on the prevention of risks in the operations of the company, mitigation and the remediation of any violation of human rights.

Iberdrola believes that all employees must become involved in compliance activities and in the dissemination and reporting of any violation in connection with this aspect, and that the entire team is responsible for ensuring that respect for human rights is a reality.

Employee training on human rights (h)	2018	2017	2016
Spain	109,595	73,244	136,790
United Kingdom	102,510	30,561	25,242
United States	15,238	49,247	32,241
Brazil	16,533	23,316	11,935
Mexico	20,832	25,901	14,526
Iberdrola total	**264,708**	**202,270**	**220,736**

Aware that internal awareness-raising alone is not enough, Iberdrola has also acted as a motivating lever for its suppliers, preparing an awareness-raising module regarding human rights, and intends to make it available to other Stakeholders.

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e) Investment agreements and contracts that include human rights clauses

412-3

The policies, codes and procedures governing the operation of the company are applied in all of Iberdrola's activities, including investments. Specifically, the *Procurement Policy*, which contains the general contracting terms of the Iberdrola group, includes a specific section on respect for human rights. Specific human rights clauses are also included in the United Kingdom by application of the Modern Slavery Act approved in 2015. During financial year 2018 there were 13 projects with significant investments[95], all located in the United States:

- In the Networks Business, Central Maine Power Company (CMP) is developing the New England Clean Energy Connect (NECEC) transmission project in New England, with an estimated capital investment of approximately 950 million dollars.
- In the Renewables Business, turbines have been acquired for the Coyote Ridge and Otter Creek wind farms in the total amount of 316 million dollars, and there are various contracts regarding the construction of the new Karankawa wind farm, as well as the repowering of the current Colorado Green wind project for almost 250 million dollars.

[95] Significant investment means one that requires more than 100 million euros or one that is considered to be significant for the company even though it requires a smaller investment due to the format or strategic importance thereof.

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Support to local communities

Contribution to SDGs of the performance described by the indicators of this section
(according to SDG Compass www.sdgcompass.org)

GRI 413

Introduction

Iberdrola maintains a policy of strong involvement in the communities in which it operates, making a contribution to society linked to its own business activities: the supply of an essential product like energy, significant investments in basic infrastructure, promotion of local supplier networks, creation of qualified job positions, etc., with the intention of being a long-term investor in the regions in which it has a presence, in order to generate sustainable economic and social value.

Iberdrola's commitment to the local communities of the countries in which it operates takes shape through social activities in cooperation with governments, institutions and civil society organisations, as well as through sponsorships and patronage. The programmes of activity focused on social and economic development of the surroundings are especially significant.

These programmes and activities are implemented in various complementary ways:

- Directly by Iberdrola, through the Institutional Relations Division.
- Directly by subsidiaries or affiliates (i.e. investee companies, i.e. those in which the company has an equity interest), in their respective areas of activity.
- Sponsorship and patronage activities, primarily through Fundación Iberdrola España, ScottishPower Foundation in the United Kingdom, Avangrid Foundation in the United States, Instituto Neoenergia in Brazil and Fundación Iberdrola México.
- There are also two other organisations in the United Kingdom with a philanthropic purpose: The ScottishPower Energy People Trust and The ScottishPower Green Energy Trust, which carry out activities in their specific areas of competence.

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Development programmes for local communities

Iberdrola takes various types of actions to minimise, mitigate and offset unfavourable socioeconomic impacts that might be caused by its facilities. Local communities benefit from these measures, which are usually established and agreed on with local authorities. They include: improvements in communication infrastructure, water supply or roadways; public lighting; creation of direct and indirect employment; professional training courses; activities to support entrepreneurs; opening of communication processes with various Stakeholders; protection of biodiversity; and the restoration of areas, among other measures.

One noteworthy example is the creation of Energy Classrooms to foster an understanding of renewable production technologies, which involve not only visits to facilities but the development of an educational programme to acquire knowledge about energy, especially about renewable energy sources, and to promote an active attitude for the efficient use of energy and thus to contribute to energy saving.

Actions to support municipalities are also planned during the construction of the group's hydroelectric plants in Brazil, such as rural relocations at Baixo Iguaçu and its hydroelectric plant, where the population has been served by various programmes and there has been socio-economic monitoring of the population with a commitment to entrepreneurship.

A more detailed description of these activities can be found in "Economic/financial impact" section of Chapter II.1 Sustainable economic growth and in the "Contributions to society (LBG)" and "Foundations" sections of this chapter.

Impact assessments

413-1 **413-2**

In each of the countries in which the group operates, environmental impact assessment studies are performed at Iberdrola's locations of operation in accordance with applicable law prior to the construction of facilities. Activities addressing its Stakeholders are also performed, including social development programmes and participation in local communities. Almost 100% of the company's locations of operation are subject to these types of activities, focused on meeting the needs of its Stakeholders, especially in local communities, and engaging in the most appropriate activities in all those areas that most directly affect them. The principal activities are described in greater detail below:

Iberdrola believes that the impacts of the start-up of electric power generation plants are especially significant. In the countries in which the company builds and operates these types of facilities, applicable laws require the performance of studies assessing the impact on the environment and the community, and such studies must be approved by the competent public authorities. Iberdrola believes that these studies and assessments are appropriate to safeguard the rights of communities, as they include the most significant issues for the affected areas.

These studies include an evaluation of the environment providing a review of environmental impacts such as emissions, effluent, waste, changes in land use, changes in landscape aesthetics and quality, etc. They also include an evaluation of the social and economic environment, which reviews demographic aspects such as changes in population in neighbouring municipalities, economic sectors that are present in the region, basic infrastructure such as railway and road networks, and historic and cultural heritage, along with the growth in job demand in certain sectors, which is seen as a positive impact.

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The impacts of the various types of facilities developed by Iberdrola are similar at the various sites at which they are implemented, and none of them are noteworthy for significant negative impacts. Consultation with and participation of both the affected government administrations and interested parties are usually guaranteed during the performance of these studies, and part of the documentation of the project is subject to public review for a period of time that varies according to the law applicable in each country. The viewpoints of the Stakeholders consulted are thus taken into account in defining the future project.

These studies also contemplate the preventive and corrective measures required to mitigate the impacts identified, and if necessary, the appropriate budgetary allocations to comply with the commitments assumed are included.

To conclude the process, programmes are implemented to monitor the various aspects identified. The effectiveness of the programmes is reviewed by means of internal and external audits, as well as by the management team and by the Community Eco-Management and Audit Scheme (EMAS). For example, in the case of nuclear plants, an environmental Radiological Protection Programme is prepared to control and monitor the impacts of the facility during the operation thereof. There are also barometers regarding the environment near the facilities, half-yearly meetings with the municipal authorities, and frequent contacts to measure the "social environment".

Most facilities have an Integrated Quality and Environmental Management System[96], the principal goal of which is to foster continual improvement in the results of the organisation's activities with respect to the environment, in addition to compliance with environmental laws. Iberdrola prepares information and plans for the closure and decommissioning of facilities in accordance with applicable law and informs the workers' representatives thereof.

Advisory committees and processes and participation of local communities in decision-making

Iberdrola plays an active role in the participation of local communities during the planning and construction of projects, expressing its points of view and making its knowledge and experience available to the government authorities. Energy planning (energy sources, technology and long-term needs) is carried out by governmental authorities; this is the institutional area in which the various Stakeholders can participate in accordance with the mechanisms established in each country.

Once the most appropriate infrastructure is selected, the viewpoints of the affected communities are taken into account through consultation processes, which vary depending on the country and the type of facility. All these processes, which are included in the facilities' impact assessment studies, are regulated, and they are determining factors in order to secure the construction and operating permits for the power plants; in addition, they are frequently completed with processes voluntarily performed by the company. Along these lines, it should be noted that methods have been incorporated into the Environmental Management System so that Stakeholders can send their concerns, complaints, requests for information or any other kind of request to minimise impacts in the area.

During the planning and development of assets, prior consultations are also held and an active dialogue is maintained with the affected communities and interested parties in order to identify and address any concerns or areas of interest. In every project, relations are established with

[96] 73% of the group's energy production is under Environmental Management System certification.

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local authorities, communities and any other groups that may be relevant to the project. Information concerning the planned development is presented through newsletters, exhibitions, presentations, meetings, the group's websites, etc. There are also e-mail addresses to allow local communities to communicate with the company during the process and, in some cases, public information days are held for such purpose.

Set out below are some of the activities conducted by Iberdrola in this field for projects currently under development:

- In the Wholesale and Retail Business in Mexico, there have been studies of the social impact of the projects currently under construction, specifically at the Topolobampo combined cycle plants (in Ahome, Sinaloa). Based on these studies, the Secretary of Energy of the Mexican government issues a resolution setting out recommendations and actions in the social area to benefit the community: paving, improvements to educational and social centres, etc. And in Brazil, there has been a socio-economic evaluation of the area around Termopernambuco, analysing demographic aspects, surroundings, influence area of the Suape Port, basic infrastructure, cultural heritage and generation of employment.

- In the Networks Business, pursuant to procedures for the management of social impact, there is public dissemination regarding projects of a certain size, in all cases complying with the regulations of each country. Both the project and the size thereof are especially taken into account regarding the impact on road infrastructures, as well as potential impacts on the landscape.

- In the Renewables Business, since the commencement of the Támega River hydroelectric project in Portugal, there has been an impact assessment process with the participation of Stakeholders through public consultations in the affected municipalities. In 2018 there were quarterly meetings with the Environmental Monitoring Commission (*Comissão de Acompanhamento Ambiental*) (CAA), made up of Iberdrola and various local and national entities, the objective of which is to supervise environmental aspects and socio-economic impact, which is completed with site visits. The agreements with the municipal chambers of the influence zone were also renewed.

  In the United States, there are social evaluations regarding community development during the planning and construction phases for potential projects. There were various consultations with communities around potential project areas in Illinois, New York, South Dakota, Oregon, Washington and Texas in 2018. The fishing fleets of Massachusetts and Rhode Island are also in the process of consultation for the Vineyard Wind offshore wind project. In Mexico, in the construction expanding the La Ventosa plant, the affected area is being restored in accordance with the ruling of the National Commission on Natural Protected Areas (*Comisión Nacional de Áreas Naturales Protegidas*). Finally, in Brazil, work is taking place at the Serra de Santana windfarm complex (under construction) on a preliminary proposal for economic activation of family farming in accordance with the nature of the region. The new facilities of Neoenergia in Brazil are committed to promoting local development activities for both urban and rural populations: projects to generate income, technical support for affected rural families, health units, schools and social centres.

During the operation phase for facilities, Iberdrola engages in different processes of participation with the various Stakeholders that it relates to and that are described in detail in the "Stakeholder engagement" section of this report.

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Management of population displacements

As a prevention measure, during the planning phase for new projects, Iberdrola evaluates the land that will potentially be occupied, choosing that which involves lesser displacement of people who either reside in the immediate area or whose economic activities are affected. In this ultimately occurs, Iberdrola and the relevant government authorities review the economic, environmental and social consequences of such projects, and jointly adopt suitable corrective measures. The company believes that such processes ensure the protection of general interests in the countries where these impacts occur. The measures adopted in projects of this nature currently being developed by Iberdrola are described below.

EU22

The construction of Wholesale and Networks assets have not affected the real property of people because they are built on land acquired or assigned, and are also small in size. No person was physically or economically displaced during 2018.

As regards the Renewables Business, Iberdrola is currently developing various plants that involve displacements of population:

- In the construction of the Támega hydroelectric complex, in Portugal, it is expected that there will be displacement of some families as well as the occupation of pathways and farmland, pursuant to the process of Declaration of Public Interest by the Portuguese government, of which there have already been three phases. In the socio-economic and cultural action plan for the project, which actions are currently being developed and coordinated with the government administration and municipal legislatures, the affected or potentially affected families and small population centres are taken into account. The displacements that have been identified as necessary and the respective economic compensation has been provided in accordance with the law on expropriations in Portugal and the socio-economic studies and in accordance with the methodology implemented regarding the management and definition of displacements and potential economic damages. Up until 2018, after agreement with the affected families, there have already been 7 displacements of homes affected by the construction (approximately 30 people).

- In Brazil, some of the hydroelectric projects in the past caused population displacements or interfered with their economic activities. The mitigation plans that were implemented are described in the “Protection of human rights” section above. There were no displacements of people in 2018.

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Contributions to society (LBG)

Social actions, in cooperation with government authorities and civil society organisations, constitute a significant part of Iberdrola's commitment to the community. Detailed information on such actions can be obtained both from the published reports and from the corporate websites of Iberdrola's subsidiaries in Spain, the United Kingdom, the United States, Brazil and Mexico.

Dedicated resources

Iberdrola has selected the *London Benchmarking Group* (LBG) model to measure and assess business contributions to the community due to its wide international recognition. It is regarded as the most highly-valued standard for measuring the results and impacts of social programmes, both for the company and for the community. This standard only recognises projects that involve voluntary contributions for social or environmental protection ends, for non-profit purposes and that are not restricted to groups related to the company.

A detailed description of the LBG model can be found at the www.lbg.es.

Iberdrola has used the LBG model to report its contributions to society in this *Sustainability Report* for financial year 2018.

Contribution to the community in 2018	(euros)
By category	
- Charitable gift	3,481,748
- Community investment	36,268,099
➢ Socioeconomic development of the community	
➢ Energy sustainability	
➢ Art and culture	
➢ Education and training	
➢ Cooperation and community service	
- Commercial initiatives in the community	10,328,534
- Management costs	3,373,888
By type of contribution	
- Cash contributions[97]	49,946,201
- Staff time	115,648
- In-kind contributions	16,532
- Management costs	3,373,888
Total	**53,452,269**

[97] Contributions made mostly to non-profit organisations and foundations but also to universities, government administrations, etc. provided that they meet the aforementioned LBG Model standards.

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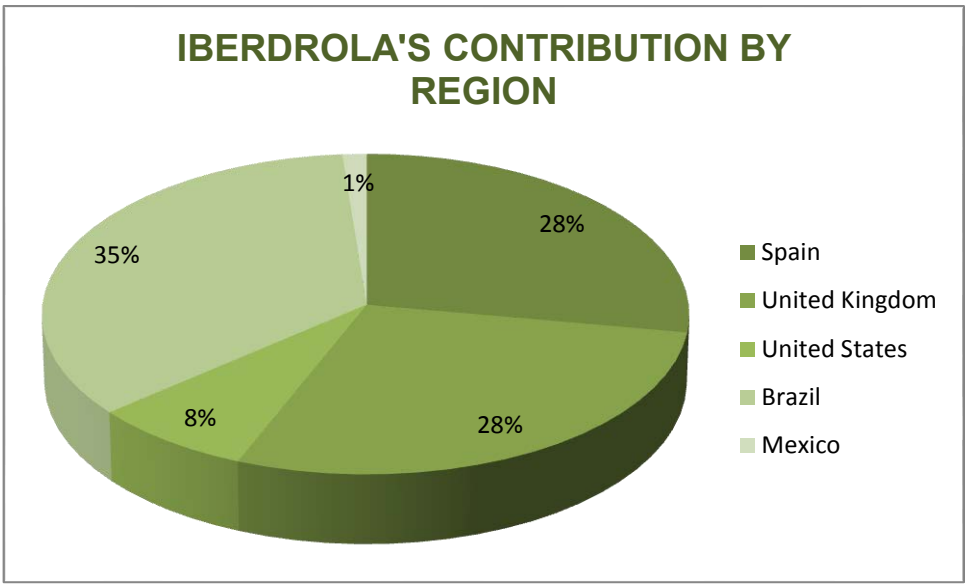
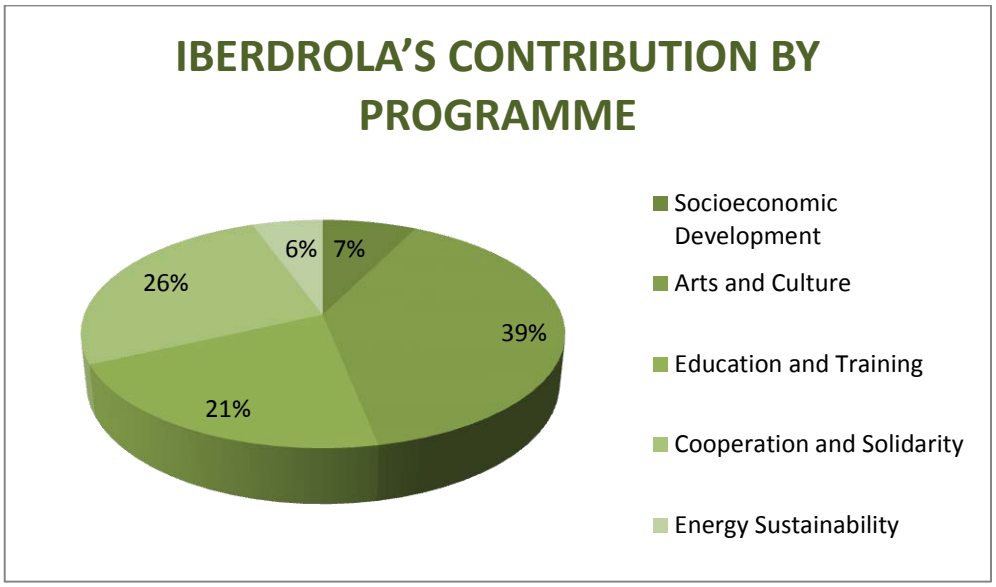

IBERDROLA'S CONTRIBUTION BY REGION
1%
28%
35%
8%
28%
Spain
United Kingdom
United States
Brazil
Mexico


IBERDROLA'S CONTRIBUTION BY PROGRAMME
6%
7%
26%
39%
21%
Socioeconomic Development
Arts and Culture
Education and Training
Cooperation and Solidarity
Energy Sustainability

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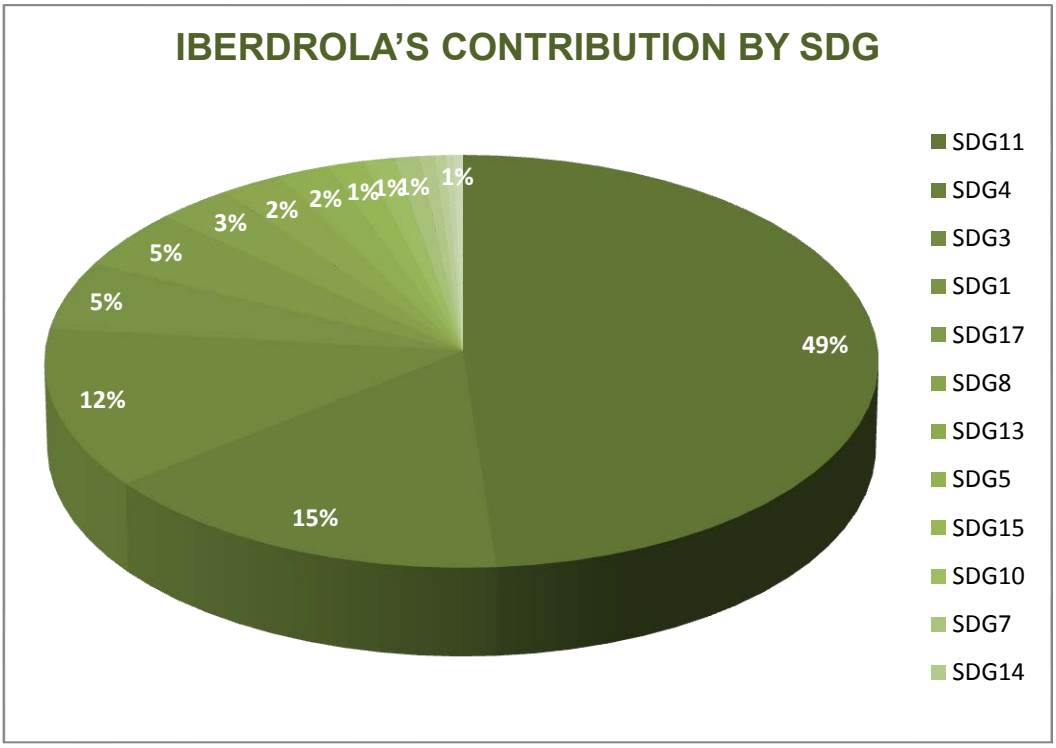
Also, for the second year in row, Iberdrola has evaluated the SDGs and targets to which each of its social initiatives contribute, as shown in the following table:

Contribution to the community in 2018	(euros)
By Sustainable Development Goals (SDGs)[98]	
- 1. End poverty	2,581,838
- 2. Zero hunger	10,329
- 3. Good health and well-being	6,032,889
- 4. Quality education	7,480,624
- 5. Gender equality	1,032,313
- 6. Clean water and sanitation	23,262
- 7. Affordable and clean energy	487,559
- 8. Decent work and economic growth	1,475,338
- 9. Industry, innovation and infrastructure	155,311
- 10. Reduced inequalities	612,753
- 11. Sustainable cities and communities	23,574,742
- 12. Responsible consumption and production	149,664
- 13. Climate action	1,208,086
- 14. Life below water	287,244
- 15. Life on land	717,875
- 16. Peace, justice and strong institutions	220,445
- 17. Partnerships for the goals	2,273,652
Total	**48,323,924**



[98] The breakdown of contributions to the community by SDG covers 96.5% of the figure reported, as it is not in all cases possible to establish a link between the initiatives and their contribution to an SDG.

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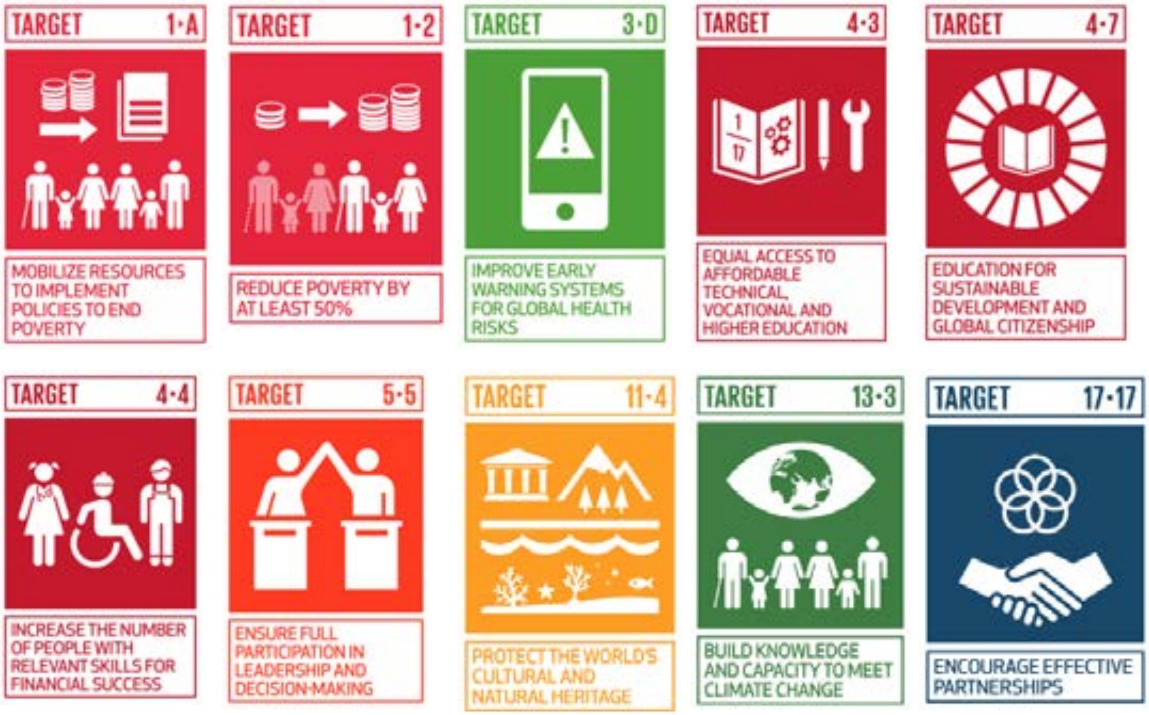
The 10 targets for which the most contribution has been made through social actions in 2018 are described below:



Benefits for society

Iberdrola uses various parameters to measure the results achieved by its community support programmes. In its Master Plan for the 2019-2021 period, Iberdrola's foundations have among their guidelines the development of evaluation mechanisms that include a methodology adapted from LBG to measure outputs and impacts for its most important programmes and projects which include direct contributions to the Sustainable Development Goals.

In 2018, Iberdrola's foundations forged multiple alliances in Spain, the United Kingdom, the United States, Brazil and Mexico covering a total social investment of 9.3 million euros for its commitment to society in these areas of work:

- **Training and Research**: this area of work focuses on a group of young students, supporting their degree studies, technical training and languages. Education is a useful tool to promote sustainable development and these initiatives offer opportunities to youth with good academic backgrounds who do not need financial resources to engage in their studies. These projects of Fundación Iberdrola linked to training contribute to achieving SDG 4 Quality education with an investment of 1.3 million euros.

- **Biodiversity and Climate Change**: from this work area there is work with public institutions and entities dedicated to protection of the environment, contributing to the scope of specific targets of SDGs 13 Climate action and 15 Life on land with an investment of 1 million euros.

- **Art and Culture**: from this area there is work with cultural institutions, prestigious museums, public institutions and religious entities in order to promote culture and restore and conserve artistic heritage, favouring local development. This directly impacts Goals 8 Economic growth and 11 Sustainable cities and communities with an investment of 2.2 million euros.

- **Social Action**: from this area there is work with non-profit institutions, foundations and development agencies to boost social and humanitarian projects focused on the most vulnerable people and that contribute to reaching the specific goals of SDGs 1 End poverty, 3 Good health and well-being, 5 Gender equality, 7 Affordable and clean energy and 10 Reduced inequalities with an investment of 3.5 million euros.

GENERAL OBJECTIVES (GO)	WORK AREAS	SDGs
1. Support training and research generally, prioritising innovation to contribute to energy sustainability	Training and Research	4 QUALITY EDUCATION
2.Support protection of the environment and improvement of biodiversity, to actively contribute to the fight against climate change	Biodiversity and Climate Change	15 LIFE ON LAND
3. Protect and safeguard artistic and cultural heritage: promote conservation and restoration, driving local development.	Art and Culture	11 SUSTAINABLE CITIES AND COMMUNITIES
4.Cotribute to sustainable human development, supporting the most vulnerable people and groups	Social Action	1 NO POVERTY
5.Promote partnerships that allow for actions to reach the SDGs, associated with actions by the Foundations within the Local Context.	Partnerships for the SDGs	17 PARTNERSHIPS FOR THE GOALS

Benefits for the company

Iberdrola believes that the main benefits that it obtains from its commitment to society are:

- Building and reinforcing relationships of trust with communities, through the support of social organisations and national, regional and local governments, which has a favourable impact on relations with all of the Stakeholders.
- Achieving higher brand recognition and improving its corporate reputation.
- Improving employee satisfaction, by their belonging to a socially valued and recognised company, which favours the attraction and retention of talent.
- Strengthen focus of social action for Iberdrola's Stakeholders and for society in general.
- Contribute to the scope of the larger global challenge, the Sustainable Development Goals.
- Contribute knowledge, technical experience and skills for human development.

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Corporate volunteering programme

The Iberdrola group offers its workforce various volunteer opportunities within the framework of its Corporate Volunteering Programme, in which more than 3,500 employees participated during 2018. Created in 2006, it is today a global and international project aligned with the values of the group and its *General Sustainable Development Policy,* which is intended to channel the employees' spirit of community service (solidarity) and motivate them to participate in social projects aimed at the integration of vulnerable groups, improving the environment and sustainable development.

The Programme is aligned with the Sustainable Development Goals defined by the United Nations for the 2015-2030 horizon, and especially focused on goals 3 (good health and well-being), 4 (quality education), 7 (affordable and clean energy), 10 (reduced inequalities) and 13 (climate action). This year the programme was recognised with an Innovation Award during the IMPACT2030 summit, held at the United Nations Headquarters in New York. This award recognises the innovative approaches of companies that make the most of their human capital, through corporate volunteering programmes, to move forward in achieving the Sustainable Development Goals (SDGs). Specifically, Iberdrola was selected for being a company that innovates to educate, inspire and unite employees around the SDGs in their community, and provides opportunities for them to be agents for change and achieve an impact, as well as for its exceptional commitment to move volunteers to action on the SDGs.

Also, this year, Iberdrola became part of the governing board of Voluntare, the most important Spanish-speaking international corporate volunteering network, with a presence in both Spain and in Latin America. With this decision, the company strengthens its commitment to Corporate Volunteering as a sustainable development tool.

Iberdrola has also maintained its leadership in the Corporate Volunteerism Observatory together with the NGO Cooperación Internacional, an initiative that, since its inception, promotes study, research and training and promotion activities relating to corporate volunteerism, with the goal of helping corporations make appropriate decisions in this area.

Some of the more noteworthy corporate volunteer initiatives carried out in 2018 were the following:

- The seventh edition of the global INVOLVE (International Volunteer Vacation for Education) project, which has offered training in new technologies to youths at risk of exclusion, with a two-week stay over the summer in Brazil or Mexico, respectively, of an international team of 34 volunteers from Spain, the United Kingdom, the United States, Brazil and Mexico, supported by local volunteers as an intercultural link.
- National and international volunteer days were organised, including International Volunteer Day held simultaneously in Spain, the United Kingdom, the United States, Brazil and Mexico which, under the motto *Together we build the world that we want!*, brought together more than 1,800 participants in more than 60 simultaneous initiatives, directed towards the fight against climate change, the inclusion of vulnerable groups and raising awareness about diversity. Volunteer Days were also held in Spain, with games and sports days to encourage the normalisation and integration of persons with functional diversity.
- Cooperation initiatives for development in African countries, within the framework of the "Electricity for All" programme, and its public-private cooperation project to improve electric power supply at several refugee camps in Ethiopia, which has commenced its second phase. At the same time, the company worked on another initiative to improve access to

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water through photovoltaic solar systems at refugee camps in Kenya, Mauritania and Sudan.

- "Iberdrola with Refugees" has continued giving support to the Integration Schools, promoted by Fundación para el Fomento del Desarrollo y la Integración (FDI), where 104 refugees have been able to take advantage of digital tools workshops in 2018, in addition to training in the Spanish language and adjustment to the environment. These workshops have expanded their humanitarian emergency response to include a group of refugees from the Aquarius vessel who arrived in Spain, and culinary integration days have allowed for cultural exchange at various Spanish cities.
- Other international initiatives in which the company participated were "Lights... and Action!" together with Fundación Tomillo to provide energy efficiency training and develop the employability of youths from underprivileged environments, and "Know your Laws", which has favoured the integration of immigrants through courses offered by company employees with legal training. In the United Kingdom, several volunteers have made available professional knowledge on marketing or administrative work, respectively, to the social entities Glasgow Building Preservation Society and Ronald McDonald House.
- Climate action continued with global projects such as "Fight against climate change" in Spain, Mexico, Brazil and the United Kingdom to raise awareness among youth on this problem through talks at school centres, and training was offered to 6,408 children at 77 centres. "Climate Volunteers", together with AIESEC, had 29 participants from the 5 countries where the company has a presence, who had the opportunity to live a volunteer experience in Brazil, Colombia and Costa Rica to create environmental awareness in various communities.
- Environmental care activities, cleaning of invasive species and reforestation in various cities in Spain, the United Kingdom, the United States, Brazil and Mexico, such as the 11th Tree Day in Spain, which has allowed for recovery of the Urdaibai (Biscay) Biosphere Reserve and thus continue with the "Iberdrola Forest" project, and participation in SEO/BirdLife's "LIBERA" initiative together with Ecoembes, with its large cooperative trash collection at various points in Spain to raise awareness concerning nature without trash.
- Projects to offer a new life for unused objects, such as "Solidarity Recycling", combining solidarity and environmental ends, which has continued to collect plastic plugs and has expanded the scope of its activities by including the collection of prescription glasses for donation to refugee camp inhabitants in Lesbos (Greece).
- Sports competitions with environmental ends, such as the ECORUN race.
- International food collection campaigns, which have allowed for the collection of more than 6.5 tons of basic foodstuffs and children's products. This activity ended with volunteer activities at social canteens and distribution of food to homeless persons.
- The company participated in various sports competitions aimed at the integration of vulnerable groups, such as the "Capacities Race", "Run for Syria", "Final Four. First National Wheelchair Basketball Competition, HePA Race and various races to support cancer victims, such as the Race against Cancer to support the Asociación Española Contra el Cáncer, "Mexico Special Olympics for integration", "11th Nobody Gives Up Here Race" to support Mexican children with cancer, and the "I run VS Cancer" race.
- Activities to promote the independence of vulnerable women, such as the "Women with their Own Light" Literary Workshop, or a sports day adapted for women with functional diversity for Women's Day.
- Childhood support activities with various entities such as Aldeas Infantiles, the Asociación Española de Ayuda a Niños con Enfermedades Hepáticas y Transplantados Hepáticos

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(HEPA) in Spain, the Red Cross in the “Their rights at stake” campaign or “Solidarity Tree” which has offered support for more than 10 Brazilian institutions to assist the minors who are part of their programmes. There are also other activities in Mexico and the United Kingdom.

- Participation in the International Corporate Volunteering Week which, under the “Give & Gain” motto, offers visibility and promotes the role of corporate volunteering as an agent for social change.

The company continues its links with the main international work groups and volunteer associations, such as Voluntare, EVEN (Employee Volunteering European Network), IMPACT 2030 and IAVE, participating in their International Conferences, where we share our volunteering good practices.

The *Volunteer Portal* continues to be the meeting point for all professionals of the group interested in social and community service actions, using a global and trilingual website. The *Volunteerism Newsletter* has provided weekly information on activities.

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Foundations

ScottishPower Foundation, Avangrid Foundation, Fundación Iberdrola México, Instituto Neoenergia and Fundación Iberdrola España represent Iberdrola's commitment to sustainable development in the countries in which it does business. Pursaunt to the Master Plan, the foundations have updated their mission, vision and values to include among their purposes and principles the contribution to the achievement of the Sustainable Development Goals (SDGs). The 2030 Agenda, promoted by the United Nations General Assembly, provides a unique opportunity for global transformation leading to more inclusive and sustainable development models. Along these lines, the foundations prioritise their focus on sustainable human development in order to define objectives linked to programmes and specific aims under the SDGs and to contribute to fostering positive changes for the most vulnerable people and for the planet. It should also be noted that they engage in specific collaboration with other cultural, social, scientific and cooperation institutions in all of the countries.

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The charts below show the economic impact of the activities of Iberdrola's foundations by global achievement and by country during 2018 (also shown in the social contribution figures in accordance with the LBG Model previously reported upon in this chapter):

Activities of Iberdrola Foundations by area of activity (€ millions)	2018
Training and research	1.3
Climate change	1.0
Art and culture	2.2
Solidarity and cooperation	3.5
Institutional collaboration	1.3

Activities of Iberdrola Foundations by country (€ millions)	2018
Spain	5.5
United Kingdom	1.2
United States	2.1
Brazil	0.3
Mexico	0.3

The results and achievements by country are available in Annex 1 – Supplementary information.

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Training and Research Area: aids for course studies, scholarships and research

The new foundations Master Plan now takes a fresh approach in order to advance equality of opportunity for access to education by means of a new Support Programme for course studies that includes the following projects:

In the United States:

- *KVCC Lineworkers* in the training of electricians in Maine, through scholarships in the CMP Lineworker Technology Programme, to train specialists while prioritising the inclusion of young women in the energy sector.
- *Monroe Community College Foundation – Salute to Excellence* (Rochester): scholarships for underprivileged students, giving them the opportunity to complete their higher education and overcome barriers to complete their university studies.
- *Binghamton University Foundation*: two-semester course in which the students participate in real engineering projects, together with Binghamton University, the Kopernik Observatory and Science Park, the Chesapeake Alliance Discovery Centre for the Protection of the Alaskan Malamute, Broome Humane Society, Willow's Wings Animal Sanctuary & Rescue, and The Community Foundation Greater New Haven.

In Mexico:

- There is a programme of collaboration with the Tecnológico de Monterrey University at its Altamira campus for the education of low-income youth in bachelor's and engineering degrees.

In Spain:

- Initiatives for linguistic immersion in English: the aim is to teach English to school students in their 3rd and 4th years of Compulsory Secondary Education. The selection of the students is made by the Education Department of several Autonomous Communities that participate in the programme, according to objective criteria of academic excellence and financial resources. The programme promotes and facilitates the participation of students in rural areas, given that this is the profile of student that finds it most difficult to access this kind of training. Iberdrola offers its facilities over the summer and Easter periods as a venue for these courses. A total of 80 students and 22 teachers have participated in the summer courses in Castile and León, Extremadura and the Valencian Community.

This area also benefitted from scholarships and research grants in 2018:

- Fundación Iberdrola México has awarded a total of 13 scholarships to underprivileged students at the Altamira Technical Training centre with the aim of achieving the inclusion of these vulnerable youths.

- Instituto Neoenergia in Brazil has awarded 9 scholarships in order to allow youths to pursue an international master's degree, thus promoting the training of high-level professionals who are capable of contributing to the development of a sustainable energy service.

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- Fundación Iberdrola España has awarded a total of 56 scholarships and grants, 20 of which focus on energy and environmental research. A call for scholarships has also been launched through Fundación Carolina to pursue energy and environment master's degrees at Spanish universities, and 2 Fullbright scholarships have been awarded for energy and environment master's degrees.

  In collaboration with ICAI - Universidad de Comillas, Iberdrola has announced a call for 9 scholarships for undergraduate students in order to help with their studies. There are also scholarships for leading museums: 3 for restoration and conservation at the Prado Museum and 2 for the Bilbao Museum of Fine Arts. In the area of sports, the foundation continues to support the Paralympics by awarding 10 support grants to undergraduate sportspeople.

The company also manages other training programmes, as set forth in greater detail in the "Creation of employment and salaries" section of chapter II.1

Biodiversity and Climate Change Area: conservation of birds, habitats and ecosystems

In Spain, particularly noteworthy is the Migra project, aimed at monitoring the movements of migratory birds, in collaboration with the Spanish Ornithology Society SEO/BirdLife. At the end of 2018, the programme has 946 birds tagged from 32 different species. During the financial year, 10 Montagu's harriers have been tagged, and information has been downloaded about the lesser kestrels tagged with nano-GPS last year with the collaboration of Grefa, the Córdoba Zoo and the City Council of Alcalá de Henares. Finally, several days were devoted to recapturing common and pallid swifts tagged in prior years, with two birds having been recaptured in Barcelona.

Another important initiative is the signing of a collaboration agreement with the Fundación para la Conservación del Quebrantahuesos (Bearded Vulture Conservation Foundation) with a view to studying the influence of climate change on this and other alpine birds. In 2018, 39 boxes were installed to capture insects, and for 72 nights hematophagous mosquito traps were set using ultra-violet light and CO_2 as attractants. 32 samples were obtained, which were taken to the University of Veterinary Medicine of Zaragoza, where they continue to be studied.

In the United Kingdom, support is given to the Dolphin Watch project for the protection of dolphins at the Sussex Wildlife Trust. The Foundation supports the 50th anniversary of this education centre and nature reserve with outreach and awareness-raising projects regarding the conservation and care of habitats.

In the United States, support has been given to Riverkeeper in New York, an initiative to help transform the Jettie S. Tisdale school, Johnson Oak Park in the impoverished East End of Bridgeport. It highlights the evolution and importance of parks in terms of urban biodiversity, human health, access and equality, the economy and other benefits. In partnership with the City of Bridgeport and other Stakeholders, efforts have centred around engaging the community in designing the restored green space known as Park City.

On land located near the Industrial Port zone of Altamira in Mexico, a project is being promoted that is devoted to the conservation of Felines, which aims to guarantee the survival of a number of jaguars, jaguarondis, ocelots and bobcats that inhabit the region. Progress has been made in the creation and demarcation of biological corridors facilitating the safe passage of these animals in danger of extinction.

The conservation of the Mangrove is another of the projects promoted by Fundación Iberdrola México to ensure the survival and encourage the increase of flora and fauna in the mangrove

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ecosystem through constant monitoring, research and demarcations that ensure permanence there. Another initiative is the conservation project Parque Estatal Cañón de Fernández, in partnership with PRONATUR in the Fernández Canyon, to protect biological and ecological processes in the area and provide environmental services in the ecosystems of the state park.

Of note in Brazil is the *Flyways* project for the conservation of wader birds and endangered species. In collaboration with *Save Brazil*, support is also given to a project devoted to the conservation of endangered birds in the area of Río Grande do Norte. The last census carried out yielded 4 species of endangered wader birds, a total of 306 specimens. Finally, outreach activities have been developed regarding wader birds and the importance of conservation of their habitat, for students and teachers of the *Maria Salete Martins* School.

Eco-citizen: building a sustainable future is another initiative in Brazil that focuses on training professionals in sustainable technology systems and their roll-out in communities that are socially at risk. The project includes training activities for professionals in the area of eco-construction, through free courses for training and implementation of sustainable technology systems in socially vulnerable communities. In order to promote this social initiative, a community vegetable garden was started, using sustainable techniques.

Art and Culture Area: programmes for lighting, restoration and support to museums

The Iberdrola Foundations Lighting Programme is mainly focused on improving the interior and/or exterior lighting of remarkable buildings, to showcase the historical-artistic heritage. The use of new LED technology entails a series of advantages such as improving conservation, increasing energy efficiency (on average 75% more than conventional bulbs) and reducing maintenance expenses thanks to a much longer-lasting useful life. In addition to the artistic, economic and environmental benefits, one must add the potential of these projects that favour economic activity, facilitating local development around the historical-artistic heritage. The most significant projects in 2018 were the following:

- In the United States, Avangrid Foundation has sponsored lighting projects in the Morgan, Hilles, Austin and Wadsworth 301-303 galleries, replacing 2,625 bulbs with LED technology.
- The Foundation in Mexico champions the MUNAL Programme to light halls in Mexico's National Museum of Art (MUNAL), improve energy efficiency and play a role in conserving the works of art in this museum.
- The Foundation in Spain has launched and completed quite significant projects in 2018: exterior lighting on the façade of the Monastery of Uclés, decorative lighting of the Royal Pantheon at San Isidoro de León Collegiate Church, the Military Museum in Toledo and the restoration workshop at the Royal Tapestry Factory using the latest LED technology. Work continues on the projects of the Ávila Cathedral, the Salamanca Cathedral, the Fonseca School, the Talavera Basilica, the Barrena Palace in Ordizia, Valdepeñas Church and the Supreme Court in Madrid.
- Instituto Neoenergia has been the driving force behind the projects for lighting of the Cinco Pontas Fort in Recife and for restoration of the Barra Grande Fort in Guaruja, Brazil.

Also in Spain, the Iberdrola Museum Programme collaborates with the Restoration Workshops of the Prado Museum and the Bilbao Museum of Fine Arts for the conservation of paintings, sculptures and works of art on paper at their art galleries. This museum has also promoted the Art to Touch Programme for persons with disabilities, especially those who are visually handicapped.

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Another significant restoration initiative is the Atlantic Romanesque Plan involving church buildings in Spain and Portugal.

Within the scope of the Restoration Programme, the following projects have been completed: Tapestries of the Royal College of the Patriarch, the altarpiece of the Cuenca Cathedral, the codices of the Yuso Monastery Library and the restoration of the three flags of Saigon owned by the Naval Museum of Madrid. In the last months of 2018, work has started on a project to restore the altarpiece of the church of San Martín de Tours, in Villarmentero de Campos, Palencia.

The Exhibitions Programme has had two main initiatives: in Spain, the exhibition Sorolla and Fashion with simultaneous and complementary exhibits at the Sorolla Museum and the Thyssen-Bornemisza Museum. The exhibition brings together more than seventy paintings from museums and national and international private collections, some of them never previously exhibited to the public, together with a significant collection of period dresses and accessories, with valuable pieces also loaned by prominent institutions and private collections, many of them previously unseen.

In Mexico there has been a temporary exhibition of European and Novohispanic paintings promoted by the Foundation in Mexico and the MUNAL Museum under the title *Caravaggio. A work, a legacy*. Another exhibition promoted by Iberdrola's foundation in Mexico is *Nahui Olin. La mirada infinita*, showcasing a representative collection of the Mexican avant-garde artist María del Carmen Mondragón, with collaborators being invited to the opening and enjoying a guided tour round the temporary exhibition.

The Art and Culture Outreach Programme has the ScottishPower Foundation as a point of reference. The following initiatives were supported in 2018:

- The international scenic arts festival Futureproof, aimed at young people from different backgrounds and communities. This is a multi-artistic and multi-platform space that will be set up in ten areas in Scotland and will be shared with the rest of the United Kingdom via social networks.
- *Art Promotion Llangollen International Musical Eisteddfod* is based on previous work to promote art education, reduce inequality of opportunity and make Eisteddfod a truly inclusive event. This project will improve the skills and confidence of participants that face difficult circumstances and will result in the creation of a unique music and dance presentation that celebrates diversity. The project will also enhance the dimension of culture, beliefs and community commitment, and will promote respect and understanding.
- National Museums Scotland. Powering Up 2.0. Financing will make it possible to improve the successful *Get Energized* programme, recognised by teachers as an excellent and attractive initiative to promote and disseminate cultural activities in Edinburgh.

Among the projects implemented by Avangrid Foundation, the following cultural events are particularly noteworthy: The *International Festival of Arts & Ideas* (Connecticut) aimed at creating and producing plays with a special focus on community education and engagement, and the Rochester Area Community Foundation/*Rochester International Jazz Festival* (New York), which is internationally acclaimed, attracts a large and diverse audience and celebrates and develops the local community. Finally, through Barrington Stage Company (Massachusetts), Avangrid Foundation develops the *Playwright Mentoring* theatre programme, which offers teenagers at risk (13 to 19) a safe place where they can talk about the serious

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challenges in their daily life, using their own life stories as a basis for creating original plays. The project provides participants a protective space for young people.

Cooperation and Solidarity Area

Iberdrola's Foundations consolidate their *Social Programme* in order to contribute to improving the quality of life of the most vulnerable groups, with a special focus on childhood, youth and women. The programme works with non-profit institutions devoted to eradicating child poverty, fostering education as a useful tool for youths, promoting the social inclusion of persons with disabilities and improving the quality of life of persons who are seriously ill and their families.

Spain:

In 2018, 52 alliances have been entered into with non-profit social organisations and local institutions to provide support to 22 solidarity initiatives and promote 35 finalist projects, with an investment in excess of one million euros and a positive impact on 65,000 beneficiaries, which has entailed the creation of one hundred direct jobs. The programme works along three lines of action, and the following are the most significant collaboration projects:

- Projects to eradicate child poverty:
    - Asociación Ciudad Joven: school support, leisure and free time for the social inclusion of children.
    - Fundación Balia por la Infancia: "Aula BALIA" for boys and girls at risk of social exclusion.
    - Candelita: "Conduce a tu futuro" ("Lead your future"): guidance, training and support for vulnerable women to facilitate access to employment.
    - Fundación Altius: "Jóvenes en la cocina" ("Youths in the kitchen"): social and occupational inclusion of 250 unemployed youths at risk of exclusion.
    - Fundación Tomillo: training in energy efficiency aimed at vulnerable youths as drivers of social change.
    - Ayuda en Acción: "Re-Ilumina": equality of opportunity for quality education.
    - Amigó: "Proyecto conviviendo" ("Living together Project"): prevention of violence among teenagers and their families in the Basque Country and Madrid.
    - Ilundai Haritz Berri: "Bizi-Baso", the forest of life: support for the social and occupational inclusion of vulnerable youths.
    - Bizitegi: temporary lodging for homeless women.
    - Columbares: comprehensive service for socially vulnerable children in the municipality of Murcia.
    - Fundación Anar: involvement with children, victims of gender-based violence through the ANAR phone line.
    - Save the Children Foundation: fight against child poverty and social and occupational inclusion for children, teenagers and families.

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- Projects focused on the autonomy of persons with disabilities:
    - Upacesur: medical-functional rehabilitation of children and youths with cerebral palsy and other multiple disabilities.
    - Fundación Síndrome de Down: training and occupational integration project. Social entrepreneurship as a component of personal development and the occupational inclusion of youths.
    - ADSIS: support services in the transition to adult life for youths at risk of social exclusion.
    - AMICOS: training for persons with disabilities.
    - ASPRODEMA: “Tendiendo puentes a la comunidad” (“Building bridges with the community”), support resources centre for the promotion of personal autonomy.
    - ASOCIDE: “Guides-Interpreters for deaf and blind persons – communication is possible”. Support for deaf and blind persons in their daily activities with the help of specialised guides-interpreters.
    - ANFAS: model centred around families and natural contexts with a focus on early care (3 to 6 years).
    - GUREAK: “Nuevos pasos” (“New steps”), a social and occupational inclusion of persons with disabilities.
    - ASIDO: “Quiero vivir mi propia vida” (“I want to live my own life”), a project promoting personal autonomy in persons with intellectual disabilities.

- Projects to improve the quality of life of seriously ill persons:
    - ASPANION: psycho-social and financial support for children with cancer and their families.
    - AMAMEC: “Mucho por vivir” (“A lot to live”), psychological, physical and social care for women suffering from breast cancer.
    - AECC: emergency social and psychological care for families at risk of social exclusion due to oncologic disease.
    - Menudos Corazones: integration programme based on leisure and free time for children, teenagers and youths with heart disease.
    - Proyecto Hombre: various types of collaboration with institutions engaged in the Proyecto Hombre programme and which develop projects focusing on therapeutic intervention in cases of comorbidity, addictions and psychiatric disorders; learning and service programme for the promotion of leisure among young people; dual approach to the treatment of persons affected by addictions; treatment and reinsertion programme for persons with alcohol addiction problems.

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In the United Kingdom:

- Alzheimer Scotland: The *Dementia Friends* programme aims to foster the public's understanding of and empathy towards this disease, so that persons suffering from dementia feel supported, accepted and welcome in their communities.
- Bangor University: The ReachingWider association focuses on higher education for vulnerable people in Wales. Its *Bright Sparks* initiative aims to encourage and inspire students and help them achieve their potential in the science, technology, engineering and mathematics (STEM) schools across the six regions in North Wales.
- Adventure for All: The Bendrigg Trust is an outdoor education centre specifically for disabled people. Its goal is to help them integrate into society, achieve independence and become healthier through adventure activities and spending time away from home.
- Live Music Off the Grid! The project involves providing live music at health centres and hospitals in remote areas such as the Scottish Highlands & Islands, Dumfries & Galloway, Kintyre, Cumbria, Northern Ireland, Wales, Devon and Cornwall.
- Prince & Princess of Wales Hospice: Provides specialised free palliative care in Glasgow to terminally ill patients, offering support to their families and carers.
- The Manchester Young Men's Christian Association: Backing of the Mental Health Champions project targeting young men to halt the rise in mental health problems. It also helps young men's parents, teachers and employers to provide better support.
- The Outward Bound Trust: This project enables young people to get involved in community activities by spending five days at the Loch Eil centre. Everyone taking part is to attend an event to share their experiences with friends and families, and 6 young people will be chosen to take part in a summer programme.
- The Great Steward of Scotland's Dumfries House Trust. *Engineering Education Programme.* The Engineering Education Centre provides indoor and outdoor experience-based learning for early primary school and secondary school students. The financing will help pay for students' school visits in South West Scotland and will contribute to their development and growth. It will also support family/public participation events. The aim of the programme is to reach a wider geographical area and also encourage the participation of schools that did not have the chance to take part in STEM activities in the past.

In the United States:

- *Operation Fuel*: Ensures that struggling families have access to year-round energy assistance in more than one hundred towns across Connecticut. Local government and community-based organisations take part in this project. It includes other activities to guarantee basic needs such as distribution of food, clothes, etc.
- Yale New-Haven Hospital (Connecticut): Ongoing support for the Yale-New Haven Hospital McGivney Center for Musculoskeletal Care, which provides specialist care and the best relief possible for patients with chronic diseases. The hospital has a specific mission to meet the needs of the most vulnerable people.
- United Way Worldwide - Trust - Employee Match (Connecticut & Massachusetts): Support for community-based organisations that encourage volunteering for the common good.
- *Working for Worcester* (Massachusetts): Improvements to recreational infrastructure and school facilities, parks, community centres, sports fields and other leisure/free time spaces in Worcester.

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- Urban League of Rochester: Early Acquisition programme for transition from secondary school to university, by means of which young people from minority and disadvantaged groups are provided with training for university, work and life. The mission of the *Urban League of Rochester*, New York is to enable Afro-Americans, Latinos and other disadvantaged persons to secure economic self-reliance and to guarantee civil rights, removing all barriers to equal participation in the economic and social mainstream of America.
- Chelsea Hicks Foundation: Therapeutic play project for more than 2,400 children and their families every year in local hospitals.
- *Progress Center*: The project offers students at risk or from low-income households in the Oxford Hills area new backpacks and school supplies to start the new school year.
- Food Bank of Western Mass., to significantly reduce food insecurity among residents of the counties of Berkshire, Franklin and Hampden.
- Ronald McDonald House of Connecticut and Western Massachusetts: Refuge home for children receiving medical treatment and their families. It helps to create a homely atmosphere, to have a wide variety of supplies to choose from to prepare breakfast, lunch and dinner for the families, and is essential to ease the financial burden of having to buy all food out, thus enabling the families to focus on what matters most: the health and well-being of their children.

Mexico:

The Asociación Civil Excelencia Educativa offers boys and girls a participative space where they can be active subjects in the learning process, enjoying new ways of approaching knowledge. This initiative was carried out throughout 2018 in 11 schools located near Iberdrola plants and installations.

Brazil:

Particularly significant is the *Jovens Brilhantes* (Young Brilliant People) project, to help children and adolescents in the state school system develop the skills and competencies needed for the 21st century. Target subjects are STEM (science, technology, engineering and mathematics) and a nurturing and interactive approach is taken to meet the real challenges faced in society. The institute also collaborates with UNICEF and the Ayrton Senna Foundation on projects helping children at risk.

International Cooperation Programme for Human Development

The International Cooperation Programme addresses humanitarian crises and promotes multi-sector alliances in order to foster sustainable development and overcome situations of extreme poverty through the electrification of basic social infrastructures (schools, health or community centres, etc.), with education and technical training components that promote productive and local development actions and the provision of help in humanitarian emergency crises. The most significant alliances are:

PUBLIC

- The SHIRE Alliance, promoting access to electricity in refugee camps. This initiative is promoted by the Universidad Politécnica de Madrid, and also has the support of the UNHCR, AECID and the European Union.

- ILUMEXICO contributes to the development of marginalised communities in Mexico where there is no access to the national electricity grid or where the service they receive is poor. Infrastructure and community work programme relating to renewable energy.

- Migrant Children Alliance in Sahel: led by Save the Children, it promotes a system for the protection of migrant boys and girls through a network of care and training centres in Mauritania with the participation of the European Union.

As regards humanitarian emergencies, mention should be made of the negative impact of Hurricane Harvey, which affected Florida's most vulnerable population. In the United States, the company continues to collaborate with the Red Cross (American Red Cross Disaster Relief) to help victims and contribute to reconstruction in the affected areas of Puerto Rico.

Institutional collaboration

Finally, the Foundations engage in specific collaboration with other cultural, social, scientific and cooperation institutions in the respective countries.

PUBLIC

Iberdrola and the Global Compact

Iberdrola has been a member of the Global Compact since 2002, undertaking to support, promote and disseminate its ten principles regarding human rights, labour practices, the environment and the fight against corruption, both internally and within its area of influence. During these years, the company has continued to further develop the policies and practices proposed by the Compact, which it has made public through its annual *Sustainability Report* and its corporate website.

Since 2004, as a founding member, the company has belonged to the Red Española del Pacto Mundial (Spanish Global Compact Network), and has prepared progress reports on compliance with the principles of the Compact, which are publicly available both on the website of the Red Española del Pacto Mundial and on the UN Global Compact website

During 2018, Iberdrola took in the following actions in connection with the Global Compact:

- Submission of the Progress Report 2017 on compliance with the principles of the Compact, rated at the highest level for this type of report ("*GC Advanced*").
- Attendance at the 2018 General Assembly of the Red Española.
- Iberdrola and the Red Española del Pacto Mundial have developed the *Moving for Climate NOW* initiative, within the framework of the COP24 Climate Summit held in Katowice (Poland) in November 2018.
- Iberdrola participated with the Global Compact on numerous initiatives to promote and develop the Sustainable Development Goals, which can be seen in the "Iberdrola's contribution to the SDGs" section of Chapter I. About Iberdrola.
- Active collaboration in promoting sustainable finances and creating robust sustainability reporting frameworks through participation in the Platforms on *Financial Innovation for the SDGs* and *SDG Reporting*.
- Encourage the global process of climate action in its role as a sponsor of the Pathways to Low-Carbon and Resilient Development Platform. In this area, also quite noteworthy is Iberdrola's contribution to the preparation of the "Ambition Loop" report, focused on generating dynamics to increase ambitions in the area of climate change, and participation at meetings and events held at the principal climate change milestones during 2018 (Katowice Climate Summit, New York Climate Week, etc.).
- Highest level of support for Global Compact events, with the participation of Iberdrola's chairman at the *UN Global Compact Leaders Summit* held within the framework of the United Nations General Assembly in September 2018.

As mentioned above and shown both in these joint activities and in its daily work, Iberdrola has linked the SDGs to its business strategy, and actively works with the Global Compact to contribute to the achievement thereof, within its scope of activities.

In 2019, Iberdrola will continue to actively participate in the activities of the Red Española del Pacto Mundial in a manner similar to the past year.

PUBLIC

II.6. Promotion of Socially Responsible Practices in the Supply Chain

PUBLIC

- Description of the supply chain
- Sustainable management of the supply chain

PUBLIC

Description of the supply chain

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The Iberdrola group's supply chain consists of two different processes:

- The acquisition of material and equipment and the procurement of works and services is the responsibility of the group's Procurement and Insurance Division.
- The acquisition of fuel, handled by the Wholesale and Retail Business.

Both processes are guided by the same principles emanating from the corporate policies and the *Code of Ethics*, which are approved by the company's Board of Directors. However, each of them has specific characteristics in their various phases: registration and classification of suppliers, bidding process, execution of contracts, monitoring of contractual terms, and quality control.

Acquisition of material and equipment and procurement of works and services

The mission of the group's Procurement and Insurance Division is to implement on a corporate and centralised basis the procurement of equipment and material (other than energy), as well as works and services and insurance programmes (other than life and casualty, health and pension insurance) for the entire Iberdrola group, meeting the strategic goals established by the Board of Directors.

"Efficiency in costs, strategic alignment with the Iberdrola group and ethics guide our procurement activity, contracting and management of operational risks"

The group's high purchase volumes are a driver of growth for those countries in which the company engages in procurement, favouring their business, industrial and social development through the creation of employment at service providers and their auxiliary industries.

PUBLIC

Iberdrola placed orders with approximately 23,300 suppliers during 2018. A breakdown of the economic and geographic volume is set out in the following table:

General supply of equipment, materials, works and services (€ millions)	2018[99]	2017	2016
Spain	1,564	1,406	1,354
United Kingdom	1,775	1,663	2,134
United States	1,945	2,467	2,146
Brazil	1,335	1,500	1,242
Mexico	957	902	453
Other countries	177	676	179
Total	**7,753**	**8,614**	**7,508**

The difference in the amount compared to 2017 was mainly due to the fact that there was invoicing for the turbines of the Wikinger offshore wind farm and turbines for wind farms in the United States during the financial year.

Acquisition of fuel

Iberdrola dedicated more than 3,300 million euros to the acquisition of natural gas, uranium and coal in 2018. The purchases of uranium are made in Spain and only through Empresa Nacional del Uranio (Enusa). Acquisitions of natural gas and coal are made on the international market, mainly through long-term commercial relationships with some 11 large domestic and international suppliers and market operators (producers and traders). Coal was only 1.3% of the total amount of fuel.

Spending on local suppliers

Iberdrola follows a local supplier strategy for its strategic contracting that has allowed for the creation of indirect employment and the maintenance of a strong industrial fabric in the countries in which it does business. The following table shows the percentage volume of procurement from local suppliers:

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Acquisition or contracting of materials, equipment, works and services from local suppliers[100] (%)	2018	2017	2016
Spain	85	88	93
United Kingdom	71	85	69
United States	97	98	98
Brazil	100	100	100
Mexico	69	60	66
Other countries	65	76	N/A
Iberdrola total	**85**	**88**	**84**

[99] Volume billed during the financial year. Amount awarded in 2018: €8,930 M.
[100] Based on the Tax ID or CIF assigned to the supplier, those registered in the main countries in which Iberdrola does business are considered to be local.

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Sustainable management of the supply chain

Contribution to SDGs of the performance described by the indicators of this section
(according to SDG Compass www.sdgcompass.org)

102-9 **GRI 204**

Promotion of sustainability amount suppliers

From the viewpoint of sustainability and responsibility, Iberdrola is market driver, encouraging suppliers to improve their environmental, ethical and social record through actions that foster excellence in their management, beyond mere technical quality, thereby helping suppliers become more competitive.

In the initial registration and classification of the supplier, sustainability has a weight of 40% in the total score, with the other 60% being its financial situation and technical solvency.

Supplier sustainability evaluation model: *CSR Scoring*

Iberdrola has a *CSR Scoring* model to evaluate its suppliers with respect to social responsibility, quantifying their relative position based on the suppliers' management in terms of social responsibility, so that there is a standard to differentiate them in tenders or contracting. Dimensions evaluated:

Leadership (20%)	Dialogue (15%)	Management Systems (45%)	Communication (20%)
• International CSR Initiatives • Good Labour Practices • Good Ethical Practices	• CSR Learning Platforms • Stakeholder Relations	• CSR Management System • Supplier Requirements • Quality System • Environmental System • Risk Prevention System	• Communication Platforms • Third Party Data Assurance

The evaluation provides added value to suppliers, allowing them to know the areas for improvement in order to focus their efforts in the area of social responsibility.

PUBLIC

The 2018 CSR scoring data[101] regarding the volume of purchases analysed (89% of the group's total procurement) are shown below:

Improvement goals have been established throughout the Procurement Division team relating to the increase in procurement with analysed suppliers and the increase in the percentage of procurement from A+ suppliers. Consequently, the supplier is motivated to improve its profile by actions promoting excellence in business management, as well as the Procurement Division being incentivized through quantifiable objectives to choose those companies showing good performance in social responsibility.

For those suppliers scoring B and A, a notice is sent and specific traction applied to their situation so that they try to improve to A+, causing the suppliers to commit during the year to improve the lesser developed areas.

During the financial year, there were 114 social audits of suppliers with an order during the year. Suppliers with "non-conformities" in the process have a specific period within which to rectify the deficiencies found.

During 2018, Iberdrola received no external complaints from authorised channels with respect to the supply chain, and has not cancelled any supply contract or order upon grounds relating to human rights, corruption, labour practices or environmental practices.

Procurement of fuel

Fuel procurement is also subject to the general principles of Iberdrola's sustainable development policies, which require the encouragement of suppliers to engage in activities that are socially responsible, respectful of the environment and prevent occupational risks.

Iberdrola carries out an internal evaluation of its main fuel suppliers in accordance with economic, logistics, environmental and social standards. Aspects assessed are: the existence of an environmental policy, information regarding CO_2 emissions, emission reduction initiatives, energy efficiency, biodiversity conservation, occupational health and safety, equal opportunity, human rights and ethical behaviour (anti-bribery and anti-corruption practices).

When establishing supply contracts, apart from agreeing on contractual elements that respect the law applicable in the countries involved in the transaction, Iberdrola negotiates the inclusion of clauses regarding sustainability. Currently, all contracts for imported coal and for uranium have these types of clauses. The inclusion of these clauses will be negotiated for the new natural gas contracts.

[101] "A+" suppliers above the average. "A" suppliers within the average. "B" suppliers below the average. Scope: Suppliers with orders during the year in an amount equal to or greater than 400,000 euros. November 2018.

PUBLIC

Iberdrola belongs to the international BetterCoal platform, which includes some of the leading European coal-purchasing energy companies. Its aim is to set a standard for ethical, environmental and social conduct; evaluate the conduct of producers through audits; create a database with the results of such evaluations; and improve producers' actions.

In the case of fuel procurement, there were no external complaints during 2018 through authorised channels with respect to the supply chain, and has not cancelled any supply contract or order upon grounds relating to human rights, corruption, labour practices or environmental practices.

Environmental assessment of suppliers

GRI 308 308-1 308-2

Alignment in Procurement and in supplier management with respect to the environment and sustainability:

Internal Procurement Mechanisms	
Procurement Policy	Sets out principles on the environment that suppliers must follow and sustainable and responsible management in the Iberdrola group's supply chain
Supplier Registration and Classification	Environmental certification will be weighted in the overall assessment of the supplier
Bid Process	The environmental assessment of the supplier is included during the ITEO (offer evaluation) phase and in the PA (proposed award) for purposes of the contract
Annual Improvement Goals	Innovative aspect: establish annual improvement goals for the Procurement team linking variable remuneration directly to the environmental improvement of suppliers
Global Environmental System	The Procurement Division is part of Iberdrola's Global Environmental System Committee: monitoring of environmental guidelines, established goals and related indicators. Audits.
Reporting	*Contribution to Sustainability* infographic and *Annual Procurement and Supplier Management Report* published on the corporate website

External Supplier Mechanisms	
Suppliers' Code of Ethics	Includes environmental principles Must be accepted by the Group's suppliers and is attached to orders and contracts
Specific T&Cs	Environmental clauses that suppliers must comply with during the term of the contract
Stimulus Campaigns	As a business driver, we proactively promote the environmental certification of the suppliers, supporting them in the search for excellence and generating a multiplier effect
Carbon Footprint Measurement	Annual supplier greenhouse gas measurement campaign
CSR Scoring	Includes environmental aspects CSR evaluation of suppliers, quantifying their relative position based on their management of this area
Supplier of the Year Award	Environmental category: this promotes the environmental responsibility of suppliers and publicly recognises those who stand out in this area

At the end of 2018, procurement from suppliers with a certified environmental management system represented 68% of all procurement from suppliers of general supplies. With respect to fuel suppliers, those with an environmental management system represented 90% of the suppliers evaluated.

100% of suppliers (both new and existing) of general supplies and significant suppliers of fuel are evaluated according to environmental and sustainability criteria.

The principal environmental risks are considered to be managed through the current management systems and the periodic audits that are performed.

No supplier with a significant negative environmental impact has been detected. Furthermore, Iberdrola does not have major suppliers located in areas with water stress.

PUBLIC

Supplier social assessment

GRI 414 414-1 414-2 407-1 408-1 409-1

The contracting terms of the group for procuring equipment, material, works and services, as well as the coal contracts, include specific supplier corporate social responsibility clauses based on the UN *Universal Declaration of Human Rights*, the conventions of the International Labour Organisation, the principles of the Global Compact and compliance with the Iberdrola group's *Code of Ethics*. In the case of other fuels, the company's goal is to include such clauses as new contracts are signed.

During the term of the contract, the supplier must allow Iberdrola to review the level of compliance with the principles established in the contracts, and if noncompliance is detected and corrective plans are not adopted, the company reserves the right to cancel the contracts.

100% of the suppliers of general supplies (both new and existing) and major suppliers of fuel (the majority under long-term contracts that are still in effect) are evaluated following such management approach, and their significant risks for labour practices and human rights in relation to their impacts on society are managed through the quality processes that have been implemented and through regular audits.

25.8% of general procurement has been made in countries in which there might be a risk of human rights violations, according to the sources consulted. In 2018 the percentage with respect to fuel procurement stayed at the same 51% as in 2017. In addition, as described in the "Ethics and integrity" section of Chapter II.7 "Good governance, transparency and Stakeholders relations" the company believes that the calculation should exclude purchase of fuel in Mexico and Brazil because they are made in strongly regulated environments that require contracting with state-owned companies. Excluding both countries from the calculation, the percentage of fuel procurement in at-risk countries would decrease to 11%. The standards used to identify countries at risk are the same as those described in the "Protection of Human Rights" section of Chapter "III.5. Contribution to the well-being of our communities" of this report.

There was no identification in 2018 of any contracting with suppliers that has generated incidents relating to freedom of association, collective bargaining, use of child or forced or compulsory labour, nor is there evidence of receiving complaints on these grounds. Nor have suppliers been detected with a material negative social impact, or incidents reported through the channels established for such purpose, resulting in the cancellation of orders or of contracts with group suppliers due to negative social impacts.

PUBLIC

Alignment in Procurement and in supplier management using human rights standards

Internal Mechanisms	
Procurement Policy	Promote **strict compliance by suppliers** with contractual terms and conditions..., with **special attention** on the principles established in the **Policy on Respect for Human Rights**
Supplier Registration and Classification	Acceptance of Suppliers' Code of Ethics Weighting of status regarding CSR, labour practices and respect for human rights
Sanction List Screening	Blocking and remediation plan if a supplier has been sanctioned or there are indications of human rights violations in their activities
Annual Improvement Goals	Innovative aspect: annual improvement goals directly relating to supplier CSR improvement established for the Procurement team and linked to variable remuneration
CSR Committee and Plan	The Procurement Division is part of the group's CSR Committee: guidelines, established goals and related indicators
Transparency & Reporting	Procurement indicator in at-risk countries *Contribution to sustainability* infographic *Annual Procurement and Supplier Management Report* published on the corporate website

External Supplier Mechanisms	
Suppliers' Code of Ethics	**Labour practices:** ensure the protection of internationally recognised human and workers' rights within their sphere of influence (forced labour, child labour, etc.)
Specific T&Cs	Specific contract clauses relating to supplier social responsibility based on the UN Universal Declaration of Human Rights, the ILO Conventions and the principles of the Global Compact
Stimulus Campaigns	As a business driver, suppliers are stimulated in areas of common interest as a vehicle to ensure reliable and responsible conduct throughout the supply chain
Modern Slavery Act (United Kingdom)	Classification protocols and audit of suppliers in accordance with contractual clauses in major contracts
CSR Scoring	Leadership, Dialogue, Management, Communication 4 blocks to evaluate the supplier's CSR performance and Human Rights standards
Supplier of the Year Award	CSR, diversity and equality categories: this promotes supplier commitment and improvement in this area and publicly recognises those who stand out

Transparency in the general procurement process

In applying the company's policies, the Procurement Division, within its area of responsibility, encourages equality of opportunity, applying standards of objectivity and impartiality in supplier relations, promoting publicity of and participation in selection processes, within management efficiency criteria.

The procurement process is periodically audited both internally and by external entities, with no "non-conformities" having been identified during the financial year. Recommendations and opportunities for improvement that arise during these reviews are analysed and put into place in order to maintain continuous improvement in the processes.

Dialogue with and satisfaction of suppliers

The 6th supplier satisfaction survey was taken at the global level with the participation of suppliers from all geographic areas. It was sent to a representative set of the group's suppliers, 2,812 suppliers, and 1,213 responses were received, yielding the following high level of participation: 43.1%.

Supplier satisfaction survey	6th Survey (2018)	5th Survey (2016)	4th Survey (2014)	3rd Survey (2012)	2nd Survey (2009)	1st Survey (2007)
Rating (out of 10)	8.18	8.06	8.00	7.74	7.57	7.56

Suppliers have very highly valued the ethics and reputation of Iberdrola, the brand and trust that inspires, and state that being a supplier to the group contributes to maintaining job positions.

In the Procurement area, suppliers value very positively the professional respect of their contacts during the bidding phase, as well as transparency in setting terms and conditions, consideration and the treatment provided (attributes with an average of 8.5 points). The attribute with the lowest rating are the financing possibilities offered (with an average of 7.05 points).

Main initiatives with suppliers of materials, equipment, works and services during 2018

Global Supplier of the Year Awards 2018: Contributing together every day

Iberdrola has delivered the Global Supplier of the Year Awards, the purpose of which is to incentivise, promote and recognise the work of the group's suppliers, which is fundamental to achieving the company's strategic objectives.

The event, held at the auditorium of the Iberdrola Campus in San Agustín del Guadalix (Madrid), was attended by approximately 340 guests, including representatives of 167 suppliers of the company from different countries. The award consists of 12 categories and the winning companies came from eight different countries.

More information is available at https://www.iberdrola.com/suppliers/moving-forward-together.

> **"With our suppliers we are addressing the important challenges posed by the UN Sustainable Development Goals. Companies are making a key contribution to the realisation of the new agenda." Ignacio Galán, Chairman of Iberdrola.**

A journey through human rights and your business

Human rights are relevant to businesses because they can have an impact on the human rights of all their Stakeholders during the course of their operations. Iberdrola has prepared an online awareness module on human rights, which is accessible to all suppliers.

More information is available at:
https://www.iberdrola.com/suppliers/contribution-sustainability/human-rights-business

Supplier diversity

Avangrid has a *Supplier Diversity Program*, which establishes a commitment to include the following within the supplier network and increase procurement therefrom:

- Minority-Owned Business Enterprises (MBE)
- Women-Owned Business Enterprises (WBE)
- Lesbian, Gay, Bisexual and/or Transgender-Owned Business Enterprises (LGBTBE)
- Veteran-Owned Business Enterprises (VBE)
- Service-Disabled Veteran-Owned Business Enterprises (SDVET)
- Small Disadvantaged Businesses (SDB)
- Historically Underutilized Business Zone Enterprises (HUBZone)

There was approximately 58 million euros of contracting volume with these groups in 2018.

During 2018, the contracting volume with Special Employment Centres in Spain (in order to assist and work with persons with disabilities) totalled 2.8 million euros.

Presence and organisation of events and activities related to stimulus in CSR, compliance or increased participation of local companies

- 7th annual UN Forum on Business and Human Rights: with the participation of the Director of Procurement Services, with a presentation focused on managing suppliers with a focus on human rights within the different contexts and countries of operation.
- CSR Europe: *Fair trade and sustainable value chains.*

PUBLIC

- Collaborative sessions between Iberdrola and local Spanish entities to discuss how to be a supplier and local opportunities for collaboration.
- Collaboration at mentoring sessions: "*Compliance programmes as a basic element in the value chain*" and participation in the National Compliance Congress.
- SDG Campaign and alliances with suppliers of the Iberdrola group.
- CPO Net Convention "Innovation in the supply".
- CSR workshop for suppliers in Mexico.

Transparency and reporting

Further information on Iberdrola's relations with and management of its suppliers can be found in the *Purchasing and Supplier Management Activities Report* and in the Contribution to Sustainability section of the corporate website.

Challenge 2019

Iberdrola's procurement model has been subject to ongoing review based continuous incremental improvements to adjust it to the needs of the service and the continuing search for efficiencies.

The market points to changes towards advanced management models supported by disruptive technological changes, many of which are already available, and the businesses and corporate areas as internal customers are moving in more competitive, changing, global and efficient environments, which require faster response times, where technology and innovation will be the keys to success.

Now that the *Review of the Group's Procurement Model* project has been completed, the Procurement Division has commenced a project of Digital Transformation of the processes and the adoption of tools allowing preparation for the change towards advanced management models and the new challenges that will appear in the market.

"Procurement as the driver and leader of its own change"

PUBLIC

II.7. Good Governance, Transparency and Stakeholder Engagement

PUBLIC

- Corporate governance
- Stakeholder engagement
- Ethics and integrity
- Fiscal responsibility
- Competition
- Public policy
- Cybersecurity and information privacy
- Socioeconomic compliance

PUBLIC

Corporate governance

Contribution to SDGs of the performance described by the indicators of this section
(according to SDG Compass www.sdgcompass.org)

Iberdrola's Corporate Governance System, described in Chapter I.1, is inspired by and based on the commitment to ethics, transparency and leadership in the application of best international practices on good governance. Pay special attention to the social dividend, as a result of which in 2018 there were reforms in its Corporate Governance System in order to deepen the integration of the Sustainable Development Goals into its strategy. This chapter discusses the structure of the board and its committees; its powers and responsibilities; its evaluation and remuneration policies.

An independent and plural Board of Directors

The Board of Directors focuses its activities on the supervision of the general guidelines and the strategy of the group, as well as on the establishment of its corporate policies.

The following keys define the vision of the company's future, its multinational scope and the establishment of channels of participation and relations with shareholders:

- **A Board of Directors under constant renewal, adjusting to the needs of the businesses and markets in which the group operates.**
- **With 14 directors of various nationalities and professional profiles, selected based on a broad set of criteria.**
- **71% of the directors are independent. Women represent 36% of the members of the Board of Directors and hold positions of the highest significance: the vice chairmanship of the Board and the chairmanship of 3 consultative committees.**

PUBLIC

The governance structure is described in the "Corporate and governance structure, ownership and legal form" section of Chapter I.1. For more detailed information regarding the composition, operation and activities carried out by the governance bodies of the company, see also the *Activities Report of the Board of Directors and of the Committees thereof* for financial year 2018.

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The critical concerns considered by the Board of Directors are principally:

- Analysis of the challenges in the energy industry: decarbonisation and electrification.
- Approval of the Strategic Outlook 2018-2022.
- Definition of the digitalization strategy.
- Introduction of new developments in the shareholder remuneration system.
- Integration of the SDGs into the strategy.
- Approval of plan for rotation of non-strategic assets.
- Appointment of a new lead independent director.
- Preparation of the annual accounts and proposed allocation of profits/losses.
- Approval of periodic financial information.
- Approval of budgets and definition of goals of the Iberdrola group.
- Authorisation or acknowledgement, as appropriate, of significant awards, investments and divestments of the Iberdrola group.
- Grant of powers of attorney.
- Setting of the remuneration of the Board of Directors and of the senior management of Iberdrola, S.A.
- Approval of various annual reports.
- Call to the General Shareholders' Meeting, formulation of proposed resolutions and the corresponding reports of the directors.
- On-going update of the Corporate Governance System.
- Evaluation of the Board of Directors.
- Approval of risk limits and indicators.
- Implementation of resolutions adopted by the shareholders at the General Shareholders' Meeting, and particularly increases and reductions in capital.
- Authorisation or acknowledgement, as appropriate, of financial transactions of the Iberdrola group (debt and equity).
- Authorisation or acknowledgement, as appropriate, of proposals for the appointment of directors in companies in which the Iberdrola group has an interest.
- Authorisation or acknowledgement, as appropriate, of corporate or business restructurings.

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The highest-level persons in charge of the various business divisions and corporate divisions have a presence on the Operating Committee referred to in the "Responsibilities" section of Chapter I.3. It is chaired by the chairman & CEO, who in turn reports to the Board of Directors.

PUBLIC

Selection and nomination of the members of the highest governance body

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The appointment, re-election and removal of directors is within the purview of the shareholders at the General Shareholders' Meeting.

Vacancies that occur may be filled by the Board of Directors on an interim basis until the next General Shareholders' Meeting, whereat the shareholders shall confirm the appointments or elect the persons who should replace directors who are not ratified, or it shall withdraw the vacant positions.

To such end, the Board of Directors has approved a *Board of Directors Diversity and Director Candidate Selection Policy*, which ensures that proposals for the appointment of directors are based on a prior and objective analysis of the needs of the Board of Directors.

The Appointments Committee advises the Board of Directors regarding the most appropriate configuration of such body and of its committees as regards size and balance among the various classes of directors existing at any time and the personal requirements that the candidates must fulfil. For such purpose, the Committee will review the structure of each body on a regular basis, particularly when vacancies occur within such bodies. Furthermore, independent directors are appointed on the basis of a proposal of the Appointments Committee, while the other appointments require a report of such Committee.

In any event, the Board of Directors, and the Appointments Committee within the scope of its powers, will endeavour to ensure that the candidates submitted to the shareholders at a General Shareholders' Meeting for appointment or re-election as directors, as well as the directors appointed directly to fill vacancies in the exercise of the power of the Board of Directors to make interim appointments, are respectable and qualified persons, widely recognised for their expertise, competence, experience, qualifications, training, availability and commitment to their duties, while at the same time endeavouring to ensure gender diversity in the composition of the Board of Directors.

In particular, they must be irreproachable professionals, whose professional conduct and background is aligned with the principles set forth in the *Code of Ethics* and with the corporate values contained in the *Purpose and Values of the Iberdrola group*.

If the Board of Directors deviates from the proposals and reports of the Appointments Committee, it shall give reasons for so acting and shall record such reasons in the minutes.

In addition, the selection of candidates shall endeavour to ensure that a diverse and balanced composition of the Board of Directors as a whole is achieved, such that decision-making is enriched and multiple viewpoints are contributed to the discussion of the matters within its power. To this end, the selection process shall promote a search for candidates with knowledge and experience in the main countries and sectors in which the group does or will do business. The directors must also have sufficient knowledge of the Spanish and English languages to be able to perform their duties.

In turn, the Board has entrusted to the Appointments Committee the responsibility of ensuring that when new vacancies are filled or new directors are appointed, the selection procedures are free from any implied bias entailing any kind of discrimination and, in particular, from any bias that may hinder the selection of female directors. This is expressly provided by the *Regulations of the Board of Directors* and the *Regulations of the Appointments Committee*.

PUBLIC

Collective knowledge of highest governance body

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The *General Corporate Governance Policy* provides that the company has a programme to provide directors with information and updates in response to the need for professionalisation, diversification and qualification of the Board of Directors.

Furthermore, to improve the knowledge of the group and of the businesses that it carries out and the environment in which it operates, presentations are made to the directors regarding the businesses of the group, which is supplemented by articles and publications of interest made available to the directors through the directors' website, a software application that has a specific section dedicated to training.

In turn, the directors' website facilitates the performance of the directors' duties and the exercise of their right to receive information. Information deemed appropriate for the preparation of meetings of the Board of Directors and the committees thereof in accordance with the agenda, as well as the materials, presentations and expositions made to the Board of Directors, is posted on such website.

In addition, a portion of each meeting of the Board of Directors is dedicated to a presentation on financial, legal or socio-political issues of significance to the group.

During financial year 2018, the directors' website was also used to provide the directors with various training sessions deemed to be of interest for the performance of their duties:

- Big Data and Artificial Intelligence in the energy sector: applications and impact
- New EU regulation on prospectuses for public offerings or admission to trading of securities.
- Mechanisms for remote participation in general meetings of shareholders of listed companies. Comparative study at the international level.
- Compliance System: Essential elements for effectiveness.
- European Data Protection Regulation and its application to the Iberdrola group.
- Trends in the social investment market.
- The application of blockchain technology at the general shareholders' meeting.
- New obligations for the publication of non-financial information of capital enterprises.
- Shareholder activism.
- Trends and best practices in risk supervision.

For their part, the consultative committees have developed their own training programmes during the year. They have dealt with various issues, all handled in person:

- Best practices in the renewal of boards of directors.
- Corporate governance trends and issues relating to shareholder participation at the 2018 General Shareholders' Meeting.
- Talent management and retention.
- Latest accounting developments.
- Risk management and board of directors.

PUBLIC

Evaluating the highest governance body's performance

102-28

The *Regulations of the Board of Directors* provides that the Board shall annually evaluate: its operation and the quality of its work; the performance of duties by the chairman & CEO, based on the report submitted thereto by the Appointments Committee; and the operation of its committees, in view of the report submitted thereto by such committees. For such purpose, the chairman of the Board of Directors organises and coordinates the aforementioned evaluation process with the chair of each committee.

The *General Corporate Governance Policy* provides that the annual evaluation shall be conducted with the cooperation of a prestigious independent firm.

Within the framework of the evaluation process of financial year 2018, Iberdrola has decided to draw on the help of PricewaterhouseCoopers Asesores de Negocios, S.L.

This process is based on the review of a large number of objectively quantifiable and measurable indicators that are updated every year in accordance with the latest trends, and is supplemented by a comparison with the companies identified as having the best market practices. As a result of this process, the company develops and adopts on-going improvement plans designed to implement the specific measures that may help to further perfect corporate governance practices.

Identifying and managing economic, environmental and social impacts

102-29 102-31

The Board of Directors of Iberdrola is structured as described above, with monitoring duties being carried out by the consultative committees thereof that supervise the economic, social and environmental performance of the company. Such duties include both the supervision of the risks and opportunities generated by the group's activities and compliance with international principles, codes and standards applicable to high-responsibility tasks. The Board of Directors and its consultative committees perform periodic evaluations of the aforementioned aspects of performance, drawing for such purpose on external information of interest thereto, with the assistance of external independent advisers, and on information provided to them by the rest of the organisation itself, primarily through periodic appearances of the group's officers at committee meetings.

These appearances are described in the *Activities Report of the Board of Directors and of the Committees thereof* for financial year 2018, available on the corporate website.

The Sustainable Development Committee has supervised the company's conduct in the area of sustainability, corporate reputation, corporate governance and compliance. Various external consultants and members of the following areas and divisions of the company appeared before the Committee during 2018:

PUBLIC

- Foundations Committee
- Office of the Secretary of the Board of Directors
- Compliance
- Innovation, Sustainability and Quality
- Finance and Resources (Human Resources and General Services; Investor Relations and Corporate Communication; Corporate Social Responsibility and Reputation; Stakeholders; Reputation and Brand)
- Legal Services (Corporate Governance of Subsidiaries)

The issues discussed during these appearances are described in the “Collective knowledge of highest governance body” section above.

PUBLIC

Remuneration policies

102-35 102-36

The current Director Remuneration Policy for the years 2018, 2019 and 2020 was approved by the shareholders at the General Shareholders' Meeting held on 13 April 2018.

As provided in the *By-Laws* and the *Regulations of the Board of Directors* of Iberdrola, the Board of Directors, at the proposal of the Remuneration Committee, is the body with power to set the remuneration of directors within the overall limit set by the By-Laws and in accordance with law, except for such remuneration as consists of the delivery of shares of Iberdrola or of options thereon or which is indexed to the price of the shares of Iberdrola, which must be submitted to the shareholders for approval at the General Shareholders' Meeting. The Remuneration Committee is a consultative committee chaired by and made up mostly of independent directors.

The Remuneration Committee is responsible for evaluating the level of attainment of the targets to which variable annual and multi-annual remuneration is linked and for submitting it to the Board of Directors for approval. To such end, in financial year 2018 it drew on the advisory services of PricewaterhouseCoopers Asesores de Negocio, S.L. Section C.1.20 of the *Annual Corporate Governance Report* for financial year 2018 describes the business relations of the company with this advisor during the financial year.

Pursuant to the *By-Laws* and the *Director Remuneration Policy*, the limit to the amounts that Iberdrola may annually allocate to the directors each year as an expense, including, in the case of executive directors, remuneration payable for performing executive duties, as well as the funding of a reserve to meet the liabilities assumed by the company in connection with pensions, payment of life insurance premiums and payment of severance to former and current directors, is 2% of the consolidated group's profit for the financial year, after allocations to cover the legal and other mandatory reserves and after declaring a dividend to the shareholders of not less than 4% of the share capital. As stated, for the purpose of establishing such limit, the quoted price of shares or options thereon or remuneration indexed to the listing price of the shares shall not be calculated, which remuneration shall in all cases require the separate approval of the shareholders at a General Shareholders' Meeting.

The *Director Remuneration Policy* implements, among other things, the structure of the remuneration of the directors for their activities as such and the structure of the executive directors' remuneration for the performance of their executive duties, based on a series of parameters that are in line with the standard remuneration of comparable companies. The reference parameters are contained in the current Director Remuneration Policy and cover economic/financial, operational and sustainability aspects. Each Annual Remuneration Report specifies the objectives to which the annual variable remuneration of executive directors is tied. The 2017-2019 Strategic Bonus approved by the shareholders at the General Shareholders' Meeting describes the multi-annual remuneration system relating to the achievement of long-term objectives, including the reduction of CO_2 emissions.

As regards aspects relating to the company's economic, environmental and social performance, variable remuneration for the management team of the Iberdrola group takes into account variable parameters linked to financial as well as environmental and social aspects.

PUBLIC

Stakeholder engagement in remuneration

102-37

The *Director Remuneration Report* for financial year 2017 was submitted to a consultative vote of the shareholders at the General Shareholders' Meeting held on 13 April 2018, which had a quorum of 76.09%, and was approved with only 5.83% of the shares represented in person and by proxy voting against.

The *Annual Director Remuneration Report* for financial year 2018 will be submitted to a consultative vote of the shareholders at the General Shareholders' Meeting called to be held on 29 March 2019.

Annual total compensation ratio and annual total compensation percentage increase ratio

102-38 102-39

Iberdrola's Corporate Governance Model provides for the existence of a holding company, Iberdrola S.A., and for country subholding companies in the main countries in which it does business, as shown in the "Corporate and governance structure, ownership and legal form" section of Chapter I.1 and described on the company's website.

The main countries in which the Iberdrola group does business are Spain, the United Kingdom, the United States, Brazil and Mexico, and the remuneration ratios are set forth in the table below.

Country[102]	Highest level of remuneration	Annual total compensation ratio[103] (102 38)			Annual total compensation percentage increase ratio[103] (102 39)		
		2018	2017	2016	2018	2017	2016
Spain	Director	20.42	21.08	30.30	-0.41	-1.15	6.78
United Kingdom	CEO	12.59	12.09	11.83	1.28	1.60	3.31
United States	CEO	23.67	22.22	16.66	0.89	4.54	N/A
Brazil	Director	21.54	22.43	41.00	0.53	N/A	0.16
Mexico	Director	6.32	7.63	7.21	0.19	1.48	-0.73

[102] Country composition:
Spain: Iberdrola, S.A.; Iberdrola Spain.
United Kingdom: ScottishPower.
United States: Avangrid.
Brazil: Neoenergia.
Mexico: Iberdrola Mexico.

[103] Annual total compensation includes fixed salary, cash salary supplements and variable remuneration. Does not include long-term incentives or benefits.

PUBLIC

Shareholder engagement

Iberdrola is a pioneer in defining one of the fundamental pillars of its corporate governance strategy to be the engagement of its shareholders, with the General Shareholders' Meeting being their main channel for participation in corporate life.

The idea is to thus allow the Board of Directors to become acquainted with the opinions and concerns of the shareholders and to keep them in mind when establishing the agenda, drawing up proposed resolutions and deciding on other aspects relating to the holding of the General Shareholders' Meeting.

The Board of Directors also actively promotes the informed participation of the shareholders at the General Meeting, facilitating access to all documentation of the General Shareholders' Meeting through the website, including a *Shareholder's Guide* that describes all of the facilities that the company offers to attend, grant a proxy or cast an absentee vote; and for each Meeting it approves certain *Implementing Rules for the General Shareholders' Meeting*, which have incorporated the latest technological advances in electronic participation, always in accordance with the guarantees required by law and by the Corporate Governance System. Along these lines, Iberdrola has developed a new application that will allow shareholders to grant their proxy and cast an absentee vote from any device with access to the internet (including mobile phones and tablets), verifying their status as shareholders in real time. Also, for the first time, individual shareholders will be able to grant their proxy or cast an absentee vote by telephone through the free phone number of the Office of the Shareholder, through which they may also request any information about the event. These electronic and telephonic channels are in addition to the traditional forms of participation, in person, by post or through the shareholder service desks, which Iberdrola will continue to offer to its shareholders in order for them to have all of the alternatives for participating in the General Meeting.

Other proactive actions are also carried out to foster the maximum possible participation of the shareholders, such as telephone information campaigns. Also to promote accessibility, the understanding of information, and ultimately the engagement of the shareholders, the company has implemented several specific channels of communication for providing information to shareholders and investors, including the following:

a) Office of the Shareholder (*Oficina del Accionista*). From the call to the General Shareholders' Meeting through the end thereof, the shareholders can rely on the support of the Office of the Shareholder, which has a specific site for such purpose at the premises of the meeting in order to resolve any issues that the attendees may raise prior to the commencement of the meeting, as well as to serve and provide information to the shareholders who wish to use the floor.

   Furthermore, the Office of the Shareholder is in permanent contact with those shareholders who have voluntarily entered their names in its database, and provides a specific service to minority shareholders for the organisation of presentations and events prior to the General Shareholders' Meeting.

b) The Shareholders' Club (*Club del Accionista*). This is an open and permanent participation channel between the company and the financial community and shareholders who voluntarily join such Club and are interested in monitoring the evolution of the company on an ongoing basis.

c) The Investor Relations Office (*Oficina de Relaciones con Inversores*). This responds on a regular and personalised basis to the questions of analysts and institutional and qualified investors in equities, fixed-income securities and socially responsible investments.

PUBLIC

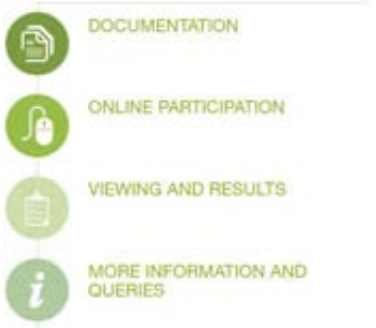
d) Interactive OLS - On Line Shareholders system. The website has an interactive system that allows shareholders (who can access the system with their user name and password) to ask questions of interest either publicly or confidentially, access frequently asked questions regarding various topics, and, with respect to the General Shareholders' Meeting, request information or clarifications or ask questions regarding the items on the agenda, as well as to view the live proceedings.

e) Relations with shareholder associations and institutional shareholders. Both shareholder associations and institutional shareholders may request meetings with representatives of the company through the Investor Relations Division. Long-term engagement plans may also be developed with those shareholders who express their intention to have a stable and continuous presence in the company's shareholder base, and appropriate mechanisms for dialogue may be established regarding the performance of the company.

f) Last, the Corporate Governance System makes provision for the ability of the Board of Directors or its chairman & CEO to empower the lead independent director or other directors to engage in dialogue with specific shareholders on certain issues relating to the corporate governance of the company.

In this section, it is noteworthy that in 2015 Iberdrola approved its *Shareholder Engagement Policy* in order to establish a permanent dialogue with its shareholders, and its *Stakeholder Relations Policy* in order to promote a framework of relationships that favours the inclusion of Stakeholders in the businesses and activities of the group.

- First Spanish company and one of the pioneers worldwide in formalising a *Shareholder Engagement Policy*, which is one of the main pillars in the corporate governance strategy.
- Constructive, continuous, effective and transparent dialogue with the shareholders, encouraging their engagement and promoting their active participation through various channels like the interactive On Line Shareholders (OLA) system and the Shareholders' Club, among others.



PUBLIC

Iberdrola's General Shareholders' Meeting, a sustainable event

Notably, in 2016 Iberdrola was the first Ibex-35 company to certify its General Shareholders' Meeting as a sustainable event, in accordance with international ISO 20121 standard. This means that all the processes of the General Shareholders' Meeting (from its planning to its subsequent holding) follow criteria of sustainability, inclusivity and accessibility, with the ultimate goal of optimising Iberdrola's contribution to the local economy, to improving the environment and to its social commitments. Improvements were proposed for the 2018 General Shareholders' Meeting and more than 70 initiatives are launched to promote the sustainability of the event, including:

- Hiring of local suppliers.
- Hiring of persons in vulnerable situations.
- Measures aimed at improving energy efficiency.
- Advancement of sustainable transport.
- Actions to guarantee accessibility for groups with different abilities.
- Use of recyclable and reusable materials.
- Collaboration with certain local NGOs.
- Childcare service as a measure to promote work-life balance.

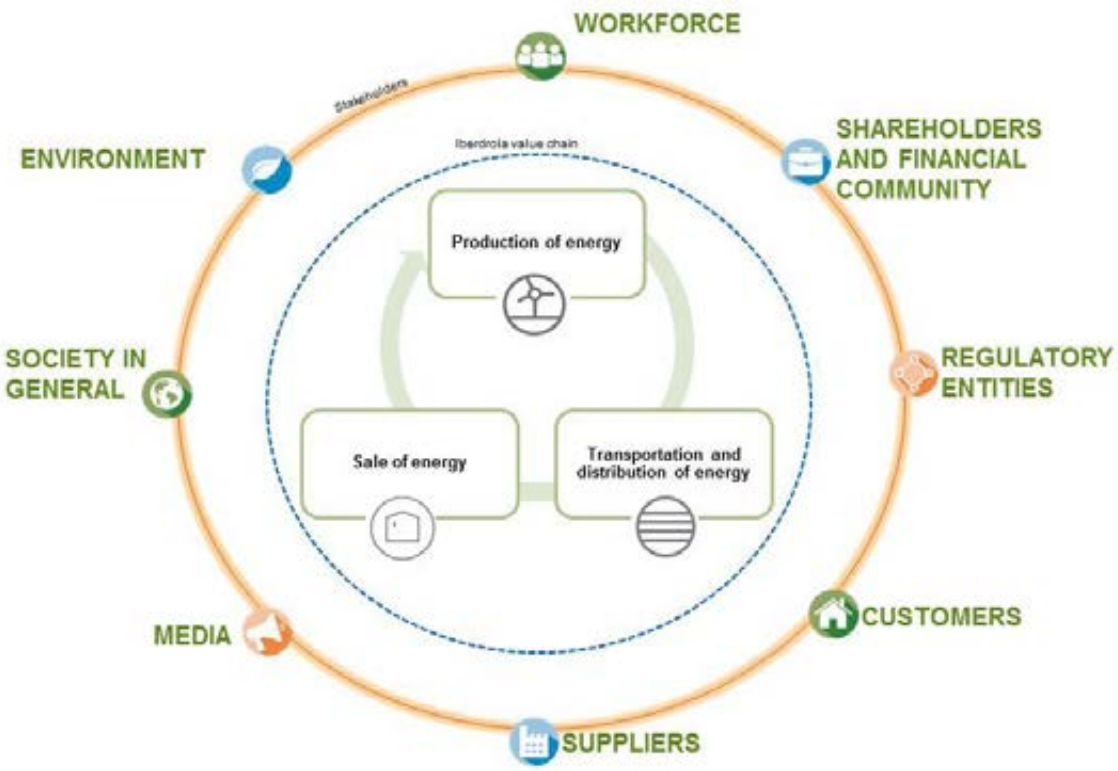
It should be noted that Iberdrola has received the "Erronka Garbia" environmental certificate in acknowledgement of best environmental practices in the organisation of its Shareholders' Meeting.

PUBLIC

Stakeholder engagement

Iberdrola's *Stakeholder Relations Policy* (approved by the Board of Directors in February 2015 and updated in October 2018) explicitly states that the company believes "*that its relations with those groups that may influence or that are affected by the decisions or the value of the Company and the group are significant*". The value chain comprised of Iberdrola's businesses means that there is a large number of these groups, for which reason the company has decided to group them into eight different categories that constitute its Stakeholders:

102-40



The initial identification and selection of the Stakeholders of Iberdrola was carried out through processes of internal reflection conducted by the management team. Subsequently, in 2015, the *Stakeholder Relations Policy* ratified the Stakeholder categories described in the preceding section.

102-42

However, for the proper management of each of the Stakeholders, the various areas and businesses identify different Subgroups that they deem relevant for more specific treatment.

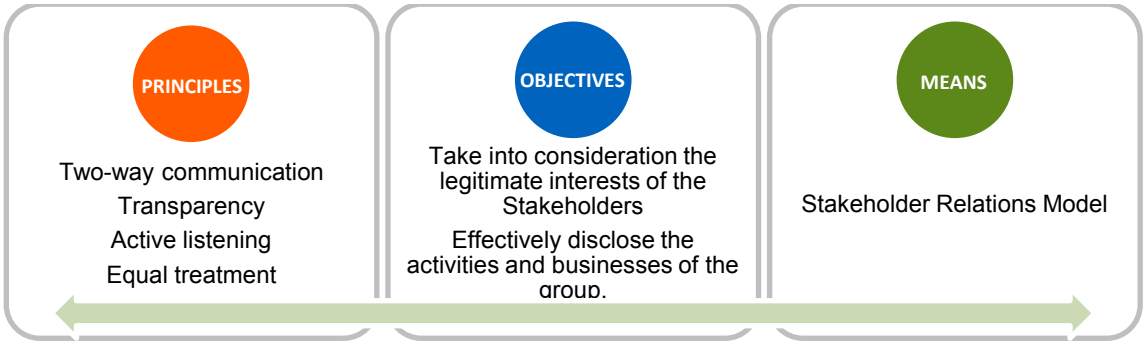
PUBLIC

Approach to Stakeholder engagement

102-43

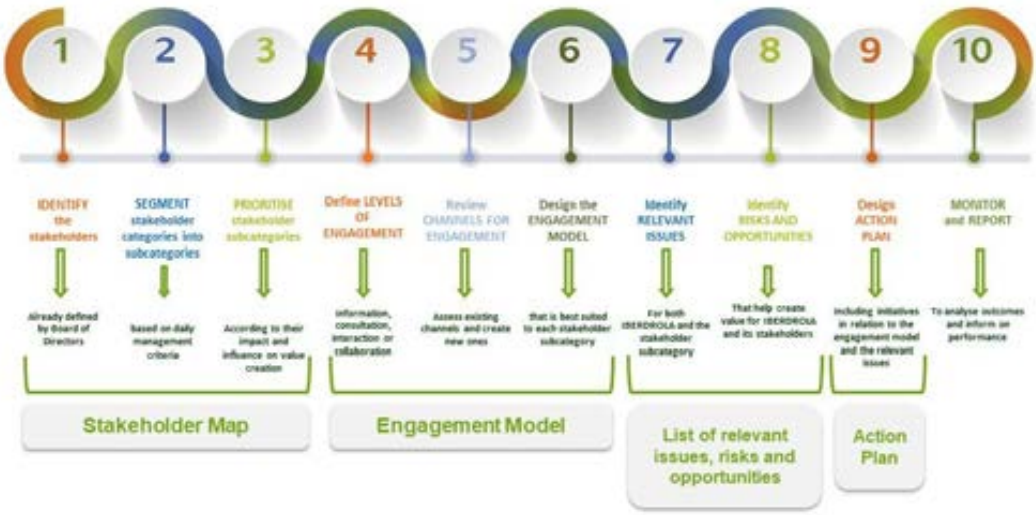
Iberdrola develops a responsible and sustainable business model, which puts Stakeholders at the centre of its strategy. The company's objective is thus to build relations of confidence with the various Stakeholders, as well as to deepen their participation, engagement and sense of belonging to Iberdrola.

The *By-Laws* themselves include a specific article dedicated to Stakeholder relations, establishing the principles and objectives that govern these relations:



Iberdrola has decisively driven compliance with its *Stakeholder Relations Policy* (mentioned above), through a Global Stakeholder Relations Model based on the AA1000 Stakeholder Engagement Standard (AA1000SES) 2015 standard and in its three requirements of inclusiveness, materiality and responsiveness[104].

Among other objectives, this Model seeks to systematise Stakeholder relations throughout the Iberdrola group, in all countries and businesses; and to create a corporate culture with respect to the significance of dialogue with the Stakeholders for more sustainable performance by the company. It constitutes a process of continuous improvement in and of itself, as shown below:



[104] Iberdrola has been continuously applying *Assurance Standard AA1000* for the last twelve years. In 2016 Iberdrola's Operating Committee approved a new *Global Stakeholder Relations Model* (referred to in this report), the second phase of which was implemented in 2018.

PUBLIC

This process was implemented in 2018 to manage eight of Iberdrola's Stakeholders in the five main countries and at most of the Generation and Renewables facilities, as well as in the various geographic areas of the Networks Business.

Relationship channels and significant issues

102-44

Iberdrola keeps the relationship channels[105] with its eight Stakeholder groups updated and makes continuous efforts to identify the issues that are most important to each of them. An analysis of these issues shows that, while there are issues exclusive to each geographical area, most are common to Iberdrola's five main countries[106].

Set out below is a summary of the most important Stakeholder relationship channels and the main global issues detected in 2018:

WORKFORCE

RELATIONSHIP CHANNELS

- ✓ Telephone, mail, web (intranet), meetings
- ✓ Events, surveys, bulletins, newsletter, information screens, posters
- ✓ Commissions, committees
- ✓ Ethics mailbox

SIGNIFICANT ISSUES

- ✓ Management and retention of talent (career plan, training, quality and maintenance of employment)
- ✓ Occupational risk prevention and health and safety training
- ✓ Employee benefits and pension plans

SHAREHOLDERS AND FINANCIAL COMMUNITY

RELATIONSHIP CHANNELS

- ✓ Telephone, mail, shareholders website, meetings
- ✓ General Shareholders' Meeting, Shareholders' Club, Shareholders' Bulletin
- ✓ Road shows, Investor Day, Investor Relations App, Corporate reports
- ✓ Shareholders' Ethics Mailbox

SIGNIFICANT ISSUES

- ✓ Economic, social and environmental performance of the company and future plans
- ✓ Political situation in the markets in which Iberdrola is present
- ✓ Share price and dividends

DISTRIBUTION CUSTOMERS

RELATIONSHIP CHANNELS

- ✓ Telephone, mail, customer website, meetings
- ✓ Satisfaction surveys, claims systems, awareness-raising campaigns
- ✓ Social media, mobile (apps, chat, etc.)

SIGNIFICANT ISSUES

- ✓ Communication during supply incidents
- ✓ Complaint management
- ✓ Service quality

RETAIL CUSTOMERS

RELATIONSHIP CHANNELS

- ✓ Telephone, mail, customer website, meetings
- ✓ Satisfaction surveys, claims systems, customer service shops, sales force
- ✓ Social media, mobile (apps, chat, etc.)

SIGNIFICANT ISSUES

- ✓ Overall customer experience: channels, service, product offerings and complaints
- ✓ Optimisation of power and consumption and impact on billing
- ✓ Service quality

[105] The By-Laws state that "the Company's corporate website, its presence on social media and its digital communication strategy generally are channels of communication serving the *Stakeholder Relations Policy*".

[106] Pursuant to its *Global Stakeholder Relations Model*, Iberdrola has a list of major topics by Stakeholder group and country, which are included in the *Management Report on Iberdrola's Relations with Stakeholders* for financial year 2018.

PUBLIC

REGULATORY ENTITIES

RELATIONSHIP CHANNELS

- ✓ Telephone, mail, letters, corporate website, meetings
- ✓ Workshops, events, debates
- ✓ Queries, procedures, information capsules

SIGNIFICANT ISSUES

- ✓ Energy transition (energy efficiency, alternative energies, emissions reduction, etc.)
- ✓ Present and future regulatory framework of the electricity sector
- ✓ Remuneration to the businesses

SUPPLIERS

RELATIONSHIP CHANNELS

- ✓ Telephone, mail, supplier website, meetings
- ✓ Register and classification of suppliers, Supplier of the Year Award, satisfaction survey, stimulus campaigns
- ✓ Suppliers' ethics mailboxes

SIGNIFICANT ISSUES

- ✓ Iberdrola's role in the supply chain (ethics and CSR, stimulus campaigns, fostering of innovation)
- ✓ Regulatory measures in each country
- ✓ Commercial relations with suppliers (communication of strategy, award standards, contracting terms, payments and billing)

MEDIA

RELATIONSHIP CHANNELS

- ✓ Telephone, mail, corporate website, meetings
- ✓ Press releases, events, visits to facilities
- ✓ Social media

SIGNIFICANT ISSUES

- ✓ Financial results and company strategy
- ✓ Operational and corporate governance performance and social impact of the activity
- ✓ Present and future industry regulation

SOCIETY IN GENERAL

RELATIONSHIP CHANNELS

- ✓ Telephone, mail, corporate website, meetings
- ✓ Partnership agreements, reports, events, working groups, visits to projects
- ✓ Social media

SIGNIFICANT ISSUES

- ✓ Iberdrola engagement in the development of the communities in which it is present (investment, innovation, collaboration programmes and projects)
- ✓ Relationship and contribution of the company in institutions and other representatives of society
- ✓ Awareness-raising, disclosure and training on specific industry issues and other issues of social interest

ENVIRONMENT

RELATIONSHIP CHANNELS

- ✓ Telephone, mail, corporate website, meetings
- ✓ Reports, sustainability surveys, inspections, audits
- ✓ Alliances, collaborations, events, conferences, roadshows

SIGNIFICANT ISSUES

- ✓ Environmental performance of the company and its facilities (environmental investments, biodiversity, environmental footprint, circular economy and water management)
- ✓ Climate change and energy transition
- ✓ Report and transparency of non-financial information (sustainability indices)

PUBLIC

Iberdrola's Wholesale, Networks and Renewables facilities mainly manage three Stakeholder groups: Regulatory entities, Society and Environmental[107]. The most significant issues of interest refer to regulatory compliance; the economic and social impact of the facilities on local communities; and environmental impacts and the mitigation thereof.

Iberdrola's response to all of these significant issues is set out not only in the various indicators of this *Sustainability Report*, but also in the *Integrated Report* and in the various specific reports, including: *Annual Financial Report*; *Annual Corporate Governance Report*; *Shareholder Engagement Report*; *Report on Procurement Activities and Supplier Management and the Contribution thereof to the Group's Sustainability; Innovation Report; Corporate Footprint Report; Biodiversity Report*; and Sustainability Balance Sheet. Likewise, the corporate website and the websites of the businesses and the foundations contain information in this regard.

The methodology described in the preceding sections enables the company to identify material issues through direct sources. Such review is completed with that made through indirect sources, such as the *Dow Jones Sustainability Index,* the *Carbon Disclosure Project*, the *Materiality Analysis*, etc., described in the "Defining report content" section.

Considering all of the foregoing, Iberdrola has a complete Stakeholder management system, subject to a process of continuous improvement, which allows it to increasingly engage all of the groups with which it relates and to encourage their participation in all of the company's decisions[108].

[107] In the case of the cogeneration plants, the main Stakeholder group is 'Customers', for whom the most significant issue is compliance with contracts.

[108] Iberdrola prepares an annual *Management Report on Iberdrola's Stakeholder Relations*, which summarises issues of interest detected within the various communication channels, as well as the company's response through action plans.

PUBLIC

Ethics and integrity

Contribution to SDGs of the performance described by the indicators of this section
(according to SDG Compass www.sdgcompass.org)

GRI 205

102-17

The Iberdrola group's compliance system

Pursuant to the *General Compliance System Framework of the Iberdrola group* approved by the Iberdrola group's Compliance Unit (the "**Unit**"), the foundations for the operation of its compliance system have been established following best domestic and international practices in the area of compliance, fraud prevention and the fight against corruption.

The group's compliance system is thus defined as a set of substantive rules, formal procedures and material actions intended to prevent, avoid and mitigate the risk of conduct that is improper or contrary to ethics or the law that may be committed by professionals of Iberdrola within the organisation, and to ensure that the conduct is in accordance with ethical principles and applicable law (the "**Compliance System**"). The bodies and divisions directly entrusted with the implementation and further development thereof also form part of this Compliance System.

Iberdrola has created a Compliance Unit, a collective, internal and permanent body linked to the Sustainable Development Committee of the Board of Directors. There is also a compliance division linked to the Audit and Compliance Committees at each subholding company and/or head of business company. The duties of all of them include promoting a culture of ethical behaviour and zero tolerance for fraud and the commission of unlawful acts and management of the Compliance System.

The Compliance Unit has powers related to the *Code of Ethics*, the *Anti-Corruption and Anti-Fraud Policy,* the *Crime Prevention Policy,* the *Internal Regulations for Conduct in the Securities Markets*, legal provisions regarding the separation of activities, and all other powers that may be entrusted thereto by the Sustainable Development Committee or the Board of Directors of the company or that are established in Iberdrola's Corporate Governance System.

PUBLIC

Within this context, the *Code of Ethics* is the "cornerstone" on which the Compliance System is based and permanently functions as an element "inspiring" the other elements thereof, which are shown in the following chart:

These elements include:

1) the regular evaluation of risks;
2) the development and maintenance of policies, procedures and action protocols for the professionals of the group describing the expected, appropriate and suitable behaviour;
3) communications activities;
4) the training of employees on compliance-related issues;
5) the continuous monitoring and review of the Compliance System through internal and external audits and control and detection mechanisms like the ethics mailboxes; and
6) the launch of plans to respond and react to conduct or situations that are improper or contrary to applicable legal provisions or failures in the Compliance System.

1.- Evaluation of compliance risks

205-1

One of the main elements of the Compliance System is the regular and continuous identification and evaluation of compliance-related risks in each of the corporate areas and functions and in the businesses of the group. The purpose of this evaluation is to be able to establish the measures required to neutralise or mitigate them based on the probability thereof and the seriousness of the consequences thereof. Various areas in which this risk evaluation occurs are described below.

Crime prevention programmes

Within the framework of the Compliance System, various activities are carried out to encourage the organisation to act in accordance with the most stringent ethical standards and in accordance with applicable laws and regulations. In order to develop the *Crime Prevention Policy,* the companies of the group have implemented a specific and effective programme, the *Crime Prevention Programme,* as a set of measures focused on the prevention and detection of and reaction to possible crimes, which also extends to the prevention and control of other frauds, administrative infractions and serious irregularities, all within the framework of the process of review and adjustment to the most recent changes to the Spanish Criminal Code following the introduction of criminal liability for legal entities, without prejudice to the legal provisions applicable in any other jurisdiction in which the company does business.

To implement these *Crime Prevention Programmes,* there is a regular evaluation of the risks of committing criminal acts that might ultimately be alleged against the various companies of the group based on their activities, as well as an identification of existing controls and the establishment of new controls for the prevention thereof.

PUBLIC

The criminal risk evaluation process follows the methodology described below:

- Meetings are held with the heads of the various areas (corporate and business) of each company in order to analyse the specific activities they perform within their area of responsibility.
- Based on the activities performed by each area, conduct that might entail the risk of committing a crime is identified.
- The risks identified are classified based on the probability of occurrence thereof and are included in a criminal risk map that reflects the divisions, departments or areas of activity within each company where there is a risk of the commission of each crime.
- For each of the crimes, there is an identification of the controls applicable to the various areas that allow for the limitation, prevention and mitigation of each of the criminal risks identified; and in those cases in which an insufficiency is observed, the specific measure necessary to strengthen prevention is adopted, e.g. implementing additional controls or modifying existing ones.
- A control map is thus developed assigning each of the controls to the crime or crimes it is intended to avoid, and identifies a person responsible for each control, who must ensure the proper operation thereof with a predetermined frequency. The person responsible for each control has the powers, experience, training and authority level appropriate for supervision of the effectiveness thereof.
- The persons responsible for the controls issue annual certifications regarding the appropriate operation thereof.

Fraud and corruption in particular

In financial year 2018 there was an update of the analysis of the risks of fraud and corruption within the Iberdrola group based on a self-evaluation of the exposure to this risk, with the participation of professionals in charge of all areas and relevant processes at each of the country subholding and/or head of business companies of the group. Specifically, the scope of the analysis was the following:

- 100% of the country subholding companies making up the group: Avangrid INC[109], Iberdrola España, S.A.U., Iberdrola México, S.A. de C.V., Iberdrola Participaciones, S.A.U., Neoenergia, S.A.[110] and Scottish Power LTD as well as the principal business thereof: i) Networks Business, ii) Wholesale and Retail Business, and iii) Renewables Business.
- As regards the corporate divisions, those areas or divisions considered to be of higher potential risk in this area have been analysed. Specifically, the following have participated: Procurement, Human Resources and General Services, Financing and Treasury, Corporate Development, Administration and Control, Investor Relations and Communication, Innovation, Sustainability and Quality, Internal Audit and International Relations.

To perform this evaluation, guidelines and a methodology are provided that allow the compliance directors and the heads of the businesses and corporate functions to identify and

[109] Avangrid formed part of the process through a specific ethics survey.
[110] Neoenergia formed part of the process through a specific analysis of this company.

PUBLIC

evaluate the risks of fraud and corruption within the group. Based on an analysis of the information received, each Compliance Division prepares the risk map for its respective company, identifying the main controls to mitigate them, and proposes improvements or modifications to strengthen the effectiveness of such controls, if appropriate.

This analysis is used as a starting point to determine the most effective prevention and control measures and thus allow for the appropriate allocation of resources and efforts to those areas or factors with higher risk or in which a potential for improvement has been identified. Accordingly, the assessment constitutes a tool upon which various actions are based and which are included within the other elements of the Compliance System.

Risks associated with suppliers

Suppliers are considered strategic players within the Iberdrola group and the Procurement function has implemented policies and mechanisms to ensure the transparent, comprehensive and responsible management of its supply chain and to mitigate risks.

- Procurement policy and procedure: global framework for the control and management of risks and opportunities arising from procurement.
- *Code of Ethics*: principles of conduct that bind the group in its relations with third parties and that contain specific principles of conduct for suppliers that match the principles and values of the group. Attached to orders and contracts.
- Procurement terms and conditions. Contract clauses:
    - Require the parties to act within the most stringent levels of safety, occupational risk prevention and environmental protection.
    - They include specific clauses on supplier corporate social responsibility and respect for human rights.
    - They include the rejection of any fraudulent practice or corruption.

The procurement process ensures that counterparty risks are evaluated in decision-making during the tender and award process.

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Evaluation of supplier risks, set out in the Procurement Policy

PROCUREMENT POLICY

Credit risk	*"In significant Procurements or tenders, a Supplier **credit risk assessment** shall be required in order to ask for sufficient contractual guarantees to ensure obligations are met".*
Fraud risk	*"Depending on the nature and amount of the object of the tender, a Supplier **fraud risk assessment** must be carried out, the result of which shall determine the level of approval required to start the relationship".*
Cybersecurity risks	*"Processes shall be included to identify and establish **cybersecurity requirements** that would mitigate the risks associated with access by Suppliers and their potential subcontractors to information or to IT systems and services and communications of the group".*
CSR risks	*"[...] priority will be given to those Suppliers that have **advanced management systems**, certified by a third party and, in particular: (i) Environmental Management System; Quality Management System; (iii) Occupational Risk Prevention System; (iv) Corporate Social Responsibility Action Plan; and (v) internal Code of Ethics.*
Party risk	*"[...] Suppliers shall be requested to state in their bid the work they propose to subcontract, as well as the names of **potential subcontractors**, for purposes of analysis in the context of evaluating the bid".*
Tax risk	*"No contract may be entered into with a supplier that is not current in the payment of its **tax obligations**, tax-related obligations or any other kind of obligations as a result of which the group might incur any secondary liability".*

Review of the provision of general supplies in countries presenting a risk of corruption

To analyse supplies in countries with a risk of corruption, the company uses the *Transparency International Corruption Perceptions Index 2018 (TI CPI 2018)* as a source to classify countries by their risk level.

Procurement volumes classified by corruption risk levels are set out in the following table:

Corruption risk[111]	% of 2018 general supply purchases in countries on the CPI Index 2018
Low	51.8
Medium	21
High	27.2

According to the TI CPI 2018, countries with a high risk of corruption in which purchases were made from suppliers registered are mainly Brazil and Mexico. This volume of procurement is directly related to Iberdrola's investment effort in these countries, where 33% of the group's total investments were made in 2018.

[111] Low risk: country index ≥ 60 / Medium 59-50 / High risk: < 50 on a scale of 0 (perception of high corruption levels) to 100 (perception of low corruption levels).

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Iberdrola has not made any significant purchase of general supplies from suppliers located in tax havens.

Review of fuel supplies in countries presenting a risk of corruption

An analysis of the purchases of fuel shows the following ratios in 2018:

Corruption risk[111]	% of 2018 general supply purchases in countries on the CPI Index 2018
Low	49
Medium	0
High	51

According to the TI CPI 2018, the countries with a high risk of corruption in which purchases were made from suppliers registered there are mainly Mexico and Brazil. However, the company believes that the calculation should exclude purchase of fuel in these two countries because they are made in strongly regulated environments that require contracting with state-owned companies. Excluding both countries from the calculation, the high-risk percentage would decrease to 11%.

Money laundering

Although Iberdrola, S.A., Iberdrola España, S.A.U and their head of business companies are not subject to *Law 10/2010 on the prevention of money laundering and terrorist financing* (the "**Money Laundering Act**"), this risk is contemplated as part of the *Crime Prevention Programme* of such companies, given the breadth of the definition of the crime and taking into account that this type of crime can be committed by careless action. The general controls related to these crimes include i) the *Code of Ethics* itself, ii) the *Procurement Policy,* iii) the *Protocol for Social Contributions, Donations and Sponsorships*, and iv) the *Protocol for Management the Risk of Third-Party Fraud and Corruption.* These companies also have a number of specific controls for these types of crimes that have also been identified in the aforementioned Programme.

However, due to the nature of its activities, Iberdrola Inmobiliaria, S.A.U. is subject to the Money Laundering Act, for which reason this company, in addition to having the preventive controls mentioned above, has specific additional controls mainly intended to prevent these types of crimes. By way of example, the company has rules like the *Procedure for Action to Prevent Money-Laundering and Terrorist Financing* and *Contract Approval Countersigning.*

2.- Policies and protocols

Once the risks are identified and duly evaluated, the company must approve the required internal rules (policies, protocols or procedures) to which decisions and activities will be subject in order to prevent and mitigate said risks.

Along these lines, the Iberdrola group has approved (as an integral part of its Corporate Governance System) a number of general internal policies and rules in the compliance area mainly intended to serve as a guide for the conduct of its professionals in a global, complex and changing environment. This general rulemaking includes the *Code of Ethics*, the *Crime Prevention Policy* and the *Anti-Corruption and Anti-Fraud Policy*, which are have been approved by Iberdrola, S.A.'s Board of Directors and are called upon to further develop the *Purpose and values of the Iberdrola group.*

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Apart from the higher-level rules mentioned above, the Unit in the exercise of its powers approves procedures and protocols in the Compliance area required for the further development thereof (some of which have already been mentioned). These lower-level rules attempt to regulate and mitigate certain specific identified risks and must in any case be in consistent with the provisions of the Corporate Governance System.

In particular, in the area of the fight against corruption, specific rules have been developed pursuant to which there is an analysis and evaluation of the risk of fraud and corruption of the third parties with which Iberdrola is related. In this context, they include:

1) **Third parties generally.** During financial year 2018, the Unit approved the *Protocol for Management the Risk of Third-Party Fraud and Corruption.* This protocol is configured as a rule specifically intended to prevent the risks of fraud and corruption arising from the relationship of the companies of the group with any third party related thereto. It establishes a number of procedures and analyses related to the process of selection and contracting thereof.

   The scope of application of this protocol excludes the third-party types referred to below.

2) **Government administrations and public officials.** Iberdrola has also approved a *Protocol for Conduct in Professional Relations with Governments, Political Parties, Authorities and Public Officials,* applicable to the entire group, governing employee relationships with government administrations, authorities, public officials and other persons who participate in the exercise of public office, as well as political parties, federations, coalitions or electoral groups. Apart from establishing certain principles of conduct to be observed by all of the professionals, this protocol establishes certain requirements to report to the corresponding Compliance Division prior to the formalisation of any contract, agreement or pact with public officials or government administrations.

3) **Corporate transactions.** The company has approved a *Corporate Transactions Protocol* in order to establish the steps to take regarding risks associated with compliance in the case of mergers and acquisitions, joint ventures and other types of corporate transactions contemplated in the area of application thereof. This protocol establishes the obligation to engage in a compliance review and analysis for any corporate transaction that is going to be formalised. Likewise, the Compliance function also engages in a prior analysis of investment and divestment projects from the standpoint of fraud and corruption risk.

4) **Donations, sponsorships and social welfare activities.** The company has also approved a *Protocol for Social Contributions, Donations and Sponsorships,* the object of which is to evaluate any compliance risks associated therewith and the terms and conditions for such transactions, as well as the beneficiaries thereof.

This internal rule, which is regularly reviewed by the Unit and the compliance divisions to the actual activities of a dynamic organisation, as well as to a changing environment, is disseminated and made available to all employees.

3.- Communication

The Unit and the compliance divisions establish an internal and external communication plan in relation to the Compliance System each year. Communication actions are established based on an evaluation of risks, strategic priorities, defined objectives and identified ethics and compliance requirements.

The Communication Divisions, working with the Unit and/or the various compliance divisions, as applicable, are responsible for implementing and monitoring the communication plans.

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The various available tools and channels have been used for the communication activities selecting those that are most effective based on the particularities of each case. The support, cooperation and advice of the company's Communication Division was available for this purpose at all times. To summarize, the main communication activities performed at the group by the various compliance divisions are the following:

- **Email campaign:** The Unit and the various compliance divisions prepare and send emails in relation to the various issues relating to the *Code of Ethics,* compliance rules and the Compliance System generally. During financial year 2018, there were communications relating to i) changes made in the latest update of the *Code of Ethics,* ii) the launch of anonymous ethics mailboxes for the Spanish companies, encouraging the use thereof, and iii) the launch of the ethics survey of the Iberdrola group.
- **Employee portals.** The new version of the employee portal of the Iberdrola group has updated and revised the information relating to compliance and ethics appearing therein. In particular, the employee portals of the Iberdrola group in Spain have been updated to include, among other things, the current versions of all compliance regulations, as well as the *Crime Prevention Programmes* of each company.

  The employee portal also makes available to the employees i) an interview with the group's Compliance Director to emphasize the importance of using the group's ethics mailboxes, and ii) specific information regarding the 2018 ethical culture survey.
- **Publications in external media.** Apart from the information published on the group's corporate website www.iberdrola.com, for purposes of Iberdrola's inclusion for the fifth consecutive year in the list of the "*World's Most Ethical Companies*" published each year by the Ethisphere Institute, there have been publications in this regard in various media, thus contributing to the dissemination of the group's commitment to ethics, honesty and integrity in all of its activities.

  There has also been publication in various external media of the acquisition by Iberdrola of the "*Compliance Leader Verification"* certification provided by the Ethisphere Institute to those companies that not only comply with applicable legal provisions but go beyond them and demonstrate the existence of an internal culture that promotes ethical values in all of their businesses and activities. The "Companies with best compliance practices" 2018-2019 award given by Expansión to Iberdrola was also recently published.
- **Events and seminars.** The compliance directors have participated in various ethics and compliance events and seminars, including *Compliance Officer Day* organised by the Spanish Compliance Association (ASCOM), the domestic and international compliance conference organised by Thompson Reuters, and the compliance sessions organised by the National Markets and Competition Commission.
- **Support programmes.** In collaboration with ASCOM, Iberdrola has developed a programme for compliance systems intended to help small- and medium-sized businesses (SMEs) and public bodies in the implementation of these systems. The initiative was addressed to almost 40 entities in Navarre, the Basque Country and Valencia. Iberdrola promotes this programme to disseminate a culture of compliance among the third parties with which it relates in order to achieve both a higher level of ethical commitment from all organisations and improvement in the competitiveness thereof, highlighting the competitive advantage that compliance systems offer to those who implement them.

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4.-Training on anti-corruption policies and procedures

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The Unit and the various compliance divisions establish specific annual ethics and compliance training plans, which are defined taking into account (i) the areas in which a higher level of risk in this area has been identified, (ii) changes in applicable rules, and (iii) changes in internal rules. The Human Resources Division is available to assist with the implementation of these specific annual plans.

The initiatives carried out during the year include:

Training for governance bodies

- As part of the training programme for the directors of Iberdrola, S.A., there was a training initiative in 2018 directed to the Board of Directors regarding the Iberdrola group's Compliance System and the structure, bodies and tasks thereof.

  The Compliance Unit also regularly reports to the Sustainable Development Committee on the most significant compliance issues for the period, having appeared before this body a total of three times in 2018. The aspects reported on include the report on annual reports, update of the internal compliance rules and the *Crime Prevention Programmes*, the implementation of anonymous ethics mailboxes at the Spanish companies, the results of the survey on ethical culture, the annual activities plans, resources and budgets.

Training for employees of the group

- In coordination with the various country subholding companies and/or head of business companies, the Unit develops and regularly updates training programmes on the *Code of Ethics* and the other rules and regulations in this area applicable to all group professionals. Such programmes foster knowledge of the action standards required at the group and promote ethical values and the principle of "zero tolerance" towards the commission of unlawful acts and situations of corruption and fraud. Various initiatives have been developed, including:
  - On-site training and awareness-raising sessions on the Code of Ethics and anti-corruption provisions for members of the company's management team in Spain. During 2018 more than 145 employees belonging to this group have received on-site training within this programme through the various meetings held in Madrid and Bilbao.
  - During the month of September there was a global training programme in collaboration with the law firm Baker & McKenzie regarding international anti-corruption risks and regulation for those employees who might be affected by these types of risks due to the nature of the duties they perform. This training was made up of an onsite session in Madrid which was broadcast globally and attended by more than 430 professionals.
  - Specific training regarding the *Internal Regulations for Conduct in the Securities Markets.* The Compliance Unit, together with the law firm Uría Menéndez, held onsite training sessions in Bilbao and Madrid, the principal purpose of which was to review and comment on the main aspects of the regulation, as well as the obligations it imposes on the persons affected and on treasury share managers. 48 professionals these meetings.
  - Specific local anti-corruption training:
    - In the United Kingdom, there is specific training in this area directed to employees in various areas with potential risk. More than 70 employees have received this training.

- The *Code of Ethics* training in the United States includes a short training session on anti-corruption. This online course was taken by 6,386 professionals in 2018.
- There have been onsite training sessions in Mexico regarding key aspects of ethics and compliance. This initiative was developed through 32 sessions attended by 654 employees.
- There have also been on-line and in-person training courses in Brazil regarding the *Code of Ethics*, fraud and corruption, attended by 8,759 professionals.

5.- Monitoring

The main activities performed by the group within the Compliance System are monitored quarterly by the Compliance Unit through the report in which the Compliance Divisions of each country subholding and/or head of business company report on changes in a number of indicators regarding the principal elements making up the compliance programs of the respective companies.

Grievance mailboxes of the group

One of the basic elements of the Compliance System is to establish detection and/or monitoring mechanisms to verify the effectiveness of the controls and prevention activities carried out at the group. Such mechanisms include the ethics mailboxes, which constitute tools to report conduct that could entail an irregularity or an act contrary to the law or to the rules of conduct set forth in the *Code of Ethics* or other internal rules or procedures. All professionals who have reasonable indications of the commission of an event of this kind must report it through the aforementioned mailboxes. In addition to potential grievances, queries may also be made through these channels on matters relating to the interpretation of and compliance with the *Code of Ethics* and the other internal rules in this area.

All communications received are deemed confidential information, and may be anonymous in those jurisdictions in which the law so allows. In any event, there is an express commitment of the group, reflected in the *Code of Ethics*, in the *Anti-Corruption and Anti-Fraud Policy* and in the other internal procedures and rules in this area, not to take reprisals against those using the aforementioned mailboxes, with the logical exception of cases of bad faith. As a new development in 2018, the Compliance Unit has made anonymous ethics mailboxes available to the employees of the companies in Spain and Mexico.

The group also has suppliers' ethics mailboxes. Such mailboxes are communication channels to enable the suppliers of the group, as well as any companies that they hire to provide services or supplies, their respective employees and the companies that have participated in a tender for services or supplies to become suppliers, to report conduct that could entail (i) infringement by any group professional of the Corporate Governance System, the *Code of Ethics* or applicable law, or (ii) the commission by a supplier, its subcontractors or their respective employees of any act contrary to the law or to the provisions of the *Code of Ethics* within the framework of their business relations with the group. These mailboxes are available in the procurement portal of the website. This mailbox also has the option of reporting anonymous grievances since 2018.

The group also has a shareholders' ethics mailbox. This mailbox represents a channel of communication through which shareholders can report conduct that night involve a breach of the company's Corporate Governance System or the commission by any professional of the group of an act contrary to the law or to the rules of conduct of the *Code of Ethics*. This mailbox is available on the group's corporate website, specifically within the interactive system provided for the shareholders known as "OLS – On-Line Shareholders".

Iberdrola group ethical culture survey 2018

In September 2018 the Compliance Unit took a survey of the ethical climate for all professionals of the group, obtaining more than 17,500 responses. The survey attempts to evaluate the ethical culture of the organisation and tries to measure significant aspects like employee perception of the company's ethical culture, their evaluation of the controls within the organisation and their confidence in the ethics mailboxes.

An analysis of the survey results leads to a number of specific measures to improve situations or problems that have been detected.

Internal reviews of the compliance system

During financial year 2018, internal audit performed a review of the *Crime Prevention Programmes* of the companies of the Iberdrola Spain subgroup, focusing on the following crimes:

- Business corruption
- Money laundering
- Illegal financing of political parties
- Bribery and influence peddling
- Terrorism financing

Although the results thereof did not indicate any non-compliance, certain areas for improvement have been identified and sent to the corresponding Compliance Divisions for assessment.

Internal reviews of the compliance system

- In 2018, as a result of the external audit of Iberdrola's Compliance System by the Ethisphere Institute, the company has renewed the "Compliance Leader Verification" certification, which this institute gives to those companies that not only comply with applicable legal provisions but go beyond them and demonstrate the existence of an internal culture and leadership that promotes ethical values in their businesses.

- Iberdrola has been included by the Ethisphere Institute for the fifth consecutive year as one of the most ethical companies in the world, according to the World's Most Ethical Companies 2018 ranking. Iberdrola is once again the only Spanish company with this classification.

- After the annual follow-up audit in 2018, Aenor has made an evaluation of Iberdrola's system according to (1) the UNE-ISO 37001 standard regarding the anti-bribery management system, and (2) the UNE19601 standard regarding criminal management systems.

  Also in 2018, (i) the country subholding company Iberdrola España, S.A.U. and its head of business companies, and (ii) Iberdrola Inmobiliaria, S.A.U. have obtained the ISO37001 and UNE19601 certifications mentioned in the preceding paragraph.

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- The law firm Uría Menéndez has issued a report evaluating the effectiveness of the *Crime Prevention Programmes* implemented at the various companies of the group. As a result of the review for 2017, it was concluded that these programmes are in compliance with best international practices, are effective and are useful to significantly reduce the risk of commission of the crimes sought to be prevented.

- Finally, Iberdrola was given the "Companies with best compliance practices 2018-2019" award by Expansión. This award is given to those companies that have a compliance model ensuring not only compliance with the internal or external rules to which it is subject, but that also has appropriate procedures, tools and personnel.

6.- Response and remediation plans

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As laid down in the *Regulations of the Compliance Unit*, it falls upon the Compliance Unit to handle communications made through the ethics mailboxes, except in cases where the report affects an employee of a country subholding company or head of business company that has its own Compliance Division.

The right to confidentiality, to a defence and to the presumption of innocence of the persons under investigation are guaranteed in all investigations.

In addition to the work of investigation, in view of the results of the investigation or grievance processes, the Compliance Unit or Divisions may identify potential corrective actions and make suggestions to the corresponding areas to improve the control, prevention and mitigation systems.

As regards the communications received through the ethics mailboxes established in the group, a total of 1,695 communications were received in financial year 2018, of which 655 were queries and 1,040 were complaints. Of the 1,040 complaints received, 648 were accepted for processing. In 8% of the cases of complaints allowed to proceed, some type of disciplinary action was taken upon a showing that there had been improper conduct or conduct contrary to the *Code of Ethics* or any other applicable rule.

Information regarding the existence of cases of corruption during the financial year

The company has not been informed, either through the ethics mailboxes or through the corresponding legal channels of its Legal Services, of any specific court decisions regarding cases of corruption during the reporting period. There were also no incidents reported through the mailboxes established for such purpose resulting in the cancellation of orders or of contracts with group suppliers.

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Proceedings from prior years with an impact on the financial year

On 22 December 2017, the European Investment Bank (the "EIB"), Iberdrola Ingeniería y Construcción, S.A.U. and Iberdrola S.A. (in its capacity as owner of all of the share capital of Iberdrola Ingeniería y Construcción, S.A.U. through the country subholding company Iberdrola Participaciones, S.A.U.) signed a settlement agreement (the "**Agreement**") within the framework of the EIB's investigation relating to the Riga TEC-2 project to rebuild a thermal plant in Riga (Latvia), which was awarded to Iberdrola Ingeniería y Construcción, S.A.U. on 8 December 2005 and financed by this institution.

Among the obligations agreed to with the bank under the Agreement, Iberdrola Ingeniería y Construcción, S.A.U. and Iberdrola, S.A. have committed to develop, finance and implement a specific programme to sponsor activities in the area of compliance by taking actions and measures in favour of the fight against corruption and fraud for a period of four years from the signing of the Agreement. Within this context, the company has performed more than 20% of the agreed activities during 2018.

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Fiscal responsibility

The fiscally responsible behaviour of all companies of the Iberdrola group forms part of the *General Sustainability Development Policy* which contemplates basic principles of conduct that must be respected. The taxes that the group pays in the countries and territories in which it operates are the main contribution of the companies of the group to sustaining public expenditures, and thus one of their contributions to society.

The values that guide the corporate policies, internal rules and other internal codes and procedures include ethical principles, good corporate governance and institutional transparency and loyalty.

In 2010 the Board of Directors approved a *Corporate Tax Policy*, which was last updated on 18 December 2018. This Policy contains the tax strategy of Iberdrola, S.A. and its commitment to the application of good tax practices, and is applicable to all companies of the group in all of the countries in which it operates.

The *Tax Policy* defines a number of principles, including:

- *"The prevention and reduction of significant tax risks, ensuring that taxes bear an appropriate relationship to the structure and location of activities, human and material resources, and the group's business risks".*
- *"The strengthening of the relationship with tax authorities based on respect for the law, fidelity, reliability, professionalism, cooperation, reciprocity, and good faith, without prejudice to the legitimate disputes that, observing the aforementioned principles and in the defence of the corporate interest, may arise with such authorities concerning the interpretation of applicable legal provisions".*
- *"Envisaging the taxes that group companies pay in the countries and territories in which they operate as the principal contribution to sustaining public expenditures, and therefore one of their contributions to society".*

And by application of these principles, the group assumes the following good tax practices, among others:

- *"Not to use artificial structures unrelated to the Company's business for the sole purpose of reducing its tax burden nor, in particular, enter into transactions with related entities solely to erode the tax basis or to transfer profits to low-tax territories".*
- *"Avoid opaque structures for tax purposes, which are understood as structures calculated to prevent knowledge by the competent tax authorities of the party ultimately responsible for the activities or of the ultimate owner of the assets or rights involved".*
- *"Not to create or acquire companies resident in tax havens, with the sole exception of those cases in which it is forced to do so because it is an indirect acquisition in which the company that is resident in a tax haven is part of a group of companies that are being acquired".*
- *"Follow the recommendations of the good tax practices codes implemented in the countries in which the companies of the group do business, taking into account the group's specific needs and circumstances".*

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Applying the maximum standards of tax transparency, Iberdrola, S.A. has adhered to the *Code of Good Tax Practices* approved on 20 July 2010 by the full Forum of Large Businesses (*Foro de Grandes Empresas*), established on 10 July 2009 at the behest of the National Tax Administration Agency (*Agencia Estatal de Administración Tributaria*). Iberdrola's commitment to compliance with, further development and implementation of the Code will extend to any other good tax practices that stem from the recommendations of the Code in effect at any time, even if not expressly set forth in the *Corporate Tax Policy.*

In addition, in order to strengthen its commitments in this area, Iberdrola, S.A. has submitted to the Spanish tax authorities the "Annual Tax Transparency Report for companies adhering to the Good Tax Practices Code" for 2015, 2016 and 2017.

In 2018, it began a new path through the preparation for purposes of the holding of the company's General Shareholders' Meeting of a document regarding "Global Tax Contribution/Financial Year 2017 - Our Commitment to Society". This document will be included after 2019 in the "Tax Transparency Report" approved by the Board of Directors, which will group together all significant tax issues.

Furthermore, aware of the significance today of tax havens and non-cooperative jurisdictions, it should be noted that the Iberdrola group does not include within its controlled affiliates and assets any that are resident in tax havens, pursuant to the laws in this regard (Royal Decree 1080/1991 of 5 July and respective updates thereof) or in territories classified by the European Union in its black list as non-cooperative jurisdictions for tax purposes.

It only held an indirect interest in the company Garter (an inactive company residing in the British Virgin Islands) acquired with the merger of Neoenergia into the Iberdrola group at the end of August 2017, although this company has already been liquidated.

The group also pays special attention to the state of Delaware due to the interest it raises, even though it is not considered a tax haven or non-cooperative jurisdiction. In this regard, various companies forming part of the Iberdrola group were incorporated in this state. In fact, in the United States, it is customary practice to incorporate companies in the State of Delaware, due to the development of its commercial law and strong jurisprudence. This combination provides strong legal security in the commercial arena.

However, the tax domicile of the companies (which determines the tax system applicable thereto and where they should register for such purpose and pay taxes) is determined by the place where the administration and management of the businesses of the companies is concentrated, regardless of the place of incorporation. Thus, the companies of the Iberdrola group incorporated in Delaware as well as in any other state of the United States have their tax domicile and pay taxes in the states in which the locations of operation of the consolidated tax group of which they form a part are located, which does not include Delaware. In summary, the companies of the Iberdrola group are incorporated according to objective business standards and not to tax engineering structures.

Iberdrola is fully aligned with the principles and actions proposed by the OECD's "BEPS Plan". Specifically, as regards Transfer Pricing, state that the group assesses related-party transactions at arms'-length prices in line with the OECD Guidelines in this area. Furthermore, all existing related-party transactions of the group are duly documented on the terms provided by the legal provisions of the various countries. The group is also committed to the preparation and presentation in due time and form of the Country-by-Country Report upon the terms provided by the law of its parent company, Spain. In the Country-by-Country Report for 2016 and 2017, submitted in 2017 and 2018, respectively, information regarding the activities of the

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group was reported, as was information regarding all taxes paid and collected by the companies of the group in the various tax jurisdictions in which it is present.

In 2017 and 2018 Iberdrola was ranked as the leading company on the tax transparency ranking of Ibex 35 companies, prepared by Fundación Compromiso y Transparencia based on 2016 and 2017 information, respectively, in recognition of its good tax practices and its transparency.

The taxes paid are presented in the following table:

Tax contribution (€ millions)	2018	2017	2016[112]
Company contributions	3,096	2,723	2,768
Contributions due to third-party payments	4,843	4,388	4,361
Iberdrola consolidated total	**7,939**	**7,111**	**7,129**

More than 98% of taxes paid (total contribution) by the group occur in the five most relevant countries. A detailed breakdown by geographic area can be found in Annex 1 Supplementary Information.

[112] For better comparability of the 2017 and 2016 information, 100% of the taxes paid by Neoenergia in Brazil during 2016 are included.

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Competition

Contribution to SDGs of the performance described by the indicators of this section
(according to SDG Compass www.sdgcompass.org)

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Pursuant to the *Code of Ethics*, the group undertakes to compete fairly in the market and not to engage in advertising that is misleading or denigrates its competitors or third parties. The group also undertakes to obtain information lawfully, to promote free competition for the benefit of consumers and users, and to promote transparency and free market rules, as provided in the group's *General Sustainable Development Policy*.

In relation to the foregoing, and specifically pursuant to the provisions of the *Anti-Corruption and Anti-Fraud Policy*, the companies of the group promote a transparent environment, maintaining appropriate internal channels to favour the communication of possible irregularities, including the ethics mailboxes, which allow professionals of the group, suppliers and shareholders of the company to communicate conduct that may entail a breach of the company's Corporate Governance System or the commission by a professional of the group of an act contrary to the law or to the rules of the *Code of Ethics*.

At the country level, each of the country subholding companies endeavours to ensure strict compliance with legal provisions on separation of activities. In many countries like Spain, where a *Code for the Separation of Activities of the Companies of the Iberdrola group in Spain* applies, applicable internal rules go beyond what is required by law, significantly strengthening the measures to prevent any anti-competitive practices deriving from a lack of separation between the liberalised and regulated businesses.

The liberalised head of business companies also have specific controls to avoid any type of anti-competitive practices, particularly in areas like advertising campaigns directed towards individuals and price manipulation.

In Spain, the generation head of business company has access to Autocontrol, a private entity that works for truthful, legal, honest and trustworthy advertising, which among other activities provides a consulting service to advise on the ethical and legal adequacy of campaigns before they are launched. It has also implemented internal processes to ensure compliance with *Regulation (EU) 1227/2011 of the European Parliament and of the Council of 25 October 2011 on wholesale energy market integrity and transparency* and the legal provisions in further development thereof, which establish rules prohibiting abusive practices that affect the wholesale energy markets. In other jurisdictions, the liberalised head of business companies have equivalent internal policies and rules.

In the United Kingdom, ScottishPower has implemented internal processes to ensure compliance with REMIT, the EU regulation on the integrity and transparency of the energy market. REMIT provides a specific regulatory framework for wholesale energy markets that defines market abuse (including manipulation or attempted manipulation of the market, use of inside information, explicit prohibition against market abuse, etc.). The regulator Ofgem

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supervises compliance with such regulations on integrity and transparency of the electricity and gas market, monitoring, investigating and sanctioning violations of REMIT.

In the practical application of applicable law, the complexity thereof might give rise to interpretations that are not shared by other market players or by the regulatory authority itself, giving rise to situations such as those described below requiring the intervention of the competent courts.

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In 2017, a class action lawsuit was filed with the United States District Court of Massachusetts on behalf of New England customers against the company and Eversource, alleging that certain of their respective subsidiaries that provide natural gas transmission services using the Algonquin Gas Transmission (hereinafter, “AGT”) pipeline, which for the company would be its indirect subsidiaries SCG and CNG, engaged in natural gas pipeline capacity scheduling practices with respect to AGT that resulted in an artificial increase in electricity prices in New England. The plaintiffs sought to recover damages, disgorgement, redress in the form of restitution, injunctive relief and an award of costs. The company filed a motion to dismiss all claims on 29 January 2018, and on 27 February 2018, the Federal Energy Regulatory Commission (hereinafter, “FERC”) released the results of a staff inquiry into the gas pipeline capacity scheduling practices involving the AGT. The FERC stated that the inquiry did not uncover any evidence of anticompetitive withholding of natural gas pipeline capacity on the AGT and that it would not take any further action on the matter. On 27 April 2018, the company filed a motion to dismiss all claims based on federal pre-emption and lack of any evidence of antitrust behaviour, citing, among other reasons, the results of the inquiry conducted by FERC staff. The plaintiffs filed opposition to the motion to dismiss on 25 May 2018, and the U.S. District Court of Massachusetts held a hearing on the motion to dismiss on 1 August 2018. On 11 September 2018, the U.S. District Court upheld the motion filed by the company and dismissed all of the claims. On 10 October 2018, the plaintiffs filed an appeal. The company cannot predict the outcome of this class action lawsuit.

In addition, on 10 August 2018, PNE Energy Supply LLC, a competitive energy supplier located in New England that purchases electricity in the day-ahead and real time wholesale electric market, filed a civil antitrust action, on behalf of itself and those similarly situated, against Avangrid and Eversource alleging that their respective gas subsidiaries illegally manipulated the supply of pipeline capacity in the “secondary capacity market” in order to artificially inflate New England natural gas and electricity prices. The plaintiff claimed to represent entities which purchased electricity directly in the wholesale electricity market that it claimed was targeted by the alleged anticompetitive conduct of Eversource and the company. On 28 September 2018, the company filed a motion to dismiss all of the claims based on federal pre-emption and lack of any evidence of antitrust behaviour, citing, among other reasons, the results of the FERC staff inquiry and the dismissal of the claim by the same Court in September. The company cannot predict the outcome of this class action lawsuit.

No cases related to monopoly practices or anti-competitive behaviour have been recorded at the other companies of the Iberdrola group during the financial year. Nor do any cases filed in prior years remain open.

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Public policy

Contribution to SDGs of the performance described by the indicators of this section

(according to SDG Compass www.sdgcompass.org)

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Relations with regulatory entities and social institutions

Iberdrola has two kinds of relationships with regulatory entities:

- Relationships geared towards contributing to the enactment of efficient regulatory provisions allowing for the development of a competitive market in activities that are not subject to a natural monopoly, and sufficient remuneration for regulated businesses. To that end, there is a continuous and constructive dialogue where information, knowledge and positions are exchanged. Iberdrola is thus acquainted with the concerns and proposals of regulatory entities and provides them with its own positions in the legitimate defence of its interests and those of its shareholders and customers. The company also actively participates in "public hearings" held by regulatory entities in order to ascertain the opinions of the players involved in the processes prior to the revision of regulations or the determination of domestic and European energy policies. It also participates in the official processes of enactment of the laws and regulations and the monitoring of the application thereof.

- Provision of all information required by regulatory entities, whether in connection with the normal conduct of its business or as a result of any transitory issue.

In addition to its direct relationships with regulatory entities, Iberdrola and the companies in its group participate in the regulatory process through the domestic and international trade associations of which they are members. **102-13**

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International	
World Energy Council	WindEurope
World Economic Forum	Electric Power Research Institute (EPRI)
United Nations Global Compact	European Distribution System Operators (EDSO)
Union of the Electricity Industry EURELECTRIC	Global Wind Energy Council (GWEC)
CSR Europe	Nuclear Industry Association (NIA)
International Electrotechnical Commission/European Committee for Electrotechnical Standardisation (IEC/CENELEC)	European Network of Transmission System Operators for Electricity (ENTSOE)
International Emissions Trading Association (IETA)	World Association Nuclear Operator (WANO)
BetterCoal	European Utilities Telecom Council-EUTC
Institute of Electrical and Electronics Engineers (IEEE)	International Conference on Electricity Distribution (CIRED)
European Round Table (ERT)	Smart Life
Prime Alliance	International Council on Large Electric Systems (CIGRE)
Connection Network Codes	European Technology Platform Smart Grids
Solar Power Europe	
Spain	
Foro de la Industria Nuclear Española	Unión Española Fotovoltaica (UNEF)
Asociación Española del Gas (SEDIGAS)	Red Española del Pacto Mundial
Plataforma Española de Redes Eléctricas (FUTURED)	Confederación Española de Organizaciones Empresariales (CEOE/Cepyme)
Asociación Española de la Industria Eléctrica (AELEC)	Círculo de empresarios
Instituto Tecnológico de la Energía (ITE)	Cámara de Comercio de España
Asociación Española de Normalización (AENOR)	Club de Excelencia en Sostenibilidad
Fundación COTEC para la Innovación	Club Español de la Energía
Asociación Empresarial para el Desarrollo e Impulso del Vehículo Eléctrico	Asociación Empresarial Eólica (AEE)
Corporate Excellence	Grupo Español de Crecimiento Verde
United Kingdom	
The Confederation of British Industry	Aviation Investment Fund Company Limited
The Scottish Council for Development and Industry	Energy UK - Energy Efficiency Group
Energy UK-ECO Group	Generators Safety & Integrity Programme
Energy Networks Association	Business Disability Forum
Scottish Renewables UK	Energy Institute
Energy & Utility Skills	Energy Action Scotland
Scotland's Towns Partnership	Cheshire Energy Hub
National Skills Academy for Power	Joint Environment Programme
Institute of Engineering & Technology	Gas Storage Operators Group
National Energy Action	Energy Efficiency Group
Scottish Rugby Union	British Hydro Association
Distribution Connection and Use of System Agreement (DCUSA)	Glasgow & Edinburgh Chamber of Commerce
United States	
Business Council of New York State	American Wind Energy Association (AWEA)
Mid-Atlantic Renewable Energy Coalition (PJM States)	Center for Energy Workforce Development (CEWD)
Maine Better Transportation Assn	The Nature Conservancy-Maine (TNC)
NY State Economic Development Council	Maine Audubon Society
Greater Binghamton Chamber of Commerce	E2Tech
Maine & Company	Maine State Chamber of Commerce (MSCC)

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Northeast Gas Association (NGA)	Renewable Energy Northwest (RENEW)
Renewable Energy Northeast (RENEW)	The Wind Coalition (TWC)
Gas Technology Institute (GTI)	American Gas Association (AGA)
Edison Electric Institute (EEI)	Wind on the Wires (WOW)
Interwest Energy Alliance	Alliance for Clean Energy - New York (ACE-NY)
Center for Energy Efficiency and Renewable Technologies (CEERT)	Independent Energy Producers Association of California
Northeast Underground Committee (NEUC)	New England Power Pool
National Electrical Safe Code	New England-Canada Business Council
Mid-Atlantic Renewable Energy Coalition (MAREC)	Center for Energy Efficiency (CEERT)
North American Electric Reliability Corporation (NERC)	Northeast Transmission Group (NETG)
ISO New England (ISO-NE)	Energy Council of the Northeast (ECNE)
Connecticut Energy Workforce Development Consortium (CTEWDC)	North American Transmission Owner and Operator Forum (NATF)
Call Before You Dig, Connecticut	Association of Edison Illuminating Companies
American National Standards Institute (ANSI)	Operations Technology Development (OTD)
Industrial Asset Management Council (IAMC)	Clean Grid Alliance (WOW)
The Wind Coalition (TWC)	Rochester Business Alliance
Mexico	
Asociación Mexicana de Energía Eólica (AMDEE)	Cámara Española de Comercio, A.C. (CEE)
Asociación Mexicana de Energía, A.C (AME)	Consejo Coordinador Empresarial A.C
Confederación Patronal de la República Mexicana (Coparmex)	Cámara Nacional de la Industria de Transformación Ensenada
Cámara de la Industria de Transformación de Nuevo León (CAINTRA)	Consejo Ejecutivo de Empresas Globales, AC
Empre-Bask México, A.C	
Brazil	
Associação Brasileira de Distribuidoras de Energia Elétrica (ABRADEE)	Associação Brasileira da Infraestrutura e Indústrias de Base (ABDIB)
Associação Brasileira dos Comercializadores de Energia (ABRACEEL)	Sistema Federação das Indústrias do Estado da Bahia (CIEB)
Movimiento Pernambuco Empresarial (ABERJE)	Instituto Ethos de Responsabilidade Social
Associação Brasileira de Energia Solar (ABSOLAR)	American Chamber of Commerce (AMCHAM)
Associação Brasileira de Geradoras Termelétricas (ABRAGET)	Associação Brasileira de Energia Eólica (ABEEOLICA)
Associação Brasileira das Empresas de Transmissão de Energia Elétrica (ABRATE)	Associação Brasileira de Relações Institucionais e Governamentais (ABRIG)
Comitê da Bacia Hidrografica do Rio Doce	Instituto Acende Brasil
Associação Brasileira dos Contadores do Setor de Energia Elétrica (ABRACONE)	Associação Brasileira das Empresas Geradoras de Energia Elétrica (ABRAGE)
Federação das Indústrias do Estado de Pernambuco (FIEPE)	Associação Brasileira dos Produtores Independentes de Energia Elétrica (APINE)
Centro de Pesquisas de Energia Elétrica (CEPEL)	

For more details on the company's commitment to the above, its participation within various committees, the contributions it makes or its strategic involvement, please consult public information or visit the websites of these organisations.

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Transparency of regulatory positions

As a general rule, Iberdrola endorses the principles of good regulation: proportionality, effectiveness and efficiency, responsibility and independence, consistency and credibility and, finally, transparency and clarity.

Therefore, a project for the dissemination of regulatory positions has been developed as part of Iberdrola's transparency policy. The company has thus made publicly available a compilation of Global Regulatory Positions, valid for all countries and businesses. The goal is for the regulatory positions advanced by Iberdrola to be transparent and well-known.

Iberdrola backs the objective of decarbonising the economy, taking a leading role in the transformation of the electricity sector. At year-end 2018, 68.2% of its installed capacity is emissions-free, the company being the leading renewable energy producer among European utilities and in the United States.

In order to decarbonise the economy, it is necessary to evolve into more efficient energy uses from emissions-free energy:

1- First, **the electricity sector must be transformed**, with fossil fuels being replaced by renewable energy.

   Along these lines, all existing energy plans include penetration objectives for renewables; specifically, the European Union has set a binding 32% by the year 2030.

   Renewables are intermittent and their costs are mostly fixed; therefore, in order to ensure their development, long-term revenue stabilisation policies are needed, such as auctions and Power Purchase Agreements (PPAs).

   In addition, firm and flexible capacities, which are needed to match demand and production, require specific payments associated with capacity, without putting the environmental objectives at risk.

   Finally, the electricity grid is key to integrating distributed and intermittent resources and to optimising the global investment. It must be adequately remunerated for these new services, and the associated costs must be allocated among all the system users.

2- Furthermore, **the other energy uses, especially transportation and construction, must be electrified**, based on an appropriate cost-benefit analysis.

   As far as transportation is concerned, the most efficient and sustainable means of decarbonisation is the development of the electric vehicle. In this regard, technological development and an adequate recharge network must both be promoted. In order to honour the commitments of the Paris Agreement and become carbon-neutral, there should be no internal combustion vehicles by 2050.

   As regards construction, the heat pump is an efficient alternative that should be specifically advanced as a renewable solution.

   Once the economy has been electrified to the maximum possible extent, other energy alternatives should be considered for uses that do not allow for electrification. For example, electrogas could be a viable alternative for sea and air transport.

3- The electrification of the economy must be financed by all the polluting sectors, for which purpose an economic signal, in certain cases coupled with a tax reform, is indispensable.

In this transformation process, it is essential for consumers to be able to make appropriate decisions based on true, adequate and clear information. Smart meters provide customers with

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better information on their consumption patterns and allow for continued progress toward custom-made offerings.

Renewable distributed generation (internal consumption) contributes to reducing emissions and makes the customer a more active player. Customers should be allowed to feed their surpluses into the network and receive the energy price in effect at the time of injection.

The company places a greater focus on vulnerable customers, to whom it wishes to guarantee basic energy supply. Several countries have developed protection policies in this regard that must be funded from general budget revenues.

The most prominent institutions share this view of electrification of the economy: MIT, EPRI, NARUC, CEER, etc.

External initiatives to which the organisation subscribes or which it endorses

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The company has subscribed to or endorsed external initiatives aligned with sustainable development and encouraged its affiliated companies to adhere to them. Iberdrola supports or subscribes to:

Iberdrola is fully aligned with the Sustainable Development Goals (SDGs), including them in its business strategy and its *General Sustainable Development Policy*. In addition to meeting its goals to reduce the intensity of CO_2 emissions 30% by 2020 and 50% by 2030 and being carbon-neutral by 2050, Iberdrola is actively working to contribute to the success of the SDGs and for other citizens and companies to be aware of them and contribute to the achievement thereof. Along these lines, it is working with universities (Universidad de Salamanca and Universidad Politécnica de Madrid, ESADE), organising informational seminars, publishing materials and participating in forums like the *High Level Political Forum 2018* in New York and the *Youth Speak Forum* (of which Iberdrola is once again a Gold Partner) of the AIESEC initiative. A partial summary of the organisations and initiatives with which it has collaborated more actively during the whole process is provided below:

- World Economic Forum (WEF) –CEO Climate Leaders–.
- World Business Council of Sustainable Development (WBCSD)
- UN Global Compact LEAD.
- European Round Table of Industrialists.
- The Prince of Wales's Corporate Leaders Group. Green Growth Platform.
- Carbon Pricing Leadership Coalition.
- REDS, Red Española de Desarrollo Sostenible.
- SE4ALL.
- We Mean Business.
- The Climate Group.
- Fundación Rafael del Pino- Programa Inicia
- Bruegel.

- Items of note in the Spanish context are a very active collaboration with the Spanish Office of Climate Change and Iberdrola's participation in the Spanish Green Growth Group, of which it is vice-president.
- The *Good Tax Practices Code* of the Large Business Forum of the Spanish Tax Agency, part of the Ministry of Treasury since 2010, which involves following a course of conduct that goes beyond respect for and strict compliance with statutes and

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regulations, to contribute actively and voluntarily to economic, social and environmental improvement.

- The Global Compact since 2002. Iberdrola has also engaged in other initiatives in collaboration with this organisation, like the participation of Iberdrola's chairman Ignacio Galán in the *UN Global Compact Leaders Summit*, and the *LEAD global programme*, projects relating to human rights, the fight against climate change, and membership in other platforms and activities at the domestic and international levels. This *Progress Report* that Iberdrola prepares annually to communicate progress in complying with and disseminating the *Principles of the Global Compact* has reached the maximum level, defined as *Advanced.*
- In Spain, Iberdrola also adhered to an SF6 emissions reduction initiative, within the framework of an agreement between the Spanish Electrical Industry Association (*Asociación Española de la Industria Eléctrica*) (AELEC) and the Ministry of the Environment.

In the United Kingdom, ScottishPower has created a team dedicated to coordinating activities with the Cancer Research association, and all joint actions carried out since it joined an initiative in 2012 in order to procure funds to investigate this illness. Since then, they have amply achieved their goals, and there have been countless initiatives by ScottishPower employees helping to raise awareness of the treatment of this illness: *Race for Life*, Stand up to Cancer. It also has a specific rate called *Help Beat Cancer Fixed Price*, which when purchased commits the company to work with this organisation by contributing up to 5 pounds per contract per year.

Along these lines, within the framework of collaboration with the Spanish Cancer Association (*Asociación Española Contra el Cáncer*) (AECC), the *Together against cancer* (*Juntos contra el cáncer*) initiative was launched in Spain in October 2016, offering the opportunity to make small monthly donations via one's electricity bill with a commitment from Iberdrola to double the amount donated by its customers. This initiative continued in 2018, and more than 86,000 customers have already joined to collect funds. The company also participates in the proceedings of World Cancer Day and World Cancer Research Day.

In Brazil there is a continuation of the Together for the Sustainable Development of Communities, which is intended to contribute to improving social and corporate investments and stimulate the participation of private initiatives. For yet another year Iberdrola has supported the Mexican Red Cross in its national drive for 2018, while the company has participated in the creation of the "Fund to Support the Tehuantepec Isthmus" operated by the Mexican Wind Power Association, to rebuild the area affected by the earthquake.

Finally, in the United States, Avangrid participates in *Reforming Energy Vision (REV)* to promote a more efficient use of energy and greater penetration of renewables in the country. It is also a member of *The Partnership on Climate Resilience* of the U.S. Department of Energy to combat the effects of climate change and modernise energy infrastructures for the future. And it is also a signatory of the *American Business Act Climate Pledge* to support the fight against climate change.

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Lobbying activities and contributions to political parties or to related institutions

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As regards lobbying activities, Iberdrola is registered with the Transparency Register created by European institutions to provide adequate transparency to the relations of such institutions with companies, NGOs, citizens' associations, think tanks, etc. The register was created by the European Parliament and the European Commission, and the Council of the European Union supports the initiative. Iberdrola's record in such register can be found on the EU's website. In its activities to influence public policies, Avangrid has made the financial contributions shown in the US register.

Iberdrola has a neutral position from a political standpoint. In financial year 2018, none of the group's companies, except in the United Kingdom and the United States, contributed to the financing of political parties or to organisations controlled by them.

Contributions to political parties (€)	2018	2017	2016
United Kingdom	**27,696**	**26,266**	**26,889**
United States	**35,129**	**14,997**	**129,543**
Federal level	0	0	0
State level	35,129	14,997	129,543
Other countries	**0**	**0**	**0**
Total	**62,825**	**41,263**	**156,432**

In the United Kingdom, ScottishPower contributed a total of 27,696 euros, distributed among various parties across the political spectrum, to sponsor lectures and events, pursuant to the *Political Parties, Elections and Referendums Act (2000)*. These occasions are an important opportunity for the group to present its viewpoints to representatives of all political options on a non-partisan basis. The contribution does not involve supporting any particular party.

In the United States, the Renewables Business of Avangrid contributed a total of 35,129 euros to candidates and political parties, and reported such contributions in accordance with applicable law. The contributions are those made by the company and do not include additional voluntary contributions made by employees.

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Cybersecurity and information privacy

Contribution to SDGs of the performance described by the indicators of this section (according to SDG Compass www.sdgcompass.org)

In order to ensure appropriate protection of the group's physical and IT assets, Iberdrola has a *Cybersecurity Risk Policy*, approved by the Board of Directors, which establishes a global framework for the control and management of the cybersecurity risks applicable to all the companies of the group.

In particular, it refers to the risks arising from threats to and vulnerabilities in information, information technology and communications systems and any other asset that forms part of the group's cyber-infrastructure. The framework establishes the guidelines for a cybersecurity management model common to the entire group, based on the establishment of a Cybersecurity Committee and on the development of global rules and standards to be applied within all the businesses and corporate functions. Iberdrola has appointed a chief information security officer (CISO) to lead and supervise the deployment of the global cybersecurity strategy, as well as information security officers at the various country subholding companies to ensure the implementation thereof in each country, taking into account the particularities of their territory.

The group's Cybersecurity Committee, led by the global CISO, and on which all businesses and corporate functions are represented, promotes and supervises the deployment of the cybersecurity strategic plan and rules throughout the organisation, based on risk analysis and management and on the application of technical and organisational measures for appropriate protection and resilience of assets based on the critical nature thereof. It also establishes training and awareness-raising for the entire workforce, cybersecurity in the supply chain and the management of threats and incidents, including collaboration with government authorities and external security services to defend the brand and the company's customers against potential risks and fraud through social engineering.

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Iberdrola pays special attention to ensuring the privacy of the personal information of the group's Stakeholders. For this purpose, the company has a *Personal Data Protection Policy*, approved by the Board of Directors, and conforming to the European *Global Data Protection Regulation.* Its purpose is to guarantee the right to the protection of data of all individuals dealing with companies belonging to the group, ensuring respect for the right to dignity and privacy in processing of the personal data, and particularly the establishment of the common principles and guidelines to govern the group regarding the protection of data, guaranteeing compliance with applicable law on this topic in all countries in which the group is present.

To further develop this policy, the Corporate Security Division has developed a *Global Personal Data Protection Framework* of the Iberdrola group, which establishes the general standards and the global governance model on personal data protection and defines the coordination mechanisms and responsibilities in this area. The Corporate Security Division is the body responsible for developing the global data protection strategy, with the support of Legal

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Services and technological support of the Systems Division, for the data processing performed by the group.

The Iberdrola group has also appointed a Global Data Protection Officer, who will rely on a network of Local Data Protection Officers at each of the country subholding companies of the countries in which the group does business, and which ensures the implementation in each country of the global personal data protection strategy, taking into account the particularities of their territory.

The table below shows substantiated complaints regarding breaches of violations of privacy and losses of customer data.

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Incidents relating to privacy (no.)	2018	2017	2016
From regulatory entities	173	163	175
From other sources, substantiated	191	29	14
Total substantiated complaints	**364**	**192**	**189**

Of the incidents arising from regulatory entities, 151 occurred in the United Kingdom and 22 occurred in Spain. Of those having another origin there were 181 in the United Kingdom and 10 in Spain.

During 2018 there were also 6 cases of loss or breach of customer data, 3 in Spain and 3 in the United Kingdom.

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Socioeconomic compliance

Contribution to SDGs of the performance described by the indicators of this section (according to SDG Compass www.sdgcompass.org)

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As laid down in its By-Laws, Iberdrola aspires for its conduct and that of the persons connected therewith to conform and adhere not only to applicable law and its Corporate Governance System, but also to ethical principles and generally accepted principles of sustainable development. In this connection, the *Code of Ethics* of the Iberdrola group provides that:

- Group professionals shall comply strictly with the laws in force in the jurisdiction of their workplace, heeding both the spirit and the purpose of such legal provisions, and shall observe the provisions of the *Code of Ethics*, the rules of the Corporate Governance System, and the basic procedures governing the activities of the group and of the company in which they provide their services. They shall also fully observe all obligations and commitments assumed by the group in its contractual relations with third parties, as well as the usage and good practice of the countries in which they carry out their activities.
- The officers of the group shall have particular knowledge of the laws and regulations, including internal ones, affecting their respective areas of activity, and must ensure that the professionals reporting to them receive the required information and training to enable such professionals to understand and fulfil the legal and regulatory obligations, including internal ones, applicable to their position.
- The group shall respect and abide by all court and/or governmental decisions or resolutions that may be issued, but reserves the right to file such appeals as may be appropriate against any such decisions or resolutions when it believes that they do not conform to the law.

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The following table shows violations of laws and regulations in the social and economic area, i.e. all violations of any kind (whether labour, tax, competition, related to distribution or retail sale of energy and gas, etc.) of the Iberdrola group, other than violations of environmental regulations, which are set out in Chapter II.3.

Significant fines and non monetary sanctions in the social and economic area[113]	2018	2017	2016
Fines imposed (€)	59,544,962	58,891,707	208,758,953
Non-monetary sanctions (no.)	17	1	3
Cases being resolved through arbitration or similar mechanisms (no.)	301	465	575

[113] Arbitration mechanisms are not included in the labour area.

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Of the total amount, fines in the amount of 58,508,283 euros have been imposed in Brazil, of which 48,545,380 euros correspond to fines of the Networks Business, mainly a fine for alleged violations in the calculation of corporate income taxes (*impuesto sobre la renta de las personas jurídicas*) (IRPJ) and corporate social contributions (*contribución Social sobre el beneficio neto de las personas jurídicas*) (CSLL). In the Renewables Business, there were fines in the amount of 5,315,971 euros, mainly for a finding of a violation in the collection of the tax on services (*impuesto sobre servicios*) (ISS) in relation to construction contracts for two wind farms. In the Wholesale Business, there were fines in the amount of 3,435,476 euros relating to findings of violations and tax notices, for which the company has submitted a defence. Fines were also imposed at Neoenergia Corporación in the amount of 1,211,456 euros mainly for two tax penalties applied by the Brazilian tax authority for failure to homologate a declared loan in two proceedings and 18,397 euros for labour violations.

Fines in the amount of 654,435 euros were imposed in Spain, of which: 256,325 euros are for fines imposed on the Wholesale and Retail Business (33,040 euros for provisions governing information on and advertising of the prices of goods and services, 83,283 euros for consumer claims due to supply disconnections and management of documentation, and 140,002 euros for penalties regarding personal data protection); and 398,110 imposed on the Networks Business for opening trenches without a construction permit, all of which cases are being appealed.

In the United Kingdom, ScottishPower has received two fines in the amount of 278,797 euros, one corresponding to the Networks Business for disputes in the construction of transmission networks at the Longannet and Blacklaw projects, and another corresponding to the Renewables Business for delay in payment of the Land and Buildings Transaction Tax (LBTT).

In the United States, fines have been imposed in the amount of 85,050 euros mainly corresponds to violations of "*Dig Safe*" safety regulations during the excavations.

No fines were imposed during 2018 in the other countries in which the company operates.

Finally, in Brazil, Neoenergia received 15 non-monetary penalties: 12 for consumer claims regarding bills and disconnections, for which the company, as a corrective measure, has made visits to PROCON (consumer portal) to explain the regulated right and the increase in the conciliatory attempt to resolve complaints; 2 due to a failure to pay apprentices and 1 for a claim for repair of motorways affected by lorry traffic from the construction of a wind farm. In the United Kingdom, ScottishPower has received two sanctions, one for a legal complaint for unfair dismissal, and the other for the occurrence of four turbine fires at the Arecleoch wind farm.

Labour practices grievance mechanisms

Using the standard that class actions on the same matter are deemed to be a single grievance, the companies of the group received 1,324 grievances about labour practices in 2018[114]; of these, 894 were resolved in that same year. In addition, 1,436 other grievances pending from previous years have been resolved.

[114] The grievances received correspond to Spain, the United Kingdom, the United States, Brazil and Mexico. No grievances of this nature have been received in the other countries in which the group operates. In Spain, the United Kingdom, Brazil and Mexico, this includes the grievances that reach the courts, while in the United States grievances include those filed with the various state and/or federal commissions on human rights and equality.

III. About this Report

- Scope of Information
- Defining Report Content. Materiality Analysis
- Content Index in Relation to the Requirements of Law 11/2018 (Statement of Non-Financial Information)
- GRI Content Index
- Content Index in Relation to the Principles of the Global Compact
- Independent External Assurance

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Scope of Information

A. Introduction

Iberdrola, with a presence in almost twenty countries, has followed the GRI recommendations in defining the boundary of this report, taking into account the entities in which it has control, those in which it has significant influence, and the activities that are significant for the group from the economic, environmental and social standpoint.

For purposes of this report, the following terms have the meanings set forth below:

- "Iberdrola" or the "company": the Spanish company Iberdrola, S.A., parent company of the Iberdrola group.
- "Iberdrola group" or the "group": Iberdrola (as parent company) and the group of subsidiaries over which Iberdrola has the power of control or joint control.
- "Affiliated companies" or "affiliates": the group of companies in which Iberdrola has a percentage interest but not the power to exercise control. At these affiliated companies Iberdrola promotes the policies approved within the group through the decision-making bodies of such companies and includes information on those considered significant in terms of sustainability.

The companies in which Iberdrola owns a direct or indirect equity interest are listed in the document *Consolidated Annual Financial Statements and Audit Report* for financial year 2018.

B. Information boundaries of this report

Time scope

102-50 **102-51** **102-52**

Year 2018. The report is published on an annual basis.

Organisational scope

102-6 **102-45**

The presentation of the company's public information is subject to the following external factors:

- The scope and basis of presentation of financial information must comply with established statutory requirements.
- The environmental and social information is presented in accordance with the new legal requirements as to content, leaving open the reporting framework to be used. This is the reason why Iberdrola has voluntarily elected to use the GRI Standards in the preparation of this report.

To reconcile these factors, Iberdrola has established two quantitative information boundaries: global boundary and report boundary.

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B.1. Global boundary (Iberdrola Total)

This includes all of the activities carried out by the group, its subsidiaries and its affiliates.

The economic information that is included in this *Statement of Non-Financial Information. Sustainability Report 2018* comes from the *Annual Financial Report* for financial year 2018.

Other non-financial information stated as within the "global boundary", such as operating information of the group, results from adding to the "report boundary" the information of affiliates consolidated by the equity method that are not considered significant for purposes of this report (as they are minority interests in companies dedicated to non-strategic activities for the group and whose employees do not belong thereto), which are included under the heading "Other".

B.2. Report boundary

Made up of Iberdrola, S.A. and its subsidiaries and minority-owned companies that are significant for purposes of sustainability that do business in the countries indicated in the table below and engage in the activities described therein.

Significant countries and activities for the Iberdrola group in terms of sustainability(1) and included in the 2018 reporting boundary

	Group office	Electricity production		Transmission and/or Distribution of electricity or gas	Electricity and/or gas supply (2) (3)		Gas storage	Real estate
		Conven-tional	Renewable (4)		Wholesale market	Retail market		
Spain (5)	X	X	X	X	LIB	LIB		X
United Kingdom	X	X	X(6)	X	LIB	LIB	X	
United States	X	X	X	X	LIB	REG	X(7)	
Brazil	X	X	X	X	LIB	REG		
Mexico	X	X	X		LIB	LIB		X
Portugal	X		X		LIB	LIB(8)		
Germany	X		X(9)		LIB	LIB		
Canada	X						X(10)	
Greece	X		X(6)					
Hungary	X		X					
Poland	X							
Romania	X		X					
France	X		X		LIB	LIB		
Italy	X				LIB	LIB		
Rest countries (11)	X							

1) The countries set out herein are those in which the company does business, with facilities and employees. Countries in which the company makes purchases of general supplies and procures fuel are not included. The workforce reported is as at year-end.

2) Types of sales activities:

LIB: activities in liberalised markets, independent of distribution activities.

REG: activities in regulated markets, together with distribution activities. The supply to these markets has not been considered as an activity in the wholesale market.

3) Environmental information on sales activities in Germany, France and Italy is not consolidated, because it is not yet integrated into the corporate systems as at the date of preparation of this report. It will be included in future reports to the extent the systems collect this information.

4) It includes the activities of hydroelectric, wind and solar generation. No social or environmental information is included on facilities in which the company has an interest of less than 50% in Spain, the United Kingdom or the United States. Environmental information on construction projects in Portugal and France is not included.

PUBLIC

5) Any reference to the 7th *Collective Bargaining Agreement* includes the following companies at 31 December 2018: Iberdrola, S.A., Iberdrola España, S.A.U., Iberdrola Generación, S.A.U., Iberdrola Generación España, S.A.U., Iberdrola Generación Nuclear, S.A.U., Iberdrola Clientes, S.A.U., Iberdrola Operación y Mantenimiento, S.A.U., Iberdrola Distribución Eléctrica, S.A.U. Iberdrola Infraestructuras y Servicios de Redes, S.A.U., Iberdrola Renovables Energía, S.A.U. and Iberdrola Ingeniería y Construcción, S.A.U.
6) Renewables and retail activities from the Republic of Ireland are included in the United Kingdom and renewables activities from Cyprus are included in Greece.
7) Activities corresponding to assets sold in 2018. These activities are not significant from the environmental standpoint. In the labour area employees are recorded in those indicators that are calculated with data accumulated through the date of sale.
8) The activity of electricity and/or gas supply in Portugal are included in Spain.
9) Activities related to the 350 MW Wikinger offshore wind farm: After the connection to the German transmission network at the end of 2017, the project entered into the commercial operation phase. Special mention should be made of the official inauguration of the wind farm on 29 October 2018 in Sassnitz-Mukran, which was tremendously successful with the attendance of both guests and the media.
10) Activities are not significant from the environmental standpoint. Labour information is included in the information for the United States.
11) Other countries: Algeria, Belgium, Bulgaria, Costa Rica, Egypt, Russian Federation, Latvia, Montenegro, Qatar and South Africa. Employees in these countries represent only 0.063% of the employees of the group. Environmental information on these activities is not included as it is not deemed relevant in terms of sustainability.

At affiliate nuclear plants, the percentage interest held by Iberdrola in each of them is used to consolidate environmental performance data: Vandellós (28%), Almaraz (52.69%); Trillo (49%) and Ascó (15%). For social information, on the other hand, because of the structure of the available information systems, nuclear plants are consolidated according to the percentage interest held by Iberdrola in the economic interest grouping created for that purpose; such interest is 51.44% in the case of Trillo-Almaraz and 14.59% in the case of Ascó-Vandellós. A 50% share of the environmental and social data corresponding to the activities of Nuclenor, S.A. is applied according to consolidation by the equity method.

B.3. Summary of the information boundaries by country

Following the GRI recommendation, the information in this report is structured by country. The table below shows the structure of information by country applied to the boundaries described above:

PUBLIC

Structure of information by country in this report	
Report boundary = Iberdrola, S.A., subsidiaries and affiliates considered to be significant for sustainability purposes.	Spain United Kingdom United States Brazil Mexico Other countries (Portugal, Germany, Canada, Greece, Hungary, Poland, Romania, France, Italy, Algeria, Belgium, Bulgaria, Costa Rica, Egypt, Russian Federation, Latvia, Montenegro, Qatar and South Africa) **Report boundary**
Global boundary = report boundary plus the information of affiliates consolidated by the equity method that are not considered significant for purposes of this report.	Other **Iberdrola total**

C. Limitations on scope of information

Based on the standards set forth above, Iberdrola believes that this report reflects the economic, environmental and social performance of the company in a reasonable and balanced manner. Existing limitations and differences between both boundaries, described in the preceding sections, have a limited influence on aggregate overall data, which, in the opinion of Iberdrola, would not affect a reader's assessment of the company's performance.

In the future, quantitative information may be included with respect to other activities of subsidiaries or affiliates to the extent that such information contributes to an understanding of the activities carried out by Iberdrola.

PUBLIC

Significant changes to the organisation and its supply chain

102-10

Changes in activities and/or in operations

In the course of their business, the various subsidiaries and affiliates of Iberdrola have carried out transactions that change the composition of their assets, including the following:

- In Spain, the sale of Iberdrola Energía Solar de Puertollano in Ciudad Real to the Ence Energía, SL. group was agreed on 18 October 2018.
- In the Cogeneration area there was a sale of the interest held (20%) in the energy recovery plant located in Mallorca to the company TIRME, S.A. and the transfer of the participation in COBANE A.I.E. to the company TARRAGONA POWER, S.L., the owner of which is Iberdrola Generación Térmica, S.L.U.
- In the United States, on 19 February 2018 Avangrid formalised a final agreement for the sale of the gas storage business unit (Enstor Gas LLC) to Amphora Gas Storage USA.
- In the United Kingdom, on 31 December 2018 Iberdrola culminated the sale of Scottish Power Generation, which included its conventional generation assets, to Drax Smart Generation Hold Co Limited.
- Finally, in Mexico the Escobedo combined cycle plant (878 MW) was placed into commercial operation during 2018.

These operations are framed within the asset rotation plan that Iberdrola presented in the Outlook 2018-2022.

Changes in capital structure

The shareholders acting at the General Shareholders' Meeting of Iberdrola held on 13 April 2018 approved two increases in capital by means of a scrip issue in order to once again implement the *Iberdrola Flexible Dividend* system, implementing the first increase in capital in July 2018 and the second in January 2019.

Changes in supply chain

There were no significant changes in the company's supply chain during the financial year.

PUBLIC

Defining Report Content. Materiality Analysis

102-46

Iberdrola has indirectly identified its material aspects since 2003, using the *GRI Sustainability Reporting Standards* (and prior versions) as well as the *Electric Utility Sector Supplement*, both of the Global Reporting Initiative (GRI), as a model for preparing its annual sustainability report.

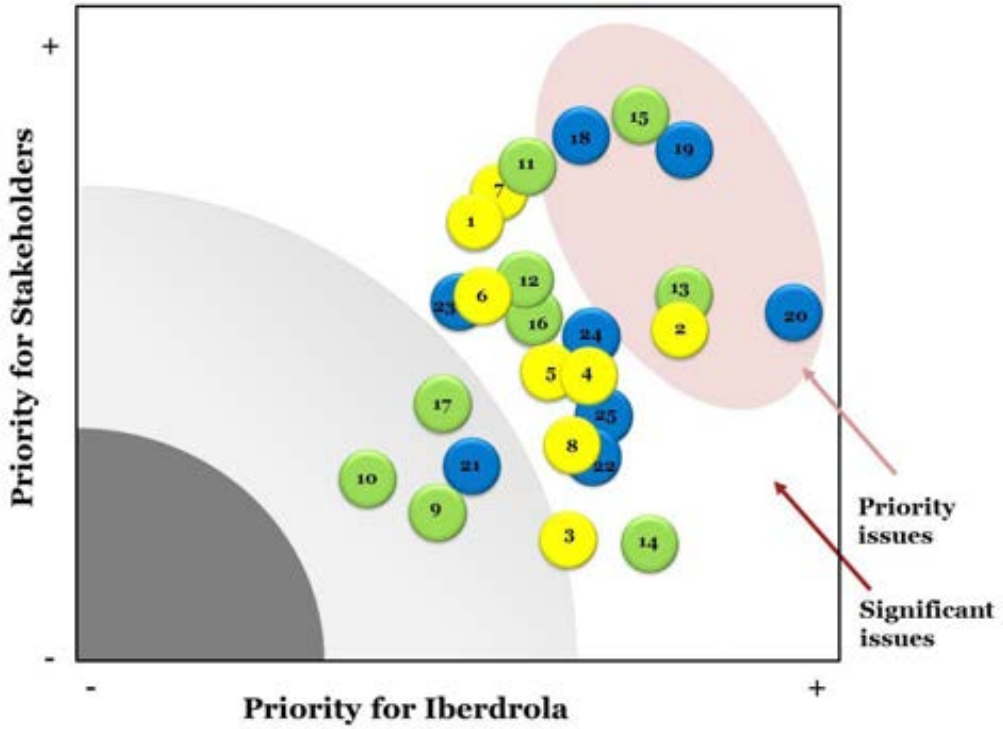
These guidelines are the result of a process in which various Stakeholders throughout the world have participated, with representatives from business, unions, civil society, the financial markets, auditors and specialists from various disciplines in the business area, regulators and governmental bodies from various countries.

The company, with a presence in countries on various continents, conforms to the various regional socioeconomic development models and has developed systems and processes to obtain the information needed to meet legal requests on matters of sustainability made by GRI, with its recommendations, and also by other areas of heightened awareness such as the Dow Jones Sustainability Index or the Carbon Disclosure Project. Iberdrola uses its *Sustainability Report* to provide an annual report on these issues, adhering to the materiality requirements, following macro-trends in sustainable development and generally meeting Stakeholder expectations.

For greater precision, Iberdrola also directly identifies its own material aspects by preparing its own *Materiality Study* with the advice of an independent outside firm, with the aim of identifying the specific aspects of interest related to the company's activity by consulting in-house and outside sources. Iberdrola uses this process to identify economic, social, environmental and ethics issues that are significant to its focus on sustainable development.

The analysis for 2018 prioritises those matters of interest identified through the analysis in accordance with their significance both to Stakeholders as well as to the company's strategy. In this way, 6 topics, shown in the following chart, have been identified as "material":

PUBLIC



Priority issues
19. Diversity and equal opportunity
15. Energy transition
20. Occupational health and safety
18. Customer satisfaction
13. Climate change
2. Economic and financial performance

Significant issues
11. Innovation and new business models
7. Smart grids and supply quality
1. Socially responsible investment
24. Attraction, development and retention of human capital
12. Integration of renewable energy within the electric system
16. Availability and management of water
4. Ethics and integrity (anti-corruption and free competition)
6. Public policy
25. Connectivity, digitisation and cybersecurity
5. Responsible supply chain
23. Vulnerable customers
22. Human Rights
8. Green financing

Other significant issues
14. Management of biodiversity
21. Impact on local communities
3. Transparency
17. Environmental safety
9. Management of natural capital
10. Circular economy

The coverage of the material topics; that is, whether the topics are significant within the organisation (internal impact on the company or its employees) or outside it (impact outside the company, outside its scope of control or on outside Stakeholders) is reflected in detail in the various sections of this report. In general terms, Iberdrola considers that its material topics have both internal and external coverage, since they directly affect the company as well as the different Stakeholders with which it has relationships.

The various sections of this report offer a concrete response to the aspects identified, as shown in the following table:

102-47

Priority issues	Description	Iberdrola's response
Diversity and equal opportunity	Non-discrimination against women in the labour world and especially in management positions. Merit- and skill-based selection, salary and promotion equality.	"Diversity and equal opportunity" section of Chapter II.2. Workforce health & safety and personal development. "Non-discrimination" section of Chapter II.5. Contribution to the well-being of our communities.
Energy transition	Transition towards a low-carbon economy. Energy efficiency to reduce the industry's energy requirements. Regulatory changes to encourage greater inclusion of renewable energies in the "mix". Improvements in the systems for inclusion of renewable production within the grid. Nuclear plant decommissioning.	"Key operating figures" section of Chapter I. About Iberdrola. "Business model" section of Chapter I. About Iberdrola. "Energy transition and supply costs" section of Chapter II.1. Sustainable economic growth. "Efficiency in energy consumption" section of Chapter II.3. Fight against climate change and protection of biodiversity.
Occupational health and safety	Management of health and safety of employees and contractors, prevention policies and plans Establishment of goals and performance in accident and absenteeism rates. Employee, supplier and subcontractor training.	"A safe work environment" section of Chapter II.2. Workforce health & safety and personal development.
Customer satisfaction	Evaluation of customer satisfaction and establishment of improvement objectives. Accessibility and transparency of information Digitalization. Management of information security and privacy, grievances and claims and other matters related to meter reading, billing, rates and contracts.	"Products and services", "Access to adequate information" and "Innovation projects and Digital transformation" sections of Chapter II.4. Innovation, digitalization and quality for our customers.
Climate change	Science-based goals for reduction of emissions, emissions trading, CO_2 storage systems, available adaptation and mitigation mechanisms, economic impacts from climate change, evaluation of risks and opportunities, awareness-raising and sensitisation, etc.	"Business model" section of Chapter I. About Iberdrola. "Economic/financial performance" section of Chapter II.1. Sustainable economic growth. "Introduction", "Emissions reduction" and "Efficiency in energy consumption" section of Chapter II.3. Fight against climate change and protection of biodiversity. "Products and services" section of Chapter II.4. Innovation, digitalization and quality for our customers.
Economic and financial performance	Action plans to guarantee results in uncertain environments. Economic value generated and distributed. Tax policy and strategy, cooperation with tax authority, tax contributions. Indirect economic impacts and creation of social value.	"Business model" section of Chapter I About Iberdrola. "Economic/financial performance" section of Chapter II.1. Sustainable economic growth. "Contribution to society (LBG)" section of Chapter II.5. Contribution to the well-being of our communities.

PUBLIC

In its commitment to transparency with its Stakeholders, apart from the topics of the GRI Standards identified as material in the table above, Iberdrola also reports on other topics included in such Standards, providing continuity with information for previous financial years. All topics reported are specifically identified in the GRI Content Index that is included in this chapter of the report.

Together with these global processes of identification of and response to material issues, which Iberdrola strengthens in its public information, the company has launched a new *Global Stakeholder Relations Model*, based on the *AA1000 Stakeholder Engagement Standard (AA1000SES) 2015* standard and on its three requirements of inclusiveness, materiality and responsiveness[115], as described in the "Stakeholder engagement" section of Chapter II.7 "Good governance, transparency and stakeholder relations".

[115] Iberdrola has been continuously applying Assurance Standard AA1000 for the last eleven years. In 2016 Iberdrola's Operating Committee approved a new *Global Stakeholder Relations Model* (referred to in this report), which was implemented for the first time in 2017.

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Statement of Non-Financial Information

In the current context there is a growing demand by society in general, as well as shareholders and investors in particular, for companies to explain the way in which they achieve financial results and their evaluation in terms of sustainability, understanding that adequate disclosure of non-financial information is an essential element for the sustainability of financing activities.

After the entry into force in 2014 of *Directive 2014/95/EU*, the Directive was transposed into the Spanish legal system in 2017 by means of *Royal Decree-law 18/2017, of 24 November*, and in 2018 *Law 11/2018, of 28 December on non-financial and diversity information* was approved. This new Law expands the legal requirements regarding non-financial information to be published regarding its management of environmental and social aspects, the management of people, diversity, respect for human rights and the fight against corruption and bribery, describing the risks, policies and results connected to these issues.

This *Statement of Non-Financial Information. Sustainability Report 2018* covers the requirements arising from the entry into force of the new legal provision, forming an integral part of the company's management report.

This report has been prepared in accordance with the reporting requirements and recommendations of the Consolidated Set of GRI Sustainability Reporting Standards 2016 and the *Electric Utilities Sector Supplement*, both of the *Global Reporting Initiative* (GRI).

The table below sets out the pages of this document in which you can find the information required by the new legal provision.

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Disclosures from the Statement of Non Financial Information	Related GRI Disclosures	SNFI pages
Description of the group's business model		
business environment	102-1 102-2 102-3 102-4 102-6 102-7 102-14	10, 22, 23, 28, 30, 55, 60, 63, 74, 87, 300, 332
organisation and structure		
markets in which it does business		
objectives and strategies		
main factors and trends that might affect its future progress		
Description of policies that the group applies regarding such issues		
due diligence procedures applied to identify, evaluate, prevent and mitigate significant risks and impacts and for verification and control	103	64, 66, 68, 206
measures adopted		
Results of policies		
key indicators of relevant non-financial results that allow for monitoring and evaluation of progress and that favour comparability among companies and industries, in accordance with the domestic, European or international reference frameworks used for each topic	GRI content index	
Main risks relating to these issues in connection with the group's activities		
when relevant and appropriate, the commercial relations, products or services thereof that might have negative impacts in these areas, and how the group manages these risks, explaining the procedures used to detect and evaluate them in accordance with leading domestic, European or international frameworks for each area	102-15 205-1 413-1 407-1 408-1 409-1	64, 66, 68, 206, 271
information on the impacts detected, providing a breakdown thereof, particularly regarding the main short-, medium- and long-term risks.		
Key indicators of non-financial results that are relevant regarding the specific business activity and that meet the standards of comparability, materiality, relevancy and reliability	102-54	Global Reporting Initiative Standards (GRI content index)
I. Information regarding environmental surveys		
Detailed information regarding the current and expected effects of the company's activities on the environment and, if applicable, on health and safety	102-11 201-2 308-1 308-2	96,132,135, 137, 138, 146, 247
environmental evaluation or certification procedures		
resources dedicated to the prevention of environmental risks		
application of the precautionary principle		
amount of reserves and coverage for environmental risks		
Specifically:		
– Pollution:		
measures to prevent, reduce or repair carbon emissions that seriously affect the environ; taking into account any form of atmospheric pollution specific to an activity	305-5 305-6 305-7	155,157, 158, 156, 342
including noise and light pollution.	Non-material indicator for the company, as described in the Materiality Analysis 2018 (page 319).	
– Circular economy and waste prevention and management:		
measures for the prevention, recycling, reuse, other forms of recovery and elimination of waste	301-2 301-3 306-2	140,147, 164, 317, 343
actions to combat food waste.	Non-material indicator for the company, as described in the Materiality Analysis 2018 (page 319).	
– Sustainable use of resources:		
water consumption and supply in accordance with local limitations	303-1 303-2 303-3 301-1 301-2 302-1 302-2 302-3 302-4 302-5	25, 55, 83, 159, 340, 161, 140-146, 339
consumption of raw materials and measures adopted to improve the efficient use thereof		
direct and indirect consumption of energy		
measures taken to improve energy efficiency and the use of renewable energy		
– Climate change:		
important elements of greenhouse gas emissions generated as a result of the company's activities, including the use of property and services that produce it	305-1 305-2 305-3	151-158, 341

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measures adopted to adapt to the consequences of climate change	305-4	
voluntarily established medium- and long-term targets established to reduce greenhouse gas emissions and the means implemented to such end	305-5 201-2 305-5	
– Protection of biodiversity:		
measures taken to preserve or restore biodiversity	304-3 306-5	163, 169, 172- 174, 340
impacts cause by activities or operations in protected areas	304-1 304-2	
II. Information regarding social issues and personnel		
– Employment:		
total number and distribution of employees by gender, age, country and professional classification	102-8 405-1	28, 32, 93, 346, 376-380
total number and distribution of types of employment contracts		
annual average of permanent contracts, temporary contracts and part-time contracts by gender, age and professional classification,		
number of dismissals by gender, age and professional classification	103	99
average remuneration and evolution thereof broken down by gender, age and professional or similar classification	103	97
salary gap	405-2	126
remuneration of same or average job positions of the company	103	97
average remuneration of directors and officers, including variable remuneration, attendance fees, severance pay, payment into long-term savings benefit systems and any other remuneration broken down by gender	102-35 102-36 102-38 102-39	Note 47 to the Annual Financial Report 2018
implementation of labour disengagement policies	103	126
employees with disabilities	405-1	128
– Organisation of work:		
organisation of work time	103	123
number of hours of absenteeism	403-2	112, 113, 369
measures to facilitate enjoyment of reconciliation and encouragement of the responsible co-exercise of responsibility by both parents	103	123
– Health and safety:		
occupational health and safety conditions	103	101
occupational accidents, particularly the frequency and seriousness thereof broken down by gender	403-2	112, 113, 369
occupational diseases; broken down by gender	403-3	114
– Social relations:		
organisation of social dialogue, including procedures to inform and consult with staff and negotiate with them	407-1	206, 248
percentage of employees covered by collective bargaining agreements by country	102-41	101, 356
balance of collective bargaining agreements, particularly in the field of workplace health and safety	403-4	109
– Training:		
policies implemented in the field of training	103	110
total hours of training by professional category	404-1	118, 373, 374
– Universal accessibility of disabled persons	103	124
– Equality:		
measures adopted to promote equality of treatment and opportunities between women and men	405	120-124
equality plans (Chapter III of Organic Law 3/2007, of 22 March, for the effective equality of women and men)	405	123
protocols against sexual and gender-based harassment	405	120, 121
measures adopted to promote the employment, integration and universal accessibility of disabled persons	405	128
policy against all types of discrimination and, if applicable, management of diversity	405	210
III. Information regarding respect for human rights		
application of human rights due diligence procedures	102-16 102-17 412-3 412-2 410-1 412-1	20, 57, 98, 205-209, 214- 215, 270
prevention of the risks of violating human rights and, if applicable, measures to mitigate, manage and repair possible abuses	412	207
complaints of human rights violations	406-1	210
promotion of and compliance with the provisions of the basic treaties of the International Labour Organization regarding respect for the freedom of association and the right to collective bargaining; the elimination of discrimination in respect of employment and	407-1 406-1 409-1 408-1	206, 248

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occupation; the elimination of forced or compulsory labour; the effective abolition of child labour		
IV. Information regarding the fight against corruption and bribery:		
measures adopted to prevent corruption and bribery	102-16 102-17 205-1 205-2 205-3	20, 57, 98, 271- 281
measures to combat money laundering	205-2	278
contributions to non-profit foundations and entities	103	221
VI. Information about the society:		
– Commitments of the company to sustainable development:		
impact of the company's operations on employment and local development	203-1 203-2 413-1	79, 81, 217
impact of the company's operations on local communities and on the land	203-1 203-2 411-1 413-1 413-2	79, 81, 217, 210, 206-214
relations with local players and types of dialogue therewith	102-43 413-1	210, 266,
association or sponsorship activities	102-12 102-13	288, 292
– Subcontracting and suppliers:		
inclusion of social, gender equality and environmental issues in the procurement policy	102-9 308-1 414-1	*Procurement Policy* 243, 245, 247, 248, 381
consideration of social and environmental responsibility of suppliers and subcontractors in relations with them	414-1 414-2	248
supervision and auditing systems and results thereof	414-1 414-2	248
– Consumers:		
consumer health and safety measures	416-1	188
grievance systems, complaints received and resolution thereof	416-2	188-191
– Tax information:		
profits per country	201	334
taxes on profit paid	201	336
public subsidies received	201-4	316

Readers of this *Sustainability Report 2018* can also read the *Annual Corporate Governance Report 2018*, the *Annual Financial Report 2018* and the *Integrated Report. February 2019,* all of which are accessible in the "Annual Reports" section of the corporate website, and which contain additional useful information for a better understanding of Iberdrola's performance during the financial year and of its future prospects.

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GRI Content Index

102-54 **102-55**

This report has been prepared in accordance with the GRI Standards: Comprehensive option.

External assurance: the contents of this index have been externally assured by an independent entity (PwC). The corresponding assurance report can be found in Annex 4 of this document.

Electric Utilities Sector Supplement: this index incorporates the topics and disclosures required by such supplement, published by GRI in 2014. They symbol * indicates those general standard disclosures and topics of the of GRI Standards where specific sector information is requested.

GRI Standard	Description	SNFI pages	External assurance	Relationship with SDGs
GRI 100 UNIVERSAL STANDARDS				
GRI 101 Foundation 2016 (Note: does not require disclosure of information)				
GRI 102 General disclosures 2016				
1.- Organisational profile *				
102-1	Name of the organisation	Iberdrola S.A.	✓	
102-2	Primary activities, brands, products and services	23	✓	
102-3	Location of headquarters	The registered office of Iberdrola, S.A. is: Plaza Euskadi número 5 48009 Bilbao, Biscay Spain	✓	
102-4	Location of operations	22	✓	
102-5	Ownership and legal form	36	✓	
102-6	Markets served	23, 26, 300	✓	
102-7	Scale of the organisation	28, 30, 332	✓	
102-8	Information on employees and other workers	28, 346 Iberdrola supervises the subcontracted activities performed, and does not deem it necessary to keep statistics regarding subcontracted personnel, except as regards health and safety	✓	8
102-9	Supply chain	243, 245	✓	
102-10	Significant changes to the organisation and its supply chain	304	✓	
102-11	Precautionary Principle or approach	132, 135, 168	✓	
102-12	External initiatives to which the organisation subscribes or which it endorses	292	✓	
102-13	Main memberships of associations	288	✓	
EU1*	Installed capacity	25, 326	✓	7
EU2*	Energy output	25, 328	✓	7, 14
EU3*	Electricity users and producers	26, 330	✓	
EU4*	Transmission and distribution lines	27, 331	✓	
EU5*	Allocation of CO_2 emissions allowances or equivalent	157	✓	14, 15

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102-14	Statement from senior decision-maker	10	✓	
102-15	Key impacts, risks and opportunities	55, 64, 66	✓	
102-16	Values, principles, standards and norms of behaviour	20, 57, 58	✓	16
102-17	Mechanisms for advice and concerns about ethics	270	✓	16
102-18	Governance structure	32	✓	
102-19	Delegating authority	35	✓	
102-20	Executive-level positions with responsibility for economic, social and environmental topics	62	✓	
102-21	Processes for consultation between Stakeholders and the Board of Directors	257	✓	16
102-22	Composition of the highest governance body and its committees	32, 33, 35	✓	5, 16
102-23	Chair of the highest governance body	33	✓	16
102-24	Selection and nomination of the members of the highest governance body	256	✓	5, 16
102-25	Processes for the highest governance body to avoid conflicts of interest	Section D.6 of the *Annual Corporate Governance Report* for financial year 2018 describes the mechanisms used to detect, determine and resolve potential conflicts of interest between Iberdrola and its directors, officers and significant shareholders.	✓	16
102-26	Role of highest governance body in setting purpose, values and strategy	20, 57	✓	
102-27	Collective knowledge of highest governance body	257	✓	4
102-28	Evaluating the highest governance body's performance	258	✓	
102-29	Identifying and managing economic, environmental and social impacts	258	✓	16
102-30	Effectiveness of risk management processes	67	✓	
102-31	Review of economic, environmental and social topics	258	✓	
102-32	Highest governance body's role in sustainability reporting	Iberdrola's Board of Directors is the body responsible for reviewing the *Sustainability Report 2018*, which was approved on 19 February 2019 (following a report from the Sustainable Development Committee), the date of preparation of the company's annual accounts for financial year 2018.	✓	
102-33	Communicating critical concerns	256	✓	
102-34	Nature and total number of critical concerns	255	✓	
102-35	Remuneration policies	260	✓	
102-36	Process for determining remuneration	260	✓	
102-37	Stakeholders' involvement in remuneration	261	✓	16
102-38	Annual total compensation ratio	261	✓	

102-39	Percentage increase in annual total compensation ratio	261	✓	
5.-Stakeholder engagement				
102-40	Stakeholder groups engaged by the organisation	265	✓	
102-41	Collective bargaining agreements	101, 356 Iberdrola supervises the subcontracted activities performed, and does not deem it necessary to keep statistics regarding subcontracted personnel, except as regards health and safety	✓	8
102-42	Identifying and selecting stakeholders	265	✓	
102-43	Approach to stakeholder engagement	266	✓	
102-44	Key topics and concerns raised	267	✓	
6.-Reporting practice				
102-45	Entities included in the consolidated financial statements and in the boundary of this report	300	✓	
102-46	Defining report content and scope and topic boundaries	305	✓	
102-47	List of material topics	307	✓	
102-48	Restatements of information provided in previous reports	It was not considered necessary to reformulate the information from prior reports during financial year 2018. If a specific indicator requires reformulation, it will be specifically explained in the indicator itself.	✓	
102-49	Significant changes in scope and topic boundaries	There were no changes deemed significant in the scope, coverage or methods of valuation used in the report in financial year 2018, keeping the ability to compare the group's key figures with those of prior years.	✓	
102-50	Reporting period	300	✓	
102-51	Date of most recent report	300	✓	
102-52	Reporting cycle	300	✓	
102-53	Contact point for questions regarding the report	429	✓	
102-54	Claims of reporting in accordance with the GRI Standards	313	✓	
102-55	GRI content index	313	✓	
102-56	External assurance	323	✓	
GRI 103 Management approach 2016				
General management approach, applicable to all aspects of this report.		54, 58, 60, 61, 62, 63	✓	1.5, 8, 12, 13, 14, 15, 16

GRI 200 ECONOMIC DIMENSION						
Material topics		**Reporting on management approach and corresponding disclosures**	**EINF page**	**Omissions**	**External assurance**	**Relationship with SDGs**
A. Topics of the GRI Standards						
-	GRI 201 Economic performanc	Management approach (103-1, 103-2 and 103-3)	78		✓	2, 5, 7, 8, 9, 13

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	e 2016	201-1	79, 334		✓	
		201-2	68		✓	
		201-3	102		✓	
		201-4	The Iberdrola group is not aware of government participation in the shareholding structure.		✓	
-	GRI 202 Market presence 2016	Management approach (103-1, 103-2 and 103-3)	94		✓	1, 5, 8
		202-1	97		✓	
		202-2	96		✓	
-	GRI 203 Indirect economic impacts 2016	Management approach (103-1, 103-2 and 103-3)	79		✓	1, 2, 3, 5, 7, 8, 9, 10, 11, 17
		203-1	81		✓	
		203-2	79		✓	
-	GRI 204 Procurement practices 2016	Management approach (103-1, 103-2 and 103-3)	245		✓	12
		204-1	244		✓	
-	GRI 205 Anti-corruption 2016	Management approach (103-1, 103-2 and 103-3)	270		✓	16
		205-1	271		✓	
		205-2	278		✓	
		205-3	281		✓	
-	GRI 206 Anti-competitive behavior 2016	Management approach (103-1, 103-2 and 103-3)	286		✓	16
		206-1	287		✓	
-	Availability and reliability	Management approach (103-1, 103-2 and 103-3)	85		✓	7
		EU10	85		✓	
-	System efficiency	Management approach (103-1, 103-2 and 103-3)	141		✓	7, 8, 12, 13, 14
		EU11	145, 339		✓	
		EU12	145		✓	
-	Demand-side management	Management approach (103-1, 103-2 and 103-3)	83		✓	
-	Research and development	Management approach (103-1, 103-2 and 103-3)	194		✓	
-	Nuclear plant decommissioning	Management approach (103-1, 103-2 and 103-3)	90		✓	
-	Supply costs		87		✓	
-	*Green* financing		81, 404		✓	
-	Fiscal responsibility		283		✓	

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-	Cybersecurity	395		✓	
-	Privacy of the personal information of Stakeholders	395		✓	

GRI 300 ENVIRONMENTAL DIMENSION

Material topics	Reporting on management approach and corresponding disclosures	EINF page	Omissions	External assurance	Relationship with SDGs
A. Topics of the GRI Standards					
- GRI 301 Materials * 2016	Management approach (103-1, 103-2 and 103-3)	140		✓	8, 12
	301-1	140		✓	
	301-2	140		✓	
	301-3	Iberdrola's main activity is the sale of electricity and gas, a product that cannot be reused and that does not generate packaging waste in the final use thereof.		✓	
- GRI 302 Energy 2016	Management approach (103-1, 103-2 and 103-3)	141		✓	7, 8, 12, 13
	302-1	142, 143, 309		✓	
	302-2	146		✓	
	302-3	141		✓	
	302-4	143		✓	
	302-5	146		✓	
- GRI 303 Water * 2016	Management approach (103-1, 103-2 and 103-3)	159		✓	6, 8, 12
	303-1	159, 340		✓	
	303-2	161		✓	
	303-3	161		✓	
- GRI 304 Biodiversity * 2016	Management approach (103-1, 103-2 and 103-3)	167		✓	6, 14, 15
	304-1	172		✓	
	304-2	169		✓	
	304-3	174		✓	
	304-4	173, 340		✓	
	EU13	170		✓	
- GRI 305 Emissions * 2016	Management approach (103-1, 103-2 and 103-3)	147		✓	3, 12, 13, 14, 15
	305-1	152, 341		✓	
	305-2	153, 341		✓	
	305-3	154		✓	
	305-4	151		✓	
	305-5	155		✓	
	305-6	158		✓	

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	305-7	157, 342		✓	
- GRI 306 Effluents and waste * 2016	Management approach (103-1, 103-2 and 103-3)	162		✓	3, 6, 12, 13, 14, 15
	306-1	163		✓	
	306-2	164, 343		✓	
	306-3	178		✓	
	306-4	Iberdrola does not directly transport, import or export hazardous waste covered by the Basel Convention in any of the countries in which it engages in its activities.		✓	
	306-5	163		✓	
- GRI 307 Environmental compliance 2016	Management approach (103-1, 103-2 and 103-3)	179		✓	12, 13, 14, 15, 16
	307-1	179		✓	
- GRI 308 Supplier environmental assessment 2016	Management approach (103-1, 103-2 and 103-3)	247		✓	
	308-1	247		✓	
	308-2	247		✓	
GRI 400 SOCIAL DIMENSION					
Material topics	**Reporting on management approach and corresponding disclosures**	**EINF page**	**Omissions**	**External assurance**	**Relationship with SDGs**
A. Topics of the GRI Standards					
- GRI 401 Employment * 2016	Management approach (103-1, 103-2 and 103-3)	92		✓	5, 8
	401-1	94, 357		✓	
	401-2	102, 365		✓	
	401-3	127, 366		✓	
- GRI 402 Labour/management relations* 2016	Management approach (103-1, 103-2 and 103-3)	92		✓	8
	402-1	101		✓	
	EU15	103, 367		✓	
	EU17	94		✓	
	EU18	107		✓	
- GRI 403 Occupational health and safety * 2016	Management approach (103-1, 103-2 and 103-3)	106		✓	3, 8
	403-1	109, 114, 369		✓	
	403-2	112, 113, 369		✓	
	403-3	114		✓	
	403-4	109		✓	
- GRI 404 Training and education 2016	Management approach (103-1, 103-2 and 103-3)	115		✓	4, 5, 8
	404-1	11, 373, 374		✓	

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		404-2	116		✓	
		404-3	119, 375		✓	
-	GRI 405 Diversity and equal opportunity 2016	Management approach (103-1, 103-2 and 103-3)	120		✓	5, 8, 10
		405-1	32, 93, 376, 377, 379, 380		✓	
		405-2	126		✓	
-	GRI 406 Non-discrimination 2016	Management approach (103-1, 103-2 and 103-3)	210		✓	5, 8, 16
		406-1	210		✓	
-	GRI 407 Freedom of association and collective bargaining* 2016	Management approach (103-1, 103-2 and 103-3)	205		✓	8
		407-1	206, 248		✓	
-	GRI 408 Child labour 2016	Management approach (103-1, 103-2 and 103-3)	205		✓	8, 16
		408-1	206, 248		✓	
-	GRI 409 Forced or compulsory labour 2016	Management approach (103-1, 103-2 and 103-3)	205		✓	8
		409-1	206, 248		✓	
-	GRI 410 Security practices 2016	Management approach (103-1, 103-2 and 103-3)	213		✓	16
		410-1	214		✓	
-	GRI 411 Rights of indigenous peoples 2016	Management approach (103-1, 103-2 and 103-3)	210		✓	2
		411-1	210		✓	
-	GRI 412 Human rights assessment 2016	Management approach (103-1, 103-2 and 103-3)	205		✓	
		412-1	206		✓	
		412-2	214		✓	
		412-3	215		✓	
-	GRI 413 Local communities * 2016	Management approach (103-1, 103-2 and 103-3)	216		✓	1.2
		413-1	217		✓	
		413-2	217		✓	
		EU22	220		✓	
-	GRI 414 Supplier social assessment 2016	Management approach (103-1, 103-2 and 103-3)	248		✓	5, 8, 16
		414-1	248, 381		✓	
		414-2	248, 381		✓	
-	GRI 415 Public policy 2016	Management approach (103-1, 103-2 and 103-3)	288		✓	16
		415-1	394		✓	

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-	GRI 416 Customer health and safety *2016	Management approach (103-1, 103-2 and 103-3)	187		✓	16
		416-1	188		✓	
		416-2	188		✓	
		EU25	188		✓	
-	GRI 417 Marketing and labelling 2016	Management approach (103-1, 103-2 and 103-3)	185		✓	12, 16
		417-1	186		✓	
		417-2	187		✓	
		417-3	186		✓	
-	GRI 418 Customer privacy 2016	Management approach (103-1, 103-2 and 103-3)	295		✓	16
		418-1	296		✓	
-	GRI 419 Socioeconomic compliance 2016	Management approach (103-1, 103-2 and 103-3)	297		✓	16
		419-1	297		✓	
-	Disaster/emergency planning and response	Management approach (103-1, 103-2 and 103-3)	177		✓	
-	Access to electricity	Management approach (103-1, 103-2 and 103-3)	201		✓	1, 7
		EU26	201		✓	
		EU27	204, 382		✓	
		EU28	184		✓	
		EU29	185		✓	
		EU30	87, 345		✓	
-	Access to adequate information	Management approach (103-1, 103-2 and 103-3)	190		✓	
-	Iberdrola and the Global Compact		240		✓	
-	Contribution to society (LBG)		221		✓	
-	Iberdrola, promoting women's sport		129		✓	

Content Index in Relation to the Principles of the Global Compact

The table below shows the GRI indicators of this report that offer more relevant information on compliance with the 10 Principles of the Global Compact, as well as the content of the management approaches to each GRI aspect. Using the table's index, each Stakeholder can assess the level of Iberdrola's advancement with respect to each of such principles:

Issue	Global Compact Principles	Most relevant GRI Standards Indicators	Related SDGs
Human Rights	**Principle 1.** Businesses should support and respect the protection of internationally proclaimed human rights.	410-1 to 412-1, 412-2, 413-1, 413-2	
	Principle 2. Businesses should make sure they are not complicit in human rights abuses.	412-3, 414-1, 414-2	
Labour Rules	**Principle 3.** Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining.	102-41, 407-1, 402-1	
	Principle 4. Businesses should uphold the elimination of all forms of forced and compulsory labour.	409-1	
	Principle 5. Businesses should uphold the effective abolition of child labour.	408-1	
	Principle 6. Businesses should uphold the elimination of discrimination in respect of employment and occupation.	102-8 202-1, 202-2 401-1, 401-3, 404-1, 404-3, 405-2, 406-1	
Environment	**Principle 7.** Businesses should support a precautionary approach to environmental challenges.	201-2, 301-1, 302-1, 303-1, 305-1 to 305-3, 305-6, 305-7	
	Principle 8. Businesses should undertake initiatives to promote greater environmental responsibility.	301-1 to 308-2	

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	Principle 9. Businesses should encourage the development and diffusion of environmentally friendly technologies.	302-4, 302-5, 305-5	6 CLEAN WATER AND SANITATION; 7 AFFORDABLE AND CLEAN ENERGY; 8 DECENT WORK AND ECONOMIC GROWTH; 10 REDUCED INEQUALITIES; 11 SUSTAINABLE CITIES AND COMMUNITIES; 16 PEACE, JUSTICE AND STRONG INSTITUTIONS; 17 PARTNERSHIPS FOR THE GOALS
Anti-corruption	**Principle 10.** Businesses should work against corruption in all its forms, including extortion and bribery.	102-16, 102-17 205-1 to 205-3, 415-1	3 GOOD HEALTH AND WELL-BEING; 10 REDUCED INEQUALITIES; 16 PEACE, JUSTICE AND STRONG INSTITUTIONS; 17 PARTNERSHIPS FOR THE GOALS

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Independent External Assurance

102-56

Iberdrola obtains independent external assurance of its annual information, the annual accounts and management reports (individual and consolidated with those of its subsidiaries) by KPMG Auditores, S.L. and the *Statement of Non-Financial Information. Sustainability Report* by PricewaterhouseCoopers Asesores de Negocio, S.L. Annex 4 hereto includes the external independent assurance report on this document.

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IV. Annexes

- Annex 1: Information Supplementary to the Sustainability Report
- Annex 2: Iberdrola's Contribution to the SDGs and targets of the 2030 Agenda
- Annex 3: Report on Green Financing Returns

  External independent assurance report on green financing
- Annex 4: External Independent Assurance Report on the Sustainability Report

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Annex 1: Information Supplementary to the Sustainability Report 2018

- Key figures
- Economic dimension
- Environmental dimension
- Social dimension

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Key figures[116]

Installed capacity by region and energy source (MW) EU1				
		2018	2017	2016
Spain	Renewables	15,789	15,821	15,819
	Onshore wind	*5,770*	*5,752*	*5,752*
	Offshore wind	*0*	*0*	*0*
	Hydroelectric	*9,715*	*9,715*	*9,715*
	Mini-hydro	*303*	*303*	*302*
	Solar and others	*0*	*50*	*50*
	Nuclear	3,177	3,177	3,410
	Combined cycle	5,695	5,695	5,695
	Cogeneration	353	368	364
	Coal	874	874	874
	Total	**25,887**	**25,934**	**26,161**
United Kingdom	Renewables	2,100	2,666	2,572
	Onshore wind	*1,906*	*1,906*	*1,812*
	Offshore wind	*194*	*194*	*194*
	Hydroelectric	*0*	*566*	*566*
	Mini-hydro	*0*	*0*	*0*
	Solar and others	*0*	*0*	*0*
	Nuclear	0	0	0
	Combined cycle	0	2,000	2,000
	Cogeneration	0	1	1
	Coal	0	0	0
	Total	**2,100**	**4,667**	**4,573**
United States	Renewables	6,713	6,625	6,035
	Onshore wind	*6,466*	*6,387*	*5,853*
	Offshore wind	*0*	*0*	*0*
	Hydroelectric	*118*	*118*	*118*
	Mini-hydro	*0*	*0*	*0*
	Solar and others	*129*	*119*	*63*
	Nuclear	0	0	0
	Combined cycle	212	212	209
	Cogeneration	636	636	636
	Coal	0	0	0
	Total	**7,561**	**7,472**	**6,880**
Brazil	Renewables	2,935	2,629	2,399
	Onshore wind	*516*	*516*	*421*
	Offshore wind	*0*	*0*	*0*
	Hydroelectric	*2,419*	*2,113*	*1,978*

[116] Operating figures include figures corresponding to partially owned and uncontrolled companies, applying the percentage interest.

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Installed capacity by region and energy source (MW) EU1				
		2018	2017	2016
	Mini-hydro	*0*	*0*	*0*
	Solar and others	*0*	*0*	*0*
	Nuclear	0	0	0
	Combined cycle	533	533	533
	Cogeneration	0	0	77
	Coal	0	0	0
	Total	**3,467**	**3,162**	**3,009**
Mexico	Renewables	679	410	367
	Onshore wind	*409*	*367*	*367*
	Offshore wind	*0*	*0*	*0*
	Hydroelectric	*0*	*0*	*0*
	Mini-hydro	*0*	*0*	*0*
	Solar and others	*270*	*43*	*0*
	Nuclear	0	0	0
	Combined cycle	6,446	5,546	5,200
	Cogeneration	346	294	237
	Coal	0	0	0
	Total	**7,471**	**6,250**	**5,804**
Rest of countries	Renewables	961	961	621
	Onshore wind	*605*	*605*	*615*
	Offshore wind	*350*	*350*	*0*
	Hydroelectric	*0*	*0*	*0*
	Mini-hydro	*0*	*0*	*0*
	Solar and others	*6*	*6*	*6*
	Nuclear	0	0	0
	Combined cycle	0	0	0
	Cogeneration	0	0	0
	Coal	0	0	0
	Total	**961**	**961**	**621**
Iberdrola total	**Renewables**	**29,177**	**29,112**	**27,813**
	Onshore wind	***15,671***	***15,533***	***14,820***
	Offshore wind	***544***	***544***	***194***
	Hydroelectric	***12,252***	***12,513***	***12,378***
	Mini-hydro	***303***	***303***	***302***
	Solar and others	***406***	***219***	***120***
	Nuclear	**3,177**	**3,177**	**3,410**
	Combined cycle	**12,885**	**13,985**	**13,637**
	Cogeneration	**1,335**	**1,299**	**1,315**
	Coal	**874**	**874**	**874**
	Total	**47,448**	**48,447**	**47,049**

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Net energy output, by region and source of energy (GWh) EU2				
		2018	2017	2016
Spain	Renewables	25,973	19,587	30,319
	Onshore wind	*11,654*	*11,216*	*11,236*
	Offshore wind	*N/A*	*N/A*	*N/A*
	Hydroelectric	*13,590*	*7,903*	*18,325*
	Mini-hydro	*670*	*394*	*686*
	Solar and others	*58*	*74*	*71*
	Nuclear	23,536	23,254	24,381
	Combined cycle	4,092	3,812	3,709
	Cogeneration	2,472	2,608	2,290
	Coal	1,637	2,642	2,084
	Total	**57,711**	**51,903**	**62,783**
United Kingdom	Renewables	5,145	4,880	3,688
	Onshore wind	*3,812*	*3,358*	*2,370*
	Offshore wind	*755*	*820*	*728*
	Hydroelectric	*578*	*702*	*590*
	Mini-hydro	*N/A*	*N/A*	*N/A*
	Solar and others	*N/A*	*N/A*	*N/A*
	Nuclear	N/A	N/A	N/A
	Combined cycle	5,530	7,260	8,341
	Cogeneration	N/A	0	N/A
	Coal	N/A	N/A	N/A
	Total	**10,675**	**12,140**	**13,748**
United States	Renewables	17,261	15,738	15,320
	Onshore wind	*16,650*	*15,103*	*14,803*
	Offshore wind	*N/A*	*N/A*	*N/A*
	Hydroelectric	*269*	*386*	*327*
	Mini-hydro	*N/A*	*N/A*	*N/A*
	Solar and others	*342*	*250*	*190*
	Nuclear	N/A	N/A	N/A
	Combined cycle	8	12	14
	Cogeneration	2,713	2,354	2,557
	Coal	N/A	N/A	N/A
	Total	**19,983**	**18,105**	**17,891**
Brazil	Renewables	10,099	8,195	4,559
	Onshore wind	*2,120*	*1,865*	*1,204*
	Offshore wind	*N/A*	*N/A*	*N/A*
	Hydroelectric	*7,979*	*6,330*	*3,355*
	Mini-hydro	*N/A*	*N/A*	*N/A*
	Solar and others	*N/A*	*N/A*	*N/A*
	Nuclear	N/A	N/A	N/A
	Combined cycle	3,553	3,956	4,033
	Cogeneration	0	91	446
	Coal	N/A	N/A	N/A

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Net energy output, by region and source of energy (GWh) EU2				
		2018	2017	2016
Mexico	Total	**13,652**	**12,242**	**9,038**
	Renewables	1,095	963	1,119
	Onshore wind	*1,084*	*963*	*1,119*
	Offshore wind	*N/A*	*N/A*	*N/A*
	Hydroelectric	*N/A*	*N/A*	*N/A*
	Mini-hydro	*N/A*	*N/A*	*N/A*
	Solar and others	*12*	*0*	*N/A*
	Nuclear	N/A	N/A	N/A
	Combined cycle	37,470	39,013	34,795
	Cogeneration	2,831	1,801	1,654
	Coal	N/A	N/A	N/A
	Total	**41,396**	**41,777**	**37,569**
Rest of countries	Renewables	2,180	1,382	1,437
	Onshore wind	*1,284*	*1,373*	*1,429*
	Offshore wind	*887*	*0*	*N/A*
	Hydroelectric	*N/A*	*N/A*	*N/A*
	Mini-hydro	*N/A*	*N/A*	*N/A*
	Solar and others	*9*	*9*	*9*
	Nuclear	N/A	N/A	N/A
	Combined cycle	N/A	N/A	N/A
	Cogeneration	N/A	N/A	N/A
	Coal	N/A	N/A	N/A
	Total	**2,180**	**1,382**	**1,437**
Iberdrola total	**Renewables**	**61,754**	**50,747**	**56,443**
	Onshore wind	***36,605***	***33,878***	***32,162***
	Offshore wind	***1,642***	***821***	***728***
	Hydroelectric	***22,416***	***15,321***	***22,597***
	Mini-hydro	***670***	***394***	***686***
	Solar and others	***421***	***333***	***270***
	Nuclear	**23,536**	**23,254**	**24,381**
	Combined cycle	**50,654**	**54,053**	**50,892**
	Cogeneration	**8,016**	**6,853**	**6,947**
	Coal	**1,637**	**2,642**	**3,803**
	Total	**145,597**	**137,549**	**142,466**

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EU3

	Electricity users (%)			
		2018	2017	2016
Spain	Residential	93.0	92.8	92.8
	Industrial	1.5	1.7	1.6
	Institutional	1.1	1.1	1.1
	Commercial	4.4	4.4	4.5
	Other	0.0	0.0	0.0
	Total users (millions)	**10.4**	**10.3**	**10.3**
	Users that are producers of electricity (no.)	0	0	4,832
United Kingdom	Residential	93.8	93.9	93.9
	Industrial	2.0	2.1	2.1
	Institutional	0.1	0.1	0.1
	Commercial	4.1	3.9	3.9
	Other	0.0	0.0	0.0
	Total users (millions)	**3.0**	**3.1**	**3.2**
	Users that are producers of electricity (no.)	67,913	66,264	64,936
United States	Residential	88.2	88.2	87.7
	Industrial	0.3	0.3	0.3
	Institutional	0.0	0.0	0.0
	Commercial	10.6	10.6	11.8
	Other	0.9	0.9	0.2
	Total users (millions)	**2.3**	**2.2**	**1.6**
	Users that are producers of electricity (no.)	12,268	3,776	13,581
Brazil	Residential	87.6	87.4	87.5
	Industrial	0.3	0.3	0.3
	Institutional	1.2	1.2	1.0
	Commercial	6.6	6.6	6.7
	Other	4.3	4.5	4.5
	Total users (millions)	**13.8**	**13.6**	**13.4**
	Users that are producers of electricity (no.)	6,900	2,033	277
Rest of countries	Residential	0	0	0
	Industrial	0	0	0
	Institutional	0	0	0
	Commercial	0	0	0
	Other	0	0	0
	Total users (millions)	**0**	**0**	**0**
	Users that are producers of electricity (no.)	0	0	0
Iberdrola total	**Residential**	**90.2**	**90.1**	**90.2**
	Industrial	**0.9**	**1.0**	**1.0**
	Institutional	**0.9**	**1.0**	**0.9**
	Commercial	**5.9**	**5.8**	**5.8**
	Other	**2.1**	**2.1**	**2.1**
	Total users (millions)	**29.5**	**29.2**	**28.5**
	Users that are producers of electricity (no.)	**87,081**	**72,073**	**83,626**

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Power lines (Km) EU4							
		Transmission			Distribution		
		2018	2017	2016	2018	2017	2016
Spain	Areas	0	0	0	161,754	155,589	155,317
	Underground	0	0	0	107,885	112,981	112,259
	Total	**0**	**0**	**0**	**269,639**	**268,570**	**267,576**
United Kingdom	Areas	3,752	3,636	3,637	38,599	38,679	38,718
	Underground	642	404	352	66,964	66,541	66,111
	Total	**4,394**	**4,040**	**3,989**	**105,563**	**105,220**	**104,829**
United States	Areas	13,334	30,620	30,835	139,962	122,884	102,431
	Underground	602	1,557	604	16,185	14,899	14,463
	Total	**13,936**	**32,177**	**31,439**	**156,147**	**137,783**	**116,894**
Brazil	Areas	679	13,832	13,560	622,625	594,322	578,674
	Underground	0	38	31	689	629	452
	Total	**679**	**13,870**	**13,591**	**623,314**	**594,951**	**579,126**
Rest of countries	Areas	0	0	0	0	0	0
	Underground	0	0	0	0	0	0
	Total	**0**	**0**	**0**	**0**	**0**	**0**
Iberdrola total	**Areas**	**17,765**	**48,088**	**48,032**	**962,940**	**911,474**	**875,140**
	Underground	**1,244**	**1,999**	**987**	**191,723**	**195,050**	**193,285**
	Total	**19,009**	**50,087**	**49,019**	**1,154,663**	**1,106,524**	**1,068,425**

PUBLIC

Locations of operation of the Iberdrola group

102-7

The group of companies that belong to the Iberdrola group carry out various activities in a large number of countries, and more than 1,200 sites or facilities have been identified.

For purposes of reporting under the *GRI Sustainability Reporting Standards*, in order to deal with such a large number of facilities, only those considered to be principal locations of operation have been included, by business and by country, adopting as a basic standard the number of persons performing their activities at a facility, and based thereon:

- In the countries deemed to be at low risk for the violation of human rights, the most important facilities are identified as principal locations of operation, assuming that the personnel at the smaller facilities are part of a functional or hierarchical reporting structure that assures their rights through the tools and procedures established at the organisation.
- In countries with a higher risk the standard is more restrictive: if there are several facilities of different sizes dedicated to similar activities, the largest facilities are included as principal locations of operation, with the smaller ones deemed to be dependent centres with the same basic guarantees; if the number of facilities is low or it is deemed that the risk is higher, such facilities are included as principal locations of operation, regardless of the number of persons working therein.

According to these standards, the principal locations of operation identified in 2018, by business and by country, are reflected in the following tables:

Significant locations of operation 2018 by business	
Corporate	17
Wholesale and Retail Business	39
Networks Business	56
Renewables Business	38
Iberdrola total	**150**

Significant locations of operation 2018 by country	
Spain	33
United Kingdom	31
United States	28
Brazil	40
Mexico	17
Rest of countries	1
Iberdrola total	**150**

Based on this data, the company has performed a study to identify the significant locations of operation at which there might be some risk of violation of human rights, which is described in detail in the Protection of Human Rights section of Chapter III.5 of this report.

PUBLIC

Economic dimension

Sales[117] (net amount in € millions)	2018	2017	2016
Spain	14,282	13,733	13,501
United Kingdom	6,176	5,908	6,524
United States	5,325	5,016	4,948
Brazil	2,346	2,407	1,566
Mexico	5,717	3,430	1,569
Rest of countries	1,229	768	651
Iberdrola consolidated total	**35,075**	**31,262**	**28,759**

Operating costs (€ millions)	2018	2017	2016
Spain	9,510	8,412	8,472
United Kingdom	4,022	4,080	4,621
United States	2,534	2,545	2,474
Brazil	4,389	2,682	1,268
Mexico	1,790	1,999	1,120
Rest of countries	206	728	669
Iberdrola consolidated total	**22,433**	**20,446**	**18,624**

[117] Sales in accordance with the grouping for the segmentation of management.

IBERDROLA

PUBLIC

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Economic value generated, distributed and retained[118] (€ millions)				
		2018	2017	2016
Spain	Revenue (sales and other income)	15,310	13,564	14,280
	Operating costs	9,510	8,412	8,457
	Employee remuneration (excluding company social security costs)	806	912	847
	Payments to providers of capital	861	1,365	1,784
	Payments to government administrations	1,170	1,496	1,581
	Community investments (verified according to the LBG Model)	16	20	15
	Economic value retained	2,347	1,359	1,596
United Kingdom	Revenue (sales and other income)	6,351	6,077	6,776
	Operating costs	4,022	4,080	4,607
	Employee remuneration (excluding company social security costs)	427	468	466
	Payments to providers of capital	198	197	231
	Payments to government administrations	377	353	380
	Community investments (verified according to the LBG Model)	15	14	14
	Economic value retained	1,312	965	1,078
United States	Revenue (sales and other income)	5,381	5,337	5,430
	Operating costs	2,534	2,545	2,470
	Employee remuneration (excluding company social security costs)	812	879	806
	Payments to providers of capital	349	501	315
	Payments to government administrations	627	583	596
	Community investments (verified according to the LBG Model)	4	6	4
	Economic value retained	1,055	823	1,239
Brazil	Revenue (sales and other income)	6,003	3,628	1,717
	Operating costs	4,389	2,682	1,266
	Employee remuneration (excluding company social security costs)	291	201	94
	Payments to providers of capital	584	283	119
	Payments to government administrations	164	160	51
	Community investments (verified according to the LBG Model)	18	22	2
	Economic value retained	587	280	185
Mexico	Revenue (sales and other income)	2,709	2,770	1,769
	Operating costs	1,790	1,999	1,119
	Employee remuneration (excluding company social security costs)	36	39	32
	Payments to providers of capital	268	217	189
	Payments to government administrations	136	100	108

[118] The grouping by country corresponds to the registered office of each company and does not necessarily coincide with the segmentation of the information for management.

PUBLIC

	Community investments (verified according to the LBG Model)	1	1	1
	Economic value retained	478	414	320
Rest of countries	Revenue (sales and other income)	519	1,338	734
	Operating costs	206	728	669
	Employee remuneration (excluding company social security costs)	15	18	15
	Payments to providers of capital	142	353	54
	Payments to government administrations	22	31	24
	Community investments (verified according to the LBG Model)	0	0	0
	Economic value retained	134	209	(28)
Iberdrola total	**Revenue (sales and other income)**	**36,273**	**32,714[119]**	**30,706**
	Operating costs	**22,433**	**20,446**	**18,588**
	Employee remuneration (excluding company social security costs)	**2,387**	**2,517**	**2,260**
	Payments to providers of capital	**2,402**	**2,916**	**2,692**
	Payments to government administrations	**3,096**	**2,723**	**2,740**
	Community investments (verified according to the LBG Model)	**54**	**63**	**36**
	Economic value retained	**5,901**	**4,049**	**4,390**

[119] Includes Sales in the amount of €31,263 million and Other revenue €1,451 million.

PUBLIC

201-4

Financial assistance received (€ millions)				
		2018	2017	2016
Spain	Capital subsidies	2	10	13
	Operating subsidies	3	6	3
	Investment tax credits	0	0	0
	Production tax credits	0	0	0
	Assistance for other items included in the GRI Protocol	0	0	0
	Total	**5**	**16**	**13**
United Kingdom	Capital subsidies	0	0	0
	Operating subsidies	0	0	0
	Investment tax credits	0	0	0
	Production tax credits	0	0	0
	Assistance for other items included in the GRI Protocol	0	0	0
	Total	**0**	**0**	**0**
United States	Capital subsidies	4	0	0
	Operating subsidies	0	0	0
	Investment tax credits	8	30	0
	Production tax credits	91	90	87
	Assistance for other items included in the GRI Protocol	0	0	0
	Total	**103**	**120**	**0**
Brazil	Capital subsidies	0	0	0
	Operating subsidies	0	0	0
	Investment tax credits	0	0	0
	Production tax credits	0	0	0
	Assistance for other items included in the GRI Protocol	0	0	0
	Total	**0**	**0**	**0**
Mexico	Capital subsidies	0	0	0
	Operating subsidies	0	0	0
	Investment tax credits	0	0	0
	Production tax credits	0	0	0
	Assistance for other items included in the GRI Protocol	0	0	0
	Total	**0**	**0**	**0**
Rest of countries	Capital subsidies	0	0	0
	Operating subsidies	0	0	0
	Investment tax credits	0	0	0
	Production tax credits	0	0	0
	Assistance for other items included in the GRI Protocol	0	0	0
	Total	**0**	**0**	**0**
Iberdrola total	**Capital subsidies**	**6**	**10**	**13**
	Operating subsidies	**3**	**6**	**3**
	Investment tax credits	**8**	**30**	**0**
	Production tax credits	**91**	**90**	**87**
	Assistance for other items included in the GRI Protocol	**0**	**0**	**0**
	Total	**108**	**136**	**103**

PUBLIC

Pre tax profit[120] (millions of euros)	2018
Spain	1,618.6
United Kingdom	1,096.9
United States	622.0
Brazil	452.9
Mexico	561.9
Rest of countries	-68.9
Iberdrola consolidated total	**4,283.4**

[120] Includes consolidated results from continuing and discontinued activities.

PUBLIC

Tax contribution (€ millions)			
	2018	2017	2016[121]
Company contributions			
Spain	**1,770**	**1,496**	**1,548**
Corporate income tax	*589*	311	449
Other	*1,181*	1,185	1,099
United Kingdom	**377**	**353**	**380**
Corporate income tax	*74*	50	108
Other	*303*	303	272
United States	**627**	**583**	**584**
Corporate income tax	*-13*	11	9
Other	*640*	572	575
Brazil	**164**	**160**	**126**
Corporate income tax	*93*	86	25
Other	*71*	74	101
Mexico	**136**	**100**	**106**
Corporate income tax	*130*	95	102
Other	*6*	5	4
Rest of countries	**22**	**31**	**24**
Corporate income tax	*14*	22	11
Other	*8*	9	13
Total	**3,096**	**2,723**	**2,768**
Corporate income tax	***887***	**575**	**704**
Other	***2,209***	**2,148**	**2,064**
Contributions due to third party payments			
Spain	1,872	1,761	1,904
United Kingdom	235	168	156
United States	277	292	275
Brazil	2,269	1,997	1,855
Mexico	23	86	101
Rest of countries	167	84	70
Total	**4,843**	**4,388**	**4,361**
Iberdrola consolidated total			
Spain	**3,642**	**3,257**	**3,452**
United Kingdom	**612**	**521**	**536**
United States	**904**	**875**	**859**
Brazil	**2,433**	**2,157**	**1,981**
Mexico	**159**	**186**	**207**
Rest of countries	**189**	**115**	**94**
Total	**7,939**	**7,111**	**7,129**

[121] For better comparability of the 2017 and 2016 information, 100% of the taxes paid by Neoenergia in Brazil during 2016 are included.

PUBLIC

Environmental dimension

Energy

Energy consumption within the organization

302-1

Energy consumption within the organisation (GJ)	2018	2017	2016
Spain	230,023,199	236,355,590	241,428,586
United Kingdom	20,179,322	30,155,278	47,145,185
United States	10,799,405	10,547,765	11,251,751
Brazil	13,005,615	11,861,813	6,788,139
Mexico	126,533,470	159,609,431	135,538,671
Rest of countries	17,545	17,587	17,873
Total	**400,558,556**	**440,547,464**	**442,170,204**

Energy consumption in buildings (GJ)	2018	2017	2016
Spain	193,679	157,422	165,637
United Kingdom	89,280	109,159	121,327
United States	416,507	346,431	401,236
Brazil	1,719	166,256	46,099
Mexico	8,606	554	911
Rest of countries[122]	1,309	1,146	1,218
Total	**711,101**	**780,969**	**736,428**

System efficiency

EU11

Average efficiency[123] at thermal generating facilities (%)	Spain[124]			United Kingdom			United States		
	2018	2017	2016	2018	2017	2016	2018	2017	2016
Combined cycle	49.67	49.55	48.28	52	51.10	49.93	N/A	N/A	N/A
Conventional	34.28	34.38	33.00	N/A	0.00	33.00	N/A	N/A	N/A
Cogeneration	63.24	63.26	62.08	N/A	56.00	48.00	48	48.00	47.00

Average efficiency[123] at thermal generating facilities (%)	Brazil			Mexico			Total		
	2018	2017	2016	2018	2017	2016	2018	2017	2016
Combined cycle	55	49	49	55	54	53	54	54	52
Conventional	N/A	N/A	N/A	N/A	N/A	N/A	34	34	33
Cogeneration	N/A	0.00	69	57	50	58	56	54	56

[122] Other countries: Greece, Romania and Hungary.
[123] Average of efficiencies weighted by the annual production of each thermal power plant.
[124] Does not include the Puertollano thermosolar plant.

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Water

Total water withdrawal by source

303-1

Water use in thermal generation[125] 2018 (hm^3)	Withdrawal			Discharge	
	Total withdrawal	Withdrawal process and standby services	Withdrawal for cooling	Evaporation of water used for cooling	Discharge into receptor environment
Spain	1,535.22	4.56	1,530.67	55.96	1,476
United Kingdom[126]	165.57	0.32	165.25	0.06	167
United States	3.44	3.44	0.00	1.93	2
Brazil	0.52	0.02	0.51	0.00	0.00
Mexico	279.97	3.18	276.79	22.20	254
Total [127]	**1,985**	**12**	**1,973**	**80**	**1,899**

Water consumption at offices and control facilities[128] (m^3)	2018	2017	2016
Spain	55,489	94,239	84,693
United Kingdom	4,496	63,242	93,375
United States	1,181,165	183,256	139,385
Brazil	9,369	1,975	89,576
Mexico	2,002	36,604	1,124
Rest of countries	2,775	5,132	901
Total	**1,255,296**	**384,448**	**409,054**

Biodiversity

Threatened species included in the UICN Red List and national and regional lists

304-4

	IUCN Red List Classification					
	Critically endangered (CR)	Endangered (EN)	Vulnerable (VU)	Near threatened (NT)	Least concern (LC)	Not on UICN List
Spain	3	26	60	5	59	5
United Kingdom	0	0	2	5	21	0
United States - Canada	3	16	19	22	84	7
Brazil	12	31	89	13	13	19
Mexico	0	0	0	1	4	1
Rest of countries	0	1	3	2	66	0
Total	**18**	**74**	**173**	**48**	**247**	**32**

[125] Withdrawal of water at the thermal generation facilities (coal, combined cycle, nuclear and cogeneration)

[126] The cooling systems in the United Kingdom are open circuits or air condensers, and therefore it is estimated that the volume of evaporated water is practically zero, except for steam from cogeneration. The data include the Daldowie thermal drying facility and the Hatfield gas storage facility.

[127] The total discharge figure includes the return from cooling, the return of water used in processes, and rainwater collected at some thermal facilities without an independent storm sewer system.

[128] Includes offices, substations and control buildings at wind farms.

PUBLIC

Emissions

Direct greenhouse gas emissions. Scope 1 (per GHG Protocol)

305-1

CO_2 emissions (t)	2018	2017	2016
Spain	**4,932,724**	**5,945,175**	**5,268,737**
Generating plants	3,469,461	4,399,869	3,912,787
Cogeneration	1,463,263	1,545,306	1,355,950
United Kingdom	**2,174,241**	**2,900,987**	**4,944,407**
Generating plants	2,156,928	2,882,992	4,927,630
Cogeneration	17,313	17,995	16,777
United States	**991,612**	**965,570**	**1,040,335**
Generating plants	0	0	N/A
Cogeneration	991,612	965,570	1,040,335
Brazil	**1,306,374**	**1,568,890**	**1,739,902**
Generating plants	1,306,374	1,471,816	1,369,047
Cogeneration	0	97,074	370,855
Mexico	**14,929,874**	**15,334,845**	**13,543,565**
Generating plants	13,396,657	14,267,041	12,598,905
Cogeneration	1,533,217	1,067,804	944,660
Total	**24,334,824**	**26,715,466**	**26,536,946**
Generating plants	20,329,419	23,021,718	22,808,369
Cogeneration	4,005,405	3,693,748	3,728,577

Indirect greenhouse gas emissions. Scope 2 (per GHG Protocol)

305-2

Emissions associated with the consumption of energy at offices 2018	CO_2 (t)
Spain	10,645
United Kingdom	6,425
United States	31,877
Brazil	34
Mexico	120
Rest of countries[129]	0
Total	**49,101**

[129] Not taken into account to calculate the Carbon Footprint as it entails less than 0.1% of the internal energy consumption of the group.

PUBLIC

NOx, SOx and other significant air emissions

305-7

NO_x emissions (t)	2018	2017	2016
Spain	**7,149**	**12,490**	**12,172**
Generating plants	2,623	4,394	5,013
Cogeneration	4,526	8,096	7,159
United Kingdom	**1,141**	**989**	**5,363**
Generating plants	1,141	989	5,363
Cogeneration	0	0	N/A
United States	**629**	**18**	**152**
Generating plants	0	0	N/A
Cogeneration	629	18	152
Brazil	**221**	**233**	**702**
Generating plants	221	233	233
Cogeneration	0	0	469
Mexico	**3,612**	**2,422**	**2,583**
Generating plants	2,565	1,997	2,325
Cogeneration	1,047	425	258
Total	**12,751**	**16,152**	**20,971**
Generating plants	6.549	7,613	12,934
Cogeneration	6,202	8,539	8,037

Sulphur dioxide (SO_2) emissions (t)	2018	2017	2016
Spain	**3,058**	**4,936**	**3,277**
Generating plants	2,327	3,723	2,744
Cogeneration	731	1,213	533
United Kingdom	**2**	**2**	**3,384**
Generating plants	2	2	3,384
Cogeneration	0	0	N/A
United States	**6**	**5**	**6**
Generating plants	0	0	N/A
Cogeneration	6	5	6
Brazil	**11**	**0**	**23**
Generating plants	11	0	12
Cogeneration	0	0	11
Mexico	**438**	**449**	**398**
Generating plants	393	418	370
Cogeneration	45	31	28
Total	**3,515**	**5,392**	**7,088**
Generating plants	2,733	4,143	6,510
Cogeneration	782	1,249	578

PUBLIC

Particulate emissions (t)	2018	2017	2016
Spain	**174**	**375**	**305**
Generating plants	141	298	259
Cogeneration	33	77	46
United Kingdom	**1**	**2**	**88**
Generating plants	1	1	88
Cogeneration	0	1	N/A
United States	**20**	**19**	**19**
Generating plants	0	0	N/A
Cogeneration	20	19	19
Brazil	**0**	**0**	**22**
Generating plants	0	0	0
Cogeneration	0	0	22
Mexico	**691**	**876**	**774**
Generating plants	603	815	720
Cogeneration	88	61	54
Total	**886**	**1,272**	**1,208**
Generating plants	745	1,114	1,067
Cogeneration	141	158	141

Effluents and waste

Total weight of waste by type and disposal method

306-2

Hazardous waste generation[130] (t)	Spain			United Kingdom			United States		
	2018	2017	2016	2018	2017	2016	2018	2017	2016
Recovered, recycled, reused	4,819	4,328	4,539	3,056	1,600	2,161	358	337	478
Deposited and/or incinerated	2,804	1,256	849	810	562	482	17	425	601
Produced (Total)	7,604	5,564	5,418	3,864	2,214	3,558	375	573	1,183

Hazardous waste generation[130] (t)	Brazil			Mexico			Rest of countries			Total		
	2018	2017	2016	2018	2017	2016	2018	2017	2016	2018	2017	2016
Recovered, recycled, reused	563	981	140	0	0	0	43	43	35	**8,839**	**7,288**	**7,353**
Deposited and/or incinerated	316	593	76	186	171	126	27	15	15	**4,161**	**3,023**	**2,148**
Produced (Total)	1,069	614	234	186	171	126	70	58	60	**13,169**	**9,193**	**10,579**

[130] Liquid waste has been converted into kg using a density of 1.3 kg/m^3.

PUBLIC

Non hazardous waste generation[131] (t)	Spain			United Kingdom			United States		
	2018	2017	2016	2018	2017	2016	2018	2017	2016
Recovered, recycled, reused	74,618	109,727	79,512	70,265	304,434	155,103	4,605	34,097	231,038
Deposited and/or incinerated	71,629	165,443	129,178	195,897	224,698	189,640	64,063	96,988	107,134
Produced (Total)	**146,671**	**277,282**	**208,681**	**266,224**	**589,432**	**387,925**	**69,046**	**131,006**	**338,276**

Non hazardous waste generation[131] (t)	Brazil			Mexico			Rest of countries			Total		
	2018	2017	2016	2018	2017	2016	2018	2017	2016	2018	2017	2016
Recovered, recycled, reused	19,589	1,614	5,179	117	47	0	9	1	0	**294,845**	**449,920**	**470,832**
Deposited and/or incinerated	23,630	38,516	1,346	17,660	17,573	16,449	18	2	3	**247,256**	**543,220**	**443,747**
Produced (Total)	**49,525**	**38,370**	**27,513**	**17,661**	**17,578**	**16,449**	**18**	**3**	**3**	**549,146**	**1,053,671**	**978,847**

[131] Liquid waste has been converted into kg using a density of 1.3 kg/m^3.

PUBLIC

Average plant availability

EU30

The availability of a plant (during a particular period) is the percentage of time within such period that the plant is able to produce energy. It is calculated using normalising indicators, for which reason, knowing the availability of each facility and the net installed capacity thereof yields the average availability factors of the group, as presented in the following table:

		Average availability factor (%)		
		2018	2017	2016
Spain	Combined cycle	91.94	91.87	89.94
	Conventional thermal	94.28	93.94	85.54
	Cogeneration	96.28	92.65	88.90
	Nuclear	89.31	89.29	85.98
	Hydroelectric	85.59	84.45	86.00
	Wind	97.30	91.87	97.80
United Kingdom	Combined cycle	89.67	88.30	86.63
	Conventional thermal	N/A	N/A	N/A
	Cogeneration	N/A	1.70	82.00
	Nuclear	N/A	N/A	N/A
	Hydroelectric	82.95	87.23	94.00
	Wind	95.80	95.21	95.91
United States	Combined cycle	N/A	N/A	N/A
	Conventional thermal	N/A	N/A	N/A
	Cogeneration	88.05	82.04	90.00
	Nuclear	N/A	N/A	N/A
	Hydroelectric	36.17	36.78	31.21
	Wind	95.40	95.58	N/A
Brazil	Combined cycle	90.95	85.41	86.00
	Conventional thermal	N/A	N/A	N/A
	Cogeneration	N/A	N/A	96.65
	Nuclear	N/A	N/A	N/A
	Hydroelectric	94.75	95.66	93.00
	Wind	97.60	97.34	97.50
Mexico	Combined cycle	91.94	94.95	95.32
	Conventional thermal	N/A	N/A	N/A
	Cogeneration	95.56	72.18	95.17
	Nuclear	N/A	N/A	N/A
	Hydroelectric	N/A	N/A	N/A
	Wind	97.10	96.22	97.50
Rest of countries	Combined cycle	N/A	N/A	N/A
	Conventional thermal	N/A	N/A	N/A
	Cogeneration	N/A	N/A	N/A
	Nuclear	N/A	N/A	N/A
	Hydroelectric	N/A	N/A	N/A
	Wind	97.5	97.61	97.90
Iberdrola total	**Combined cycle**	**90.39**	**90.94**	**89.94**
	Conventional thermal	**94.28**	**93.94**	**85.54**
	Cogeneration	**92.17**	**82.75**	**91.00**
	Nuclear	**89.31**	**89.29**	**85.98**
	Hydroelectric	**86.92**	**86.02**	**86.96**
	Wind	**96.36**	**94.36**	**96.84**

PUBLIC

Social dimension

Employment[132]

102-8

Total workforce by employment type, region and gender							
		Full time			Part time		
		2018	2017	2016	2018	2017	2016
Spain	Men	7,852	8,309	8,404	0	4	4
	Women	1,970	1,981	1,986	0	2	1
	Total	**9,822**	**10,290**	**10,390**	**0**	**6**	**5**
United Kingdom	Men	3,670	4,032	4,224	51	62	56
	Women	1,306	1,329	1,407	584	644	686
	Total	**4,976**	**5,361**	**5,631**	**635**	**706**	**742**
United States	Men	4,601	4,664	4,836	1	1	2
	Women	1,838	1,886	1,998	9	10	13
	Total	**6,439**	**6,550**	**6,834**	**10**	**11**	**15**
Brazil	Men	7,746	8,048	7,387	1,050	112	143
	Women	1,924	1,749	1,694	29	187	205
	Total	**9,670**	**9,797**	**9,081**	**1,079**	**299**	**348**
Mexico	Men	909	779	736	0	0	0
	Women	203	164	138	0	1	0
	Total	**1,112**	**943**	**874**	**0**	**1**	**0**
Rest of countries	Men	237	218	133	0	0	0
	Women	98	73	29	0	0	0
	Total	**335**	**291**	**162**	**0**	**0**	**0**
Iberdrola total	**Men**	**25,015**	**26,050**	**25,720**	**1,102**	**179**	**205**
	Women	**7,339**	**7,182**	**7,252**	**622**	**844**	**905**
	Total	**32,354**	**33,232**	**32,972**	**1,724**	**1,023**	**1,110**

[132] As the percentage interests in certain companies may not be 100%, the sums added may not correspond to the total presented due to rounding.

IBERDROLA

PUBLIC

Total workforce by contract type, region and gender							
		Permanent contract			Temporary contract		
		2018	2017	2016	2018	2017	2016
Spain	Men	7,830	8,287	8,368	22	26	40
	Women	1,964	1,975	1,970	6	8	17
	Total	**9,794**	**10,262**	**10,338**	**28**	**34**	**57**
United Kingdom	Men	3,704	4,069	4,255	17	25	25
	Women	1,874	1,958	2,085	16	15	8
	Total	**5,578**	**6,027**	**6,340**	**33**	**40**	**33**
United States	Men	4,594	4,661	4,829	8	4	9
	Women	1,845	1,889	2,001	2	7	10
	Total	**6,439**	**6,550**	**6,830**	**10**	**11**	**19**
Brazil	Men	8,790	8,134	7,379	6	26	151
	Women	1,951	1,929	1,832	2	7	67
	Total	**10,741**	**10,063**	**9,211**	**8**	**33**	**218**
Mexico	Men	690	708	580	219	71	156
	Women	158	141	102	45	24	36
	Total	**848**	**849**	**682**	**264**	**95**	**192**
Rest of countries	Men	232	214	120	5	4	13
	Women	98	73	28	0	0	1
	Total	**330**	**287**	**148**	**5**	**4**	**14**
Iberdrola total	**Men**	**25,840**	**26,073**	**25,531**	**277**	**156**	**394**
	Women	**7,890**	**7,965**	**8,018**	**71**	**61**	**139**
	Total	**33,730**	**34,038**	**33,549**	**348**	**217**	**533**

PUBLIC

Total workforce by employment type, gender, age and region 2018			
		Full time	Part time
Spain	**Men**	**7,852**	**0**
	Up to 30 years old	341	0
	Between 31 and 50 years old	4,298	0
	More than 50 years old	3,213	0
	Women	**1,970**	**0**
	Up to 30 years old	100	0
	Between 31 and 50 years old	1,332	0
	More than 50 years old	538	0
	Total	**9,822**	**0**
	Up to 30 years old	441	0
	Between 31 and 50 years old	5630	0
	More than 50 years old	3,751	0
United Kingdom	**Men**	**3,670**	**51**
	Up to 30 years old	590	2
	Between 31 and 50 years old	1,942	23
	More than 50 years old	1,138	26
	Women	**1,306**	**584**
	Up to 30 years old	173	19
	Between 31 and 50 years old	800	472
	More than 50 years old	333	93
	Total	**4,976**	**635**
	Up to 30 years old	763	21
	Between 31 and 50 years old	2,742	495
	More than 50 years old	1,471	119
United States	**Men**	**4,601**	**1**
	Up to 30 years old	515	0
	Between 31 and 50 years old	2,136	0
	More than 50 years old	1,950	1
	Women	**1,838**	**9**
	Up to 30 years old	155	0
	Between 31 and 50 years old	875	6
	More than 50 years old	808	3
	Total	**6,439**	**10**
	Up to 30 years old	670	0
	Between 31 and 50 years old	3,011	6
	More than 50 years old	2,758	4
Brazil	**Men**	**7,746**	**1,050**
	Up to 30 years old	2,187	301
	Between 31 and 50 years old	4,782	676
	More than 50 years old	777	73
	Women	**1,924**	**29**
	Up to 30 years old	611	19
	Between 31 and 50 years old	1,194	9
	More than 50 years old	119	1
	Total	**9,670**	**1,079**
	Up to 30 years old	2,798	320

Total workforce by employment type, gender, age and region 2018			
		Full time	Part time
	Between 31 and 50 years old	5,976	685
	More than 50 years old	896	74
Mexico	**Men**	**909**	**0**
	Up to 30 years old	247	0
	Between 31 and 50 years old	587	0
	More than 50 years old	75	0
	Women	**203**	**0**
	Up to 30 years old	82	0
	Between 31 and 50 years old	117	0
	More than 50 years old	4	0
	Total	**1,112**	**0**
	Up to 30 years old	329	0
	Between 31 and 50 years old	704	0
	More than 50 years old	79	0
Rest of countries	**Men**	**232**	**5**
	Up to 30 years old	16	3
	Between 31 and 50 years old	190	1
	More than 50 years old	26	1
	Women	**98**	**0**
	Up to 30 years old	17	0
	Between 31 and 50 years old	73	0
	More than 50 years old	8	0
	Total	**330**	**5**
	Up to 30 years old	33	3
	Between 31 and 50 years old	263	1
	More than 50 years old	34	1
Iberdrola total	**Men**	**25,010**	**1,107**
	Up to 30 years old	3,896	306
	Between 31 and 50 years old	13,935	700
	More than 50 years old	7,179	101
	Women	**7,339**	**622**
	Up to 30 years old	1,138	38
	Between 31 and 50 years old	4,391	487
	More than 50 years old	1,810	97
	Total	**32,349**	**1,729**
	Up to 30 years old	5,034	344
	Between 31 and 50 years old	18,326	1,187
	More than 50 years old	8,989	198

PUBLIC

Total workforce by employment type, gender, professional category and region 2018			
		Full time	Part time
Spain	**Men**	**7,852**	**0**
	Management team	405	0
	Middle managers and skilled technicians	3,348	0
	Skilled workers and support personnel	4,099	0
	Women	**1,970**	**0**
	Management team	94	0
	Middle managers and skilled technicians	1,348	0
	Skilled workers and support personnel	528	0
	Total	**9,822**	**0**
	Management team	499	0
	Middle managers and skilled technicians	4,696	0
	Skilled workers and support personnel	4,627	0
United Kingdom	**Men**	**3,670**	**51**
	Management team	108	0
	Middle managers and skilled technicians	2,361	27
	Skilled workers and support personnel	1,201	24
	Women	**1,306**	**584**
	Management team	30	3
	Middle managers and skilled technicians	835	236
	Skilled workers and support personnel	441	345
	Total	**4,976**	**635**
	Management team	138	3
	Middle managers and skilled technicians	3,196	263
	Skilled workers and support personnel	1,642	369
United States	**Men**	**4,601**	**1**
	Management team	41	0
	Middle managers and skilled technicians	1,660	1
	Skilled workers and support personnel	2,900	0
	Women	**1,838**	**9**
	Management team	13	0
	Middle managers and skilled technicians	757	6
	Skilled workers and support personnel	1,068	3
	Total	**6,439**	**10**
	Management team	54	0
	Middle managers and skilled technicians	2,417	7
	Skilled workers and support personnel	3,968	3
Brazil	**Men**	**7,746**	**1,050**
	Management team	75	0
	Middle managers and skilled technicians	1,641	11
	Skilled workers and support personnel	6,030	1,039
	Women	**1,924**	**29**
	Management team	21	0
	Middle managers and skilled technicians	1,094	3
	Skilled workers and support personnel	809	26
	Total	**9,670**	**1,079**
	Management team	96	0

PUBLIC

Total workforce by employment type, gender, professional category and region 2018			
		Full time	Part time
	Middle managers and skilled technicians	2,735	14
	Skilled workers and support personnel	6,839	1,065
Mexico	**Men**	**909**	**0**
	Management team	21	0
	Middle managers and skilled technicians	488	0
	Skilled workers and support personnel	400	0
	Women	**203**	**0**
	Management team	6	0
	Middle managers and skilled technicians	173	0
	Skilled workers and support personnel	24	0
	Total	**1,112**	**0**
	Management team	27	0
	Middle managers and skilled technicians	661	0
	Skilled workers and support personnel	424	0
Rest of countries	**Men**	**237**	**0**
	Management team	10	0
	Middle managers and skilled technicians	164	0
	Skilled workers and support personnel	63	0
	Women	**98**	**0**
	Management team	3	0
	Middle managers and skilled technicians	87	0
	Skilled workers and support personnel	8	0
	Total	**335**	**0**
	Management team	13	0
	Middle managers and skilled technicians	251	0
	Skilled workers and support personnel	71	0
Iberdrola total	**Men**	**25,015**	**1,102**
	Management team	660	0
	Middle managers and skilled technicians	9,662	39
	Skilled workers and support personnel	14,693	1,063
	Women	**7,339**	**622**
	Management team	167	3
	Middle managers and skilled technicians	4,294	245
	Skilled workers and support personnel	2,878	374
	Total	**32,354**	**1,724**
	Management team	827	3
	Middle managers and skilled technicians	13,956	284
	Skilled workers and support personnel	17,571	1,437

PUBLIC

Total workforce by contract type, gender, age and region			
		Permanent contract	Temporary contract
Spain	**Men**	**7,830**	**22**
	Up to 30 years old	336	5
	Between 31 and 50 years old	4,281	17
	More than 50 years old	3,213	0
	Women	**1,964**	**6**
	Up to 30 years old	98	2
	Between 31 and 50 years old	1,328	4
	More than 50 years old	538	0
	Total	**9,794**	**28**
	Up to 30 years old	434	7
	Between 31 and 50 years old	5,609	21
	More than 50 years old	3,751	0
United Kingdom	**Men**	**3,704**	**17**
	Up to 30 years old	586	6
	Between 31 and 50 years old	1,955	10
	More than 50 years old	1,163	1
	Women	**1,874**	**16**
	Up to 30 years old	189	3
	Between 31 and 50 years old	1,261	11
	More than 50 years old	424	2
	Total	**5,578**	**33**
	Up to 30 years old	775	9
	Between 31 and 50 years old	3,216	21
	More than 50 years old	1,587	3
United States	**Men**	**4,594**	**8**
	Up to 30 years old	509	6
	Between 31 and 50 years old	2,134	2
	More than 50 years old	1,951	0
	Women	**1,845**	**2**
	Up to 30 years old	154	1
	Between 31 and 50 years old	880	1
	More than 50 years old	811	0
	Total	**6,439**	**10**
	Up to 30 years old	663	7
	Between 31 and 50 years old	3,014	3
	More than 50 years old	2762	0
Brazil	**Men**	**8,790**	**6**
	Up to 30 years old	2,486	2
	Between 31 and 50 years old	5,455	3
	More than 50 years old	849	1
	Women	**1,951**	**2**
	Up to 30 years old	628	2
	Between 31 and 50 years old	1,203	0
	More than 50 years old	120	0
	Total	**10,741**	**8**
	Up to 30 years old	3,114	4

PUBLIC

Total workforce by contract type, gender, age and region			
		Permanent contract	Temporary contract
	Between 31 and 50 years old	6,658	3
	More than 50 years old	969	1
Mexico	**Men**	**690**	**219**
	Up to 30 years old	141	105
	Between 31 and 50 years old	485	103
	More than 50 years old	64	11
	Women	**158**	**45**
	Up to 30 years old	54	28
	Between 31 and 50 years old	100	17
	More than 50 years old	4	0
	Total	**848**	**264**
	Up to 30 years old	195	133
	Between 31 and 50 years old	585	120
	More than 50 years old	68	11
Rest of countries	**Men**	**232**	**5**
	Up to 30 years old	16	3
	Between 31 and 50 years old	190	1
	More than 50 years old	26	1
	Women	**98**	**0**
	Up to 30 years old	17	0
	Between 31 and 50 years old	73	0
	More than 50 years old	8	0
	Total	**330**	**5**
	Up to 30 years old	33	3
	Between 31 and 50 years old	263	1
	More than 50 years old	34	1
Iberdrola total	**Men**	**25,840**	**277**
	Up to 30 years old	4,074	127
	Between 31 and 50 years old	14,500	136
	More than 50 years old	7,266	14
	Women	**7,890**	**71**
	Up to 30 years old	1,140	36
	Between 31 and 50 years old	4,845	33
	More than 50 years old	1,905	2
	Total	**33,730**	**348**
	Up to 30 years old	5,214	163
	Between 31 and 50 years old	19,345	169
	More than 50 years old	9,171	16

PUBLIC

Total workforce by contract type, gender, professional category and region 2018			
		Permanent contract	Temporary contract
Spain	**Men**	**7,830**	**22**
	Management team	405	0
	Middle managers and skilled technicians	3,338	10
	Skilled workers and support personnel	4,087	12
	Women	**1,964**	**16**
	Management team	94	0
	Middle managers and skilled technicians	1,343	5
	Skilled workers and support personnel	527	1
	Total	**9,794**	**28**
	Management team	499	0
	Middle managers and skilled technicians	4,681	15
	Skilled workers and support personnel	4,614	13
United Kingdom	**Men**	**3,704**	**17**
	Management team	108	0
	Middle managers and skilled technicians	2,371	17
	Skilled workers and support personnel	1,225	0
	Women	**1,874**	**16**
	Management team	33	0
	Middle managers and skilled technicians	1,058	13
	Skilled workers and support personnel	783	3
	Total	**5,578**	**33**
	Management team	141	0
	Middle managers and skilled technicians	3,429	30
	Skilled workers and support personnel	2,008	3
United States	**Men**	**4,594**	**8**
	Management team	41	0
	Middle managers and skilled technicians	1,661	0
	Skilled workers and support personnel	2,892	8
	Women	**1,845**	**2**
	Management team	13	0
	Middle managers and skilled technicians	762	1
	Skilled workers and support personnel	1,070	1
	Total	**6,439**	**10**
	Management team	54	0
	Middle managers and skilled technicians	2,423	1
	Skilled workers and support personnel	3,962	9
Brazil	**Men**	**8,790**	**6**
	Management team	75	0
	Middle managers and skilled technicians	1,650	2
	Skilled workers and support personnel	7,065	4
	Women	**1,951**	**2**
	Management team	21	0
	Middle managers and skilled technicians	1,096	1
	Skilled workers and support personnel	834	1
	Total	**10,741**	**8**
	Management team	96	0

PUBLIC

Total workforce by contract type, gender, professional category and region 2018			
		Permanent contract	Temporary contract
	Middle managers and skilled technicians	2,746	3
	Skilled workers and support personnel	7,899	5
Mexico	**Men**	**690**	**219**
	Management team	21	0
	Middle managers and skilled technicians	381	107
	Skilled workers and support personnel	288	112
	Women	**158**	**45**
	Management team	6	0
	Middle managers and skilled technicians	140	33
	Skilled workers and support personnel	12	12
	Total	**848**	**264**
	Management team	27	0
	Middle managers and skilled technicians	521	140
	Skilled workers and support personnel	300	124
Rest of countries	**Men**	**232**	**5**
	Management team	10	0
	Middle managers and skilled technicians	159	5
	Skilled workers and support personnel	63	0
	Women	**98**	**0**
	Management team	3	0
	Middle managers and skilled technicians	87	0
	Skilled workers and support personnel	8	0
	Total	**330**	**5**
	Management team	13	0
	Middle managers and skilled technicians	246	5
	Skilled workers and support personnel	71	0
Iberdrola total	**Men**	**25,840**	**277**
	Management team	660	0
	Middle managers and skilled technicians	9,560	141
	Skilled workers and support personnel	15,620	136
	Women	**7,890**	**71**
	Management team	170	0
	Middle managers and skilled technicians	4,486	53
	Skilled workers and support personnel	3,234	18
	Total	**33,730**	**348**
	Management team	830	0
	Middle managers and skilled technicians	14,046	194
	Skilled workers and support personnel	18,854	154

PUBLIC

102-41

Personnel covered by a collective bargaining agreement, by region						
	2018		2017		2016	
	No. of Employees	%	No. of Employees	%	No. of Employees	%
Spain	8,582	87.38	9,109	88.47	9,753	93.82
United Kingdom	4,149	73.94	4,219	69.54	4,510	70.77
United States	3,112	48.26	3,146	47.95	3,234	47.22
Brazil	10,735	99.87	9,805	97.12	9,190	97.47
Mexico	294	26.44	203	21.50	241	27.57
Rest of countries	28	8.36	161	55.53	82	50.62
Total	**26,900**	**78.94**	**26,643**	**77.78**	**27,010**	**79.25**

PUBLIC

401-1

New hires by region, gender and age group							
		Men			Women		
		2018	2017	2016	2018	2017	2016
Spain	By age group	**221**	**252**	**244**	**114**	**64**	**93**
	Up to 30 years old	104	116	121	45	31	35
	Between 31 and 50 years old	106	125	116	68	31	55
	More than 50 years old	11	11	7	1	2	3
	By age group (%)	**2.82**	**3.03**	**2.90**	**5.81**	**3.23**	**4.68**
	Up to 30 years old	30.55	35.26	30.17	45.12	41.89	39.77
	Between 31 and 50 years old	2.47	2.92	2.65	5.14	2.34	4.02
	More than 50 years old	0.34	0.3	0.19	0.19	0.34	0.56
	Total workforce	7,852	8,313	8,408	1,970	1,983	1,987
United Kingdom	By age group	**270**	**464**	**261**	**138**	**177**	**81**
	Up to 30 years old	135	141	112	69	59	25
	Between 31 and 50 years old	120	245	109	56	104	52
	More than 50 years old	15	78	40	13	14	4
	By age group (%)	**7.26**	**11.33**	**6.10**	**7.30**	**8.97**	**3.87**
	Up to 30 years old	22.80	23.46	18.51	35.94	30.41	11.9
	Between 31 and 50 years old	6.11	11.84	5.01	4.40	7.76	3.07
	More than 50 years old	1.29	5.48	2.67	3.05	3.2	1.00
	Total workforce	3,721	4,094	4,280	1,890	1,973	2,093
United States	By age group	**380**	**322**	**369**	**137**	**148**	**126**
	Up to 30 years old	149	114	141	44	54	37
	Between 31 and 50 years old	187	171	181	74	70	75
	More than 50 years old	44	37	47	19	24	14
	By age group (%)	**8.26**	**6.9**	**7.63**	**7.42**	**13.81**	**10.73**
	Up to 30 years old	28.93	23.17	27.87	28.39	24.86	23.9
	Between 31 and 50 years old	8.75	8.07	8.24	8.40	11.55	6.85
	More than 50 years old	2.26	1.8	2.20	2.34	1.62	0.35
	Total workforce	4,602	4,665	4,838	1,847	1,896	2,011
Brazil	By age group	**1,583**	**1,127**	**808**	**272**	**174**	**262**
	Up to 30 years old	840	550	515	169	108	167
	Between 31 and 50 years old	731	559	289	101	64	94
	More than 50 years old	12	18	4	2	2	1
	By age group (%)	**18.00**	**7.81**	**6.27**	**13.93**	**8.99**	**13.80**
	Up to 30 years old	33.76	34.39	22.98	26.83	18.15	28.02
	Between 31 and 50 years old	13.39	7.76	7.89	8.40	5.47	8.30
	More than 50 years old	1.41	2.87	2.00	1.67	1.17	0.59
	Total workforce	8,796	8,160	7,530	1,953	1,936	1,899
Mexico	By age group	**184**	**323**	**146**	**51**	**74**	**31**
	Up to 30 years old	114	73	72	39	37	17
	Between 31 and 50 years old	68	210	67	12	36	14
	More than 50 years old	2	40	7	0	1	0
	By age group (%)	**20.24**	**41.46**	**19.84**	**25.12**	**44.85**	**22.46**
	Up to 30 years old	46.15	42.69	39.13	47.56	61.67	44.74
	Between 31 and 50 years old	11.58	38.82	13.7	10.26	36.00	14.74
	More than 50 years old	2.67	59.7	11.11	0.00	20.00	0
	Total workforce	909	779	736	203	165	138

PUBLIC

New hires by region, gender and age group							
		Men			Women		
		2018	2017	2016	2018	2017	2016
Rest of countries	By age group	**35**	**66**	**13**	**28**	**19**	**0**
	Up to 30 years old	9	18	1	11	6	0
	Between 31 and 50 years old	23	43	9	17	13	0
	More than 50 years old	3	5	3	0	0	0
	By age group (%)	**14.77**	**30.28**	**9.77**	**28.57**	**26.03**	**0**
	Up to 30 years old	47.37	60	11.11	64.71	66.67	0
	Between 31 and 50 years old	12.04	25.75	8.04	23.29	22.41	0
	More than 50 years old	11.11	23.81	25	0.00	0	0
	Total workforce	**237**	**218**	**133**	**98**	**73**	**29**
Iberdrola total	By age group	**2,673**	**2,554**	**1,841**	**740**	**656**	**593**
	Up to 30 years old	1,351	1,012	962	377	295	281
	Between 31 and 50 years old	1,235	1,353	771	328	318	290
	More than 50 years old	87	189	108	35	43	22
	By age group (%)	**10.23**	**9.74**	**7.10**	**9.30**	**8.17**	**7.27**
	Up to 30 years old	32.15	26.39	24.9	32.06	27.09	25.66
	Between 31 and 50 years old	8.44	9.65	5.68	6.72	6.5	5.83
	More than 50 years old	1.19	2.26	1.27	1.84	2.1	1.06
	Total workforce	**26,117**	**26,229**	**25,925**	**7,961**	**8,026**	**8,157**

PUBLIC

Persons leaving the company by region, gender and age group							
		Men			Women		
		2018	2017	2016	2018	2017	2016
Spain	By age group	**682**	**461**	**452**	**130**	**76**	**66**
	Up to 30 years old	11	4	6	5	2	3
	Between 31 and 50 years old	48	99	74	31	36	32
	More than 50 years old	623	358	372	94	38	31
	By age group (%)	**8.69**	**5.55**	**5.38**	**6.58**	**3.83**	**3.32**
	Up to 30 years old	3.23	1.22	1.5	5.01	2.7	3.41
	Between 31 and 50 years old	1.12	2.31	1.69	2.30	2.72	2.34
	More than 50 years old	19.38	9.68	10.23	17.46	6.48	5.83
	Total workforce	**7,852**	**8,313**	**8,408**	**1,970**	**1,983**	**1,987**
United Kingdom	By age group	**643**	**346**	**516**	**220**	**214**	**119**
	Up to 30 years old	61	26	33	24	18	9
	Between 31 and 50 years old	194	75	173	86	85	58
	More than 50 years old	388	245	310	110	111	52
	By age group (%)	**17.28**	**8.45**	**12.06**	**11.64**	**10.85**	**5.69**
	Up to 30 years old	10.30	4.33	5.45	12.50	9.28	4.29
	Between 31 and 50 years old	9.87	3.62	7.95	6.76	6.34	4.12
	More than 50 years old	33.33	17.21	20.69	25.82	25.34	10.92
	Total workforce	**3,721**	**4,094**	**4,280**	**1,890**	**1,973**	**2,093**
United States	By age group	**453**	**471**	**320**	**186**	**252**	**172**
	Up to 30 years old	38	53	69	20	34	30
	Between 31 and 50 years old	127	137	89	60	61	61
	More than 50 years old	288	281	162	106	157	81
	By age group (%)	**9.84**	**10.10**	**6.61**	**10.07**	**13.29**	**8.55**
	Up to 30 years old	7.38	10.77	13.64	12.90	21.66	18.63
	Between 31 and 50 years old	5.95	6.47	4.05	6.81	6.76	6.42
	More than 50 years old	14.76	13.68	7.59	13.07	18.76	9
	Total workforce	**4,602**	**4,665**	**4,838**	**1,847**	**1,896**	**2,011**
Brazil	By age group	**941**	**580**	**544**	**247**	**165**	**184**
	Up to 30 years old	165	137	116	59	51	56
	Between 31 and 50 years old	403	269	219	119	84	76
	More than 50 years old	373	174	209	69	30	52
	By age group (%)	**10.70**	**7.11**	**7.22**	**12.65**	**8.52**	**9.69**
	Up to 30 years old	6.63	6.19	5.38	9.37	8.57	9.4
	Between 31 and 50 years old	7.38	5.56	5.19	9.89	7.18	6.71
	More than 50 years old	43.88	15.68	18.06	57.50	17.54	30.59
	Total workforce	**8,796**	**8,160**	**7,530**	**1,953**	**1,936**	**1,899**
Mexico	By age group	**62**	**80**	**95**	**13**	**23**	**18**
	Up to 30 years old	14	20	30	6	7	8
	Between 31 and 50 years old	38	47	55	6	16	10
	More than 50 years old	10	13	10	1	0	0
	By age group (%)	**6.82**	**10.27**	**12.91**	**6.40**	**13.94**	**13.04**
	Up to 30 years old	5.67	11.7	16.3	7.32	11.67	21.05
	Between 31 and 50 years old	6.47	8.69	11.25	5.13	16	10.53
	More than 50 years old	13.33	19.4	15.87	25.00	0	0
	Total workforce	**909**	**779**	**736**	**203**	**165**	**138**

Persons leaving the company by region, gender and age group							
		Men			Women		
		2018	2017	2016	2018	2017	2016
Rest of countries	By age group	**45**	**14**	**11**	**20**	**7**	**5**
	Up to 30 years old	4	2	0	3	1	0
	Between 31 and 50 years old	29	11	10	15	6	5
	More than 50 years old	12	1	1	2	0	0
	By age group (%)	**18.99**	**6.25**	**8.27**	**20.41**	**18.92**	**17.24**
	Up to 30 years old	21.05	5.88	0	17.65	33.33	0
	Between 31 and 50 years old	15.18	6.56	8.93	20.55	19.35	20
	More than 50 years old	44.44	4.76	8.33	25.00	0	0
	Total workforce	**237**	**218**	**133**	**98**	**73**	**29**
Iberdrola total	By age group	**2,826**	**1,952**	**1,931**	**816**	**737**	**564**
	Up to 30 years old	293	242	254	117	113	106
	Between 31 and 50 years old	839	638	614	317	288	242
	More than 50 years old	1694	1,072	1,063	382	336	216
	By age group (%)	**10.82**	**7.44**	**7.45**	**10.25**	**9.18**	**6.91**
	Up to 30 years old	6.97	6.31	6.58	9.94	10.38	9.68
	Between 31 and 50 years old	5.73	4.55	4.53	6.50	5.88	4.86
	More than 50 years old	23.27	12.8	12.5	20.04	16.45	10.36
	Total workforce	**26,117**	**26,229**	**25,925**	**7,961**	**8,026**	**8,157**

PUBLIC

Redundancies by region, gender and age group			
		Men	Women
Spain	By age group	**13**	**2**
	Up to 30 years old	0	1
	Between 31 and 50 years old	7	0
	More than 50 years old	6	1
	By age group (%)	**0.16**	**0.10**
	Up to 30 years old	0.00	1.00
	Between 31 and 50 years old	0.16	0.00
	More than 50 years old	0.17	0.19
United Kingdom	By age group	**8**	**1**
	Up to 30 years old	4	1
	Between 31 and 50 years old	2	0
	More than 50 years old	2	0
	By age group (%)	**0.21**	**0.05**
	Up to 30 years old	0.68	0.52
	Between 31 and 50 years old	0.10	0.00
	More than 50 years old	0.17	0.00
United States	By age group	**23**	**22**
	Up to 30 years old	5	2
	Between 31 and 50 years old	12	15
	More than 50 years old	6	5
	By age group (%)	**0.50**	**1.19**
	Up to 30 years old	0.97	1.29
	Between 31 and 50 years old	0.56	1.70
	More than 50 years old	0.31	0.62
Brazil	By age group	**617**	**141**
	Up to 30 years old	81	20
	Between 31 and 50 years old	241	57
	More than 50 years old	295	64
	By age group (%)	**7.01**	**7.22**
	Up to 30 years old	3.26	3.17
	Between 31 and 50 years old	4.42	4.74
	More than 50 years old	34.71	53.33
Mexico	By age group	**11**	**2**
	Up to 30 years old	3	0
	Between 31 and 50 years old	8	2
	More than 50 years old	0	0
	By age group (%)	**1.21**	**0.99**
	Up to 30 years old	1.21	0.00
	Between 31 and 50 years old	1.36	1.71
	More than 50 years old	0.00	0.00

PUBLIC

Redundancies by region, gender and age group			
		Men	Women
Rest of countries	By age group	**0**	**0**
	Up to 30 years old	0	0
	Between 31 and 50 years old	0	0
	More than 50 years old	0	0
	By age group (%)	**0.00**	**0.00**
	Up to 30 years old	0.00	0.00
	Between 31 and 50 years old	0.00	0.00
	More than 50 years old	0.00	0.00
Iberdrola total	By age group	**672**	**168**
	Up to 30 years old	**93**	**24**
	Between 31 and 50 years old	**270**	**74**
	More than 50 years old	**309**	**70**
	By age group (%)	**2.57**	**2.11**
	Up to 30 years old	**2.21**	**2.04**
	Between 31 and 50 years old	**1.84**	**1.52**
	More than 50 years old	**4.24**	**3.67**

PUBLIC

Redundancies by region, gender and professional category			
		Men	Women
Spain	By professional category	**13**	**2**
	Management team	3	1
	Middle managers and skilled technicians	8	1
	Skilled workers and support personnel	2	0
	By professional category (%)	**0.16**	**0.10**
	Management team	0.74	1.06
	Middle managers and skilled technicians	0.24	0.07
	Skilled workers and support personnel	0.05	0.00
United Kingdom	By professional category	**8**	**1**
	Management team	0	0
	Middle managers and skilled technicians	2	0
	Skilled workers and support personnel	6	1
	By professional category (%)	**0.21**	**0.05**
	Management team	0.00	0.00
	Middle managers and skilled technicians	0.08	0.00
	Skilled workers and support personnel	0.49	0.13
United States	By professional category	**23**	**22**
	Management team	1	0
	Middle managers and skilled technicians	9	14
	Skilled workers and support personnel	13	8
	By professional category (%)	**0.50**	**1.19**
	Management team	2.44	0.00
	Middle managers and skilled technicians	0.54	1.83
	Skilled workers and support personnel	0.45	0.75
Brazil	By professional category	**617**	**141**
	Management team	9	1
	Middle managers and skilled technicians	142	78
	Skilled workers and support personnel	466	62
	By professional category (%)	**7.01**	**7.22**
	Management team	12.00	4.76
	Middle managers and skilled technicians	8.60	7.11
	Skilled workers and support personnel	6.59	7.43
Mexico	By professional category	**11**	**2**
	Management team	0	0
	Middle managers and skilled technicians	10	2
	Skilled workers and support personnel	1	0
	By professional category (%)	**1.21**	**0.99**
	Management team	0.00	0.00
	Middle managers and skilled technicians	2.05	1.16
	Skilled workers and support personnel	0.25	0.00

PUBLIC

Redundancies by region, gender and professional category			
		Men	Women
Rest of countries	By professional category	**0**	**0**
	Management team	0	0
	Middle managers and skilled technicians	0	0
	Skilled workers and support personnel	0	0
	By professional category (%)	**0.00**	**0.00**
	Management team	0.00	0.00
	Middle managers and skilled technicians	0.00	0.00
	Skilled workers and support personnel	0.00	0.00
Iberdrola total	By professional category	**672**	**168**
	Management team	13	2
	Middle managers and skilled technicians	171	95
	Skilled workers and support personnel	488	71
	By professional category (%)	**2.57**	**2.11**
	Management team	**1.97**	**1.18**
	Middle managers and skilled technicians	**1.76**	**2.09**
	Skilled workers and support personnel	**3.09**	**2.18**

PUBLIC

Average seniority of workforce by region (years)	2018
Spain	19.64
United Kingdom	15.90
United States	14.07
Brazil	7.78
Mexico	6.05
Rest of countries	6.32
Iberdrola total	**13.66**

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Benefits offered[133]	2018					
	Life insurance	Medical insurance	Disability insurance	Maternity/paternity leave	Pension fund	Shares
Spain	All	All	All	All	All	N/A
United Kingdom	All	All	N/A	All	All	All
United States	All	All	Full-time	All	All	N/A
Brazil	All [134]	All[135]	All	All[136]	All	All[137]
Mexico	Full-time	Full-time	All	All	Full-time	Full-time

[133] All: Applies to both full-time and part-time employees.
[134] Valid for all employees (excluding non-executive employees of Elektro), including officers, interns and trainees
[135] Excluding interns.
[136] Maternity/paternity leave (employees covered by collective bargaining agreement).
[137] Elektro executives. (The share programme was paid in cash, the last delivery will occur in March 2019. There is no new programme contemplating the grant of shares).

PUBLIC

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Leaves from and returns to work due to maternity/paternity, by region and gender									
	Men			Women			Total		
	2018	2017	2016	2018	2017	2016	2018	2017	2016
Employees entitled to parental leave									
Spain	7,852	8,313	8,408	1,970	1,983	1,987	9,822	10,296	10,395
United Kingdom	3,721	4,094	4,280	1,890	1,973	2,093	5,611	6,067	6,373
United States	4,602	4,665	4,838	1,847	1,896	2,011	6,449	6,561	6,849
Brazil	8,796	8,160	7,530	1,953	1,936	1,899	10,749	10,096	9,429
Mexico	909	779	736	203	165	138	1,112	944	874
Rest of countries	237	218	133	98	73	29	335	291	162
Total	**26,117**	**26,299**	**25,295**	**7,961**	**8,026**	**8,157**	**34,078**	**34,255**	**34,082**
Employees taking parental leave									
Spain	21	31	276	130	145	158	151	176	434
United Kingdom	36	39	26	147	130	151	183	169	177
United States	0	0	0	53	48	125	53	48	125
Brazil	370	274	132	98	105	18	468	379	150
Mexico	10	0	0	12	9	10	22	9	10
Rest of countries	4	1	0	4	3	1	8	4	1
Total	**441**	**345**	**434**	**444**	**440**	**463**	**885**	**785**	**897**
Employees that returned to work after parental leave ended									
Spain	21	29	N/Av.	126	114	N/Av.	147	143	N/Av.
United Kingdom	36	39	N/Av.	73	73	N/Av.	109	112	N/Av.
United States	76	0	N/Av.	53	48	N/Av.	129	48	N/Av.
Brazil	369	290	N/Av.	98	103	N/Av.	467	393	N/Av.
Mexico	10	4	N/Av.	12	10	N/Av.	22	14	N/Av.
Rest of countries	4	1	N/Av.	4	1	N/Av.	8	2	N/Av.
Total	**516**	**363**	**N/AV.**	**366**	**349**	**N/AV.**	**871**	**712**	**N/AV.**
Employees that returned to work after parental leave ended that were still employed 12 months after their return to work.									
Spain	20	28	N/Av.	132	114	N/Av.	152	142	N/Av.
United Kingdom	40	28	N/Av.	68	80	N/Av.	108	108	N/Av.
United States	73	41	N/Av.	49	137	N/Av.	122	178	N/Av.
Brazil	230	226	N/Av.	76	74	N/Av.	306	300	N/Av.
Mexico	10	4	N/Av.	12	6	N/Av.	22	10	N/Av.
Rest of countries	0	1	N/Av.	0	0	N/Av.	0	1	N/Av.
Total	**373**	**328**	**N/AV.**	**337**	**411**	**N/AV.**	**710**	**739**	**N/AV.**
Return to work rate									
Spain	100	93.55	N/Av.	97.41	78.62	N/Av.	97.76	86.08	N/Av.
United Kingdom	100	100.00	N/Av.	49.66	56.15	N/Av.	59.56	78.08	N/Av.
United States	N/A	N/A	N/Av.	100.00	100.00	N/Av.	100.00	100.00	N/Av.
Brazil	99.73	105.84	N/Av.	100.00	98.10	N/Av.	99.57	101.97	N/Av.
Mexico	100.00	100.00	N/Av.	100.00	111.11	N/Av.	100.00	55.56	N/Av.
Rest of countries	100.00	100.00	N/Av.	100.00	33.33	N/Av.	100.00	66.67	N/Av.
Total	**117.01**[138]	**105.22**	**N/AV.**	**82.34**	**79.32**	**N/AV.**	**99.61**	**92.27**	**N/AV.**

[138] Greater than 100% because employees who were entitled to leave in 2017 returned to work in 2018

IBERDROLA

PUBLIC

EU15

Employees eligible to retire in the next 5 years							
		By professional category (no.)			By professional category (%)		
		2018	2017	2016	2018	2017	2016
Spain	Management team	55	55	46	11.06	11.11	11.31
	Middle managers and skilled technicians	344	396	303	7.33	8.38	6.18
	Skilled workers and support personnel	658	850	606	14.22	16.74	12.53
	Total	**1,057**	**1,301**	**955**	**10.76**	**12.64**	9.56
United Kingdom	Management team	2	5	6	1.42	3.6	5.04
	Middle managers and skilled technicians	173	222	300	5.00	11.84	12.20
	Skilled workers and support personnel	224	286	320	11.14	13.83	14.66
	Total	**399**	**513**	**626**	**7.11**	**10.32**	10.80
United States	Management team	14	80	36	25.93	49.08	39.88
	Middle managers and skilled technicians	834	1,109	685	34.41	40.56	32.00
	Skilled workers and support personnel	1,573	1,553	726	39.61	42.39	29.78
	Total	**2,421**	**2,742**	**1,447**	**37.54**	**41.79**	30.96
Brazil	Management team	7	13	2	7.29	14.13	7.14
	Middle managers and skilled technicians	153	379	666	5.57	13.51	1.37
	Skilled workers and support personnel	222	571	383	2.81	7.93	0.30
	Total	**382**	**963**	**1,051**	**3.55**	**9.54**	1.17
Mexico	Management team	1	2	2	3.7	7.14	1.09
	Middle managers and skilled technicians	21	25	14	3.18	4.27	2.14
	Skilled workers and support personnel	5	4	3	1.18	1.21	1.65
	Total	**27**	**31**	**19**	**2.43**	**3.28**	1.78
Rest of countries	Management team	2	2	1	15.38	18.18	9.09
	Middle managers and skilled technicians	2	2	1	0.8	0.95	0.47
	Skilled workers and support personnel	0	0	0	0	0	0.00
	Total	**4**	**4**	**2**	**1.19**	**1.37**	2.90
Iberdrola total	**Management team**	**81**	**157**	**93**	**9.78**	16.92	15.63
	Middle managers and skilled technicians	**1,527**	**2,133**	**1,969**	**10.72**	16.89	13.67
	Skilled workers and support personnel	**2,682**	**3,264**	**2,038**	**14.11**	17.50	15.58
	Total	**4,290**	**5,554**	**4,100**	**12.59**	**16.22**	14.71

PUBLIC

Employees eligible to retire in the next 10 years							
		By professional category (no.)			By professional category (%)		
		2018	2017	2016	2018	2017	2016
Spain	Management team	135	149	120	27.11	30.10	25.86
	Middle managers and skilled technicians	824	931	809	17.54	19.70	16.83
	Skilled workers and support personnel	1,607	1,845	1,689	34.73	36.34	33.94
	Total	**2,566**	**2,925**	**2,618**	**26.12**	**28.41**	**25.70**
United Kingdom	Management team	29	28	29	20.57	20.14	22.30
	Middle managers and skilled technicians	611	713	823	17.66	32.49	33.32
	Skilled workers and support personnel	518	646	739	25.76	31.95	36.49
	Total	**1,158**	**1,387**	**1,591**	**20.64**	**26.22**	**26.85**
United States	Management team	15	94	80	27.78	57.67	53.99
	Middle managers and skilled technicians	1,027	1,488	1,263	42.37	54.43	43.60
	Skilled workers and support personnel	1,984	2,032	1,451	49.96	55.46	40.23
	Total	**3,026**	**3,614**	**2,794**	**46.92**	**55.08**	**41.98**
Brazil	Management team	8	24	7	8.33	17.86	21.43
	Middle managers and skilled technicians	212	484	905	7.71	5.46	4.27
	Skilled workers and support personnel	318	959	634	4.02	6.06	4.85
	Total	**538**	**1,467**	**1,546**	**5.01**	**6.04**	**4.98**
Mexico	Management team	6	5	5	22.22	26.09	5.43
	Middle managers and skilled technicians	61	32	26	9.23	17.25	6.24
	Skilled workers and support personnel	22	20	15	5.19	13.32	7.13
	Total	**89**	**57**	**46**	**8**	**14.53**	**6.86**
Rest of countries	Management team	4	1	1	30.77	9.09	9.09
	Middle managers and skilled technicians	10	4	2	3.98	1.90	0.47
	Skilled workers and support personnel	3	0	0	4.23	0.00	0.00
	Total	**17**	**5**	**3**	**5.07**	**7.25**	**2.90**
Iberdrola total	Management team	**197**	**301**	**242**	**23.77**	**32.44**	**31.02**
	Middle managers and skilled technicians	**2,745**	**3,652**	**3,828**	**19.27**	**24.88**	**25.72**
	Skilled workers and support personnel	**4,452**	**5,502**	**4,528**	**23.42**	**29.50**	**31.73**
	Total	**7,394**	**9,455**	**8,598**	**21.70**	**27.60**	**28.96**

PUBLIC

Workplace Health and Safety

403-1

Employees represented on health and safety committees, by region (%)	2018	2017	2016
Spain	97.50	96.88	95.89
United Kingdom	100.00	100.00	94.68
United States	100.00	100.00	99.40
Brazil	100.00	100.00	90.76
Mexico	100.00	100.00[139]	100.00
Rest of countries	31.94	37.46	66.05
Iberdrola total	**98.61**	**98.53**	**95.70**

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Number of accidents by region and gender				
		2018	2017	2016
Spain	Men	88	69	83
	Women	5	13	8
	Total	93	82	91
United Kingdom	Men	47	61	74
	Women	11	31	27
	Total	58	92	101
United States	Men	161	176	154
	Women	13	33	20
	Total	174	209	174
Brazil	Men	66	69	89
	Women	7	0	10
	Total	73	69	99
Mexico	Men	1	1	6
	Women	0	2	0
	Total	1	3	6
Rest of countries	Men	0	0	1
	Women	0	0	0
	Total	0	0	1
Iberdrola total	**Men**	**363**	**376**	**407**
	Women	**36**	**79**	**65**
	Total	**399**	**455**	**472**

[139] There has been a recalculation of the data from 2016 and 2017, including the Renewables and Engineering businesses.

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Number of accidents by type, region and gender										
		Men			Women			Total		
	Accident types	2018	2017	2016	2018	2017	2016	2018	2017	2016
Spain	Fatal	0	0	0	0	0	0	0	0	0
	With leave	23	24	25	1	0	1	24	24	26
	Without leave	65	58	58	4	0	7	69	58	65
United Kingdom	Fatal	0	0	0	0	0	0	0	0	0
	With leave	6	3	7	0	0	0	6	3	7
	Without leave	41	58	67	11	31	27	52	89	94
United States	Fatal	0	0	0	0	0	0	0	0	0
	With leave	35	40	38	3	3	8	38	43	46
	Without leave	126	136	116	10	30	12	136	166	128
Brazil	Fatal	0	0	0	0	0	0	0	0	0
	With leave	11	34	23	1	0	3	12	34	26
	Without leave	55	35	66	6	0	7	61	35	73
Mexico	Fatal	0	0	0	0	0	0	0	0	0
	With leave	0	0	2	0	0	0	0	0	2
	Without leave	1	1	4	0	2	0	1	3	4
Rest of countries	Fatal	0	0	0	0	0	0	0	0	0
	With leave	0	0	1	0	0	0	0	0	1
	Without leave	0	0	0	0	0	0	0	0	0
Iberdrola total	Fatal	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	With leave	**75**	**101**	**96**	**5**	**3**	**12**	**80**	**104**	**108**
	Without leave	**288**	**265**	**311**	**31**	**76**	**53**	**319**	**341**	**364**

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Accident rate by region[140]				
		2018	2017	2016
Spain	Number of fatalities - company	0	0	0
	Number of fatalities - subcontractor	0	1	1
	Number of lost days	1,788	1,558	998
	Injury rate	1,65	1.77	1.87
	Occupational disease rate (ODR)	0.01	0.00	0.01
	Severity indices	0.12	0.11	0.06
United Kingdom	Number of fatalities - company	0	0	0
	Number of fatalities - subcontractor	0	1	0
	Number of lost days	154	214	164
	Injury rate	0,64	0.28	0.61
	Occupational disease rate (ODR)	0.00	0.02	0.00
	Severity indices	0.02	0.02	0.02
United States	Number of fatalities - company	0	0	0
	Number of fatalities - subcontractor	0	1	0
	Number of lost days	1,518	2,141	1,274
	Injury rate	2.97	3.27	3.49
	Occupational disease rate (ODR)	0.00	0.08	0.00
	Severity indices	0.12	0.16	0.10
Brazil	Number of fatalities - company	0	0	0
	Number of fatalities - subcontractor	3	10	0
	Number of lost days	469	461	326
	Injury rate	0.58	1.99	1.48
	Occupational disease rate (ODR)	0.01	0.01	0.01
	Severity indices	0.02	0.03	0.02
Mexico	Number of fatalities - company	0	0	0
	Number of fatalities - subcontractor	0	0	0
	Number of lost days	0	0	105
	Injury rate	0.00	0.00	1.37
	Occupational disease rate (ODR)	0.00	0.00	0.00
	Severity indices	0.00	0.08	0.07
Rest of countries	Number of fatalities - company	0	0	0
	Number of fatalities - subcontractor	0	0	0
	Number of lost days	0	0	10
	Injury rate	0.00	0.00	3.22
	Occupational disease rate (ODR)	0.00	0.00	0.00
	Severity indices	0.00	0.00	0.03
Iberdrola total	**Number of fatalities - company**	**0**	**0**	**0**
	Number of fatalities - subcontractor	**3**	**13**	**1**
	Number of lost days	**3,929**	**4,374[141]**	**2,877**
	Frequency ratio	**1,37**	**1.75**	**1.82**
	Occupational disease rate (ODR)	**0.01**	**0.02**	**0.01**
	Severity index	**0.07**	**0.07**	**0.05**

[140] Methodology for calculating the indicators:
- Injury rate (IR) = (number of accidents with leave*1,000,000)/hours worked.
- Occupational disease rate (ODR) = (number of occupational disease cases/hours worked)*200,000.
- Severity index = (calendar days lost per accident, as from first day of leave/hours worked)*1,000.

[141] In 2017 there was a lower number of accidents with leave but a higher mayor number of lost days.

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Absenteeism by region and gender										
		Men			Women			Total		
		2018	2017	2016	2018	2017	2016	2018	2017	2016
Spain	Number of sick leaves per year	1,275	1,381	1,486	464	545	654	**1,739**	**1,926**	**2,140**
	Lost days	48,243	67,341	66,689	16,001	23,650	25,450	**64,244**	**90,991**	**92,139**
	Lost hours	426,189	N/Av.	N/Av.	128,185	N/Av.	N/Av.	**554,995**	N/Av.	N/Av.
United Kingdom	Number of sick leaves per year	1,407	1,443	1,632	928	1,047	1,144	**2,335**	**2,490**	**2,776**
	Lost days	26,232	26,491	29,835	19,173	19,986	23,081	**45,405**	**46,477**	**52,916**
	Lost hours	193,746	N/Av.	N/Av.	126,185	N/Av.	N/Av.	**319,931**	N/Av.	N/Av.
United States	Number of sick leaves per year	3,523	3,587	3,147	1,616	1,721	1,653	**5,139**	**5,308**	**4,800**
	Lost days	21,831	20,848	21,924	13,081	13,173	14,350	**34,912**	**34,021**	**36,274**
	Lost hours	187,661	N/Av.	N/Av.	94,199	N/Av.	N/Av.	**281,860**	N/Av.	N/Av.
Brazil	Number of sick leaves per year	3,088	886	3,833	1,586	666	2,029	**4,674**	**1,552**	**5,862**
	Lost days	12,228	11,155	11,900	8,444	6,199	6,213	**20,672**	**17,354**	**18,113**
	Lost hours	293,472	N/Av.	N/Av.	202,656	N/Av.	N/Av.	**496,128**	N/Av.	N/Av.
Mexico	Number of sick leaves per year	78	123	116	16	48	37	**94**	**171**	**153**
	Lost days	1,078	120	87	240	62	110	**1,318**	**182**	**197**
	Lost hours	8,596	N/Av.	N/Av.	1,914	N/Av.	N/Av.	**10,510**	N/Av.	N/Av.
Rest of countries	Number of sick leaves per year	0	0	3	0	0	0	**0**	**0**	**3**
	Lost days	0	0	26	0	0	0	**0**	**0**	**26**
	Lost hours	0	N/Av.	N/Av.	0	N/Av.	N/Av.	**0**	N/Av.	N/Av.
Iberdrola total	Number of sick leaves per year	9,371	7,420	10,217	4,610	4,610	5,517	13,981	11,447	15,734
	Lost days	109,612	125,955	130,461	56,939	62,279	69,204	166,551	189,025	199,665
	Lost hours	1,109,664	N/Av.	N/Av.	553,760	553,800	N/Av.	1,663,424	N/Av.	N/Av.

Absenteeism rate (AR) by region[142]			
	2018	2017	2016
Spain	6,842.97[143]	N/Av.	N/Av.
United Kingdom	6,667.40	6,989.38	7,234.95
United States	4,361.44	4,135.13	4,468.46
Brazil	1,898.90	1,626.70	1,651.9
Mexico	1.658.48[144]	N/Av.	N/Av.
Rest of countries	0.00	0.00	189.54
Iberdrola total	**4,615.21**	**N/AV.**	**N/AV.**

[142] Methodology for calculating the indicators (per GRI standard):

- Absenteeism rate (AR) = (missed days due to absenteeism, as from first day of leave/days worked)*200,000.

[143] The data for Spain and Mexico has been recalculated due to a change in methodology, the information for 2016 and 2017 cannot be recalculated due to a lack of data. Therefore, the information for Spain, Mexico and Iberdrola total is not comparable.

[144] The calculation standard has been revised in 2018.

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Training and education

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Total number of training hours by professional category, region and gender										
		Men			Women			Total		
	Professional category	2018	2017	2016	2018	2017	2016	2018	2017	2016
Spain	Management team	11,875	12,752	12,910	3,165	2,952	3,299	**15,040**	**15,704**	**16,209**
	Middle managers and skilled technicians	171,725	150,887	152,006	69,776	52,992	59,571	**241,501**	**203,879**	**211,577**
	Skilled workers and support personnel	190,787	197,645	207,328	10,065	11,593	11,961	**200,852**	**209,238**	**219,289**
	Total workforce	**374,387**	**361,284**	**372,244**	**83,006**	**67,537**	**74,831**	**457,393**	**428,821**	**447,075**
United Kingdom	Management team	1,981	3,061	3,510	786	1,200	141	**2,767**	**4,261**	**3,651**
	Middle managers and skilled technicians	49,282	64,319	84,433	12,702	15,282	7,589	**61,984**	**79,601**	**92,022**
	Skilled workers and support personnel	93,238	88,230	51,319	2,683	6,141	5,279	**95,921**	**94,371**	**56,598**
	Total workforce	**144,501**	**155,610**	**139,262**	**16,171**	**22,623**	**13,009**	**160,672**	**178,233**	**152,271**
United States	Management team	574	1,036	1,576	269	540	587	**843**	**1,576**	**2,163**
	Middle managers and skilled technicians	31,256	42,425	50,698	14,168	13,524	25,100	**45,424**	**55,949**	**75,798**
	Skilled workers and support personnel	107,581	154,129	212,079	35,164	27,443	89,160	**142,745**	**181,572**	**301,239**
	Total workforce	**139,411**	**197,590**	**264,353**	**49,601**	**41,507**	**114,847**	**189,012**	**239,097**	**379,200**
Brazil	Management team	2,534	2,354	1,186	766	400	217	**3,300**	**2,754**	**1,403**
	Middle managers and skilled technicians	75,946	64,789	132,450	51,748	40,535	33,231	**127,694**	**105,324**	**165,681**
	Skilled workers and support personnel	481,863	412,476	156,809	63,551	50,193	13,622	**545,414**	**462,669**	**170,431**
	Total workforce	**560,343**	**479,619**	**290,445**	**116,065**	**91,128**	**47,070**	**676,408**	**570,747**	**337,515**
Mexico	Management team	2,433	1,968	544	883	117	522	**3,316**	**2,085**	**1066**
	Middle managers and skilled technicians	42,641	28,982	19,703	15,620	8,542	3,709	**58,261**	**37,524**	**23,412**
	Skilled workers and support personnel	40,204	40,328	20,745	552	1,122	1,159	**40,756**	**41,450**	**21,904**
	Total workforce	**85,278**	**71,278**	**40,992**	**17,055**	**9,781**	**5,390**	**102,333**	**81,059**	**46,382**
Rest of countries	Management team	107	306	8	2	16	0	109	**322**	**8**
	Middle managers and skilled technicians	1,077	4,436	1254	237	1,198	280	1,314	**5,634**	**1,534**
	Skilled workers and support personnel	363	3,000	980	62	198	29	425	**3,198**	**1,009**
	Total workforce	**1,547**	**7,742**	**2,242**	**301**	**1,412**	**309**	**1,848**	**9,154**	**2,551**
Iberdrola total	Management team	**19,504**	**21,477**	**19,734**	**5,871**	**5,225**	**4,766**	**25,375**	**26,702**	**24,500**
	Middle managers and skilled technicians	**371,927**	**355,838**	**440,544**	**164,251**	**132,073**	**129,480**	**536,178**	**487,911**	**570,024**
	Skilled workers and support personnel	**914,036**	**895,808**	**649,260**	**112,077**	**96,690**	**121,210**	**1,026,113**	**992,498**	**770,470**
	Total workforce	**1,305,467**	**1,273,123**	**1,109,538**	**282,199**	**233,988**	**255,456**	**1,587,666**	**1,507,111**	**1,364,994**

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Average hours of training per employee trained, broken down by professional category, region and gender										
		Men			Women			Total		
	Professional category	2018	2017	2016	2018	2017	2016	2018	2017	2016
Spain	Management team	29.98	14.83	36.37	34.77	36.44	45.19	**30.88**	**16.69**	**37.87**
	Middle managers and skilled technicians	51.80	42.96	47.00	52.26	40.42	47.77	**51.93**	**42.27**	**47.22**
	Skilled workers and support personnel	45.87	44.52	45.64	19.31	20.23	21.51	**42.91**	**41.75**	**43.01**
	Total workforce	47.57	41.00	45.77	42.62	34.37	39.91	**46.59**	**39.79**	**44.67**
United Kingdom	Management team	17.38	28.34	39.89	24.56	41.38	14.10	**18.95**	**31.10**	**37.26**
	Middle managers and skilled technicians	18.74	25.04	39.02	11.68	14.50	18.93	**16.68**	**21.97**	**35.88**
	Skilled workers and support personnel	69.89	60.39	40.28	3.41	6.82	15.35	**45.18**	**39.95**	**34.98**
	Total workforce	35.43	37.61	39.50	8.48	11.40	17.23	**26.84**	**29.11**	**35.57**
United States	Management team	12.75	9.17	15.92	14.95	10.19	15.05	**13.38**	**9.49**	**15.67**
	Middle managers and skilled technicians	17.60	20.30	27.27	17.51	11.65	22.86	**17.57**	**17.21**	**25.63**
	Skilled workers and support personnel	35.93	48.05	75.10	31.51	30.73	112.29	**34.73**	**44.28**	**83.26**
	Total workforce	28.95	36.52	55.28	25.53	19.70	59.48	**27.97**	**31.80**	**56.49**
Brazil	Management team	35.69	34.62	40.90	42.56	25.00	27.13	**37.08**	**32.79**	**37.92**
	Middle managers and skilled technicians	44.03	36.28	40.60	45.51	35.40	30.74	**44.62**	**35.93**	**38.15**
	Skilled workers and support personnel	66.17	65.37	44.64	73.38	62.43	28.20	**66.94**	**65.04**	**42.65**
	Total workforce	61.73	58.75	42.69	57.43	46.38	29.94	**60.94**	**56.35**	**40.30**
Mexico	Management team	90.11	70.29	36.27	126.11	29.25	174.00	**97.54**	**65.16**	**59.20**
	Middle managers and skilled technicians	93.72	69.17	78.19	94.66	64.71	67.45	**93.97**	**68.10**	**76.26**
	Skilled workers and support personnel	126.43	139.06	103.21	32.45	43.15	231.80	**121.66**	**131.17**	**106.33**
	Total workforce	106.60	96.71	87.59	90.24	60.38	85.56	**103.47**	**90.17**	**87.35**
Rest of countries	Management team	6.66	25.50	8.00	0.51	5.33	0	**5.69**	**21.47**	**8.00**
	Middle managers and skilled technicians	4.66	19.20	10.63	2.67	12.61	17.50	**4.11**	**17.28**	**11.45**
	Skilled workers and support personnel	3.91	12.35	6.58	4.80	22.00	4.83	**4.02**	**12.69**	**6.51**
	Total workforce	4.55	15.93	8.37	2.87	13.20	14.05	**4.15**	**15.44**	**8.80**
Iberdrola total	**Management team**	**29.15**	**18.06**	**33.74**	**34.73**	**28.09**	**35.82**	**30.28**	**19.42**	**34.11**
	Middle managers and skilled technicians	**36.71**	**33.55**	**40.66**	**35.54**	**26.96**	**33.23**	**36.34**	**31.47**	**38.71**
	Skilled workers and support personnel	**56.49**	**56.16**	**51.92**	**33.74**	**30.16**	**55.40**	**52.62**	**51.81**	**52.44**
	Total workforce	**48.38**	**45.88**	**46.33**	**34.78**	**28.23**	**41.08**	**45.24**	**41.82**	**45.25**

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Employees receiving performance reviews by region, professional category and gender (%)										
		Men			Women			Total		
	Professional category	2018	2017	2016	2018	2017	2016	2018	2017	2016
Spain	Management team	87.68	97.55	100	84.97	90.80	97.50	87.17	96.36	29.39
	Middle managers and skilled technicians	87.61	94.58	95.84	84.56	93.66	93.41	86.73	94.31	100
	Skilled workers and support personnel	96.14	95.42	94.64	96.44	92.86	92.82	96.17	95.12	74.37
	Total	**92.06**	**95.18**	**95.49**	**87.76**	**93.29**	**94.67**	**91.20**	**94.80**	**95.33**
United Kingdom	Management team	100	100	98.20	96.97	100	100	99.29	100	98.56
	Middle managers and skilled technicians	99.83	100	99.42	100	100	100	99.94	100	99.61
	Skilled workers and support personnel	99.76	100	100	99.62	100	100	99.70	100	100
	Total	**99.81**	**100**	**99.60**	**99.89**	**100**	**100**	**99.84**	**100**	**99.75**
United States	Management team	97.56	99.11	100	100	98.04	100	98.15	98.77	100
	Middle managers and skilled technicians	97.05	98.90	99.57	97.12	98.72	99.54	97.07	98.83	99.56
	Skilled workers and support personnel	16.14	13.42	13.00	34.08	13.69	16.28	20.98	13.48	13.76
	Total	**46.07**	**47.03**	**48.08**	**60.58**	**61.34**	**63.45**	**50.22**	**51.17**	**52.59**
Brazil	Management team	77.33	61.64	92.31	52.38	47.37	100	71.88	58.70	96.88
	Middle managers and skilled technicians	89.35	92.78	100	88.33	90.56	86.85	88.94	91.91	98.86
	Skilled workers and support personnel	75.71	81.48	85.64	75.21	86.01	91.06	75.66	81.99	86.34
	Total	**78.29**	**83.66**	**93.60**	**82.33**	**88.22**	**88.31**	**79.02**	**84.54**	**92.53**
Mexico	Management team	100	100	4.55	100	100	33.33	100	100	8.00
	Middle managers and skilled technicians	100	100	69.62	100	100	73.64	100	100	70.45
	Skilled workers and support personnel	100	100	15.54	100	100	36.00	100	100	17.13
	Total	**100**	**100**	**45.92**	**100**	**100**	**65.94**	**100**	**100**	**49.08**
Rest of countries	Management team	80.00	75.00	66.67	100	100	100	84.62	81.82	75.00
	Middle managers and skilled technicians	90.85	62.16	61.33	82.76	61.90	27.27	88.05	62.09	53.61
	Skilled workers and support personnel	98.41	22.58	28.85	100	28.57	60.00	98.59	23.19	31.58
	Total	**92.41**	**51.38**	**48.87**	**84.69**	**60.27**	**37.93**	**90.15**	**53.61**	**46.91**
Iberdrola total	**Management team**	**89.41**	**94.57**	**97.11**	**85.22**	**90.10**	**98.14**	**88.55**	**95.92**	**97.31**
	Middle managers and skilled technicians	**93.21**	**96.20**	**98.23**	**91.82**	**95.23**	**94.31**	**92.77**	**96.76**	**97.09**
	Skilled workers and support personnel	**72.64**	**74.91**	**73.13**	**71.25**	**72.15**	**72.95**	**72.40**	**74.09**	**73.10**
	Total	**80.70**	**83.58**	**85.13**	**83.28**	**86.00**	**86.18**	**81.30**	**84.15**	**85.38**

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Diversity and equal opportunity

Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership and other indicators of diversity.

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Total workforce by region, gender and professional category										
		Men			Women			Total		
	Professional category	2018	2017	2016	2018	2017	2016	2018	2017	2016
Spain	Management team	405	408	424	94	87	80	499	495	504
	Middle managers and skilled technicians	3,348	3,430	3,435	1,348	1,294	1,308	4,696	4,724	4,743
	Skilled workers and support personnel	4,099	4,475	4,549	528	602	599	4,627	5077	5,148
	Total	7,852	8,313	8,408	1,970	1,983	1,987	9,822	10,296	10,395
United Kingdom	Management team	108	111	111	33	28	28	141	139	139
	Middle managers and skilled technicians	2,388	2,547	2,576	1,071	1,068	1,054	3,459	3,615	3,630
	Skilled workers and support personnel	1,225	1,436	1,593	786	877	1,011	2,011	2,313	2,604
	Total	3,721	4,094	4,280	1,890	1,973	2,093	5,611	6,067	6,373
United States	Management team	41	112	104	13	51	42	54	163	146
	Middle managers and skilled technicians	1,661	1,722	1,856	763	1,012	1,097	2,424	2,734	2,953
	Skilled workers and support personnel	2,900	2,831	2,878	1,071	833	872	3,971	3,664	3,750
	Total	4,602	4,665	4,838	1,847	1,896	2,011	6,449	6,561	6,849
Brazil	Management team	75	73	26	21	19	6	96	92	32
	Middle managers and skilled technicians	1,652	1,704	3,360	1,097	1,102	1,278	2,749	2,806	4,638
	Skilled workers and support personnel	7,069	6,383	4,144	835	815	615	7,904	7,198	4,759
	Total	8,796	8,160	7,530	1,953	1,936	1,899	10,749	10,096	9,429
Mexico	Management team	21	24	22	6	4	3	27	28	25
	Middle managers and skilled technicians	488	454	418	173	132	110	661	586	528
	Skilled workers and support personnel	400	301	296	24	29	25	424	330	321
	Total	909	779	736	203	165	138	1,112	944	874
Rest of countries	Management team	10	8	6	3	3	2	13	11	8
	Middle managers and skilled technicians	164	148	75	87	63	22	251	211	97
	Skilled workers and support personnel	63	62	52	8	7	5	71	69	57
	Total	237	218	133	98	73	29	335	291	162
Iberdrola total	**Management team**	**660**	**736**	**693**	**170**	**192**	**161**	**830**	928	854
	Middle managers and skilled technicians	**9,701**	**10,005**	**11,720**	**4,539**	**4,671**	**4,869**	14,240	14,676	16,589
	Skilled workers and support personnel	**15,756**	**15,488**	**13,512**	**3,252**	**3,163**	**3,127**	19,008	18,651	16,639
	Total	**26,117**	**26,229**	**25,925**	**7,961**	**8,026**	**8,157**	**34,078**	**34,255**	**34,082**

PUBLIC

405-1

Total workforce by region, gender and professional category (%)										
		Men			Women			Total		
	Professional category	2018	2017	2016	2018	2017	2016	2018	2017	2016
Spain	Management team	4%	4%	4%	1%	1%	1%	5%	5%	5%
	Middle managers and skilled technicians	34%	33%	33%	14%	13%	12%	48%	46%	46%
	Skilled workers and support personnel	42%	43%	44%	5%	6%	6%	47%	49%	50%
	Total	80%	81%	81%	20%	19%	19%	100%	100%	100%
United Kingdom	Management team	2%	2%	2%	1%	0%	0%	3%	2%	2%
	Middle managers and skilled technicians	42%	42%	40%	19%	18%	17%	61%	60%	57%
	Skilled workers and support personnel	22%	24%	25%	14%	14%	16%	36%	38%	41%
	Total	66%	67%	67%	34%	33%	33%	100%	100%	100%
United States	Management team	1%	2%	2%	0%	1%	1%	1%	2%	2%
	Middle managers and skilled technicians	25%	26%	27%	12%	15%	16%	37%	42%	43%
	Skilled workers and support personnel	45%	43%	42%	17%	13%	12%	62%	56%	55%
	Total	71%	71%	71%	29%	29%	29%	100%	100%	100%
Brazil	Management team	1%	1%	0%	0%	0%	0%	1%	1%	0%
	Middle managers and skilled technicians	15%	17%	36%	10%	11%	14%	25%	28%	49%
	Skilled workers and support personnel	66%	63%	44%	8%	8%	7%	74%	71%	50%
	Total	82%	81%	80%	18%	19%	20%	100%	100%	100%
Mexico	Management team	2%	3%	3%	0%	0%	0%	2%	3%	3%
	Middle managers and skilled technicians	44%	48%	48%	16%	14%	12%	60%	62%	60%
	Skilled workers and support personnel	36%	32%	34%	2%	3%	3%	38%	35%	37%
	Total	82%	83%	84%	18%	17%	16%	100%	100%	100%
Rest of countries	Management team	3%	3%	4%	1%	1%	1%	4%	4%	5%
	Middle managers and skilled technicians	49%	51%	46%	26%	22%	14%	75%	73%	60%
	Skilled workers and support personnel	19%	21%	32%	2%	2%	3%	21%	24%	35%
	Total	71%	75%	82%	29%	25%	18%	100%	100%	100%
Iberdrola total	**Management team**	**2%**	**2%**	**2%**	**0%**	**1%**	**0%**	**2%**	**3%**	**3%**
	Middle managers and skilled technicians	**29%**	**29%**	**35%**	**13%**	**14%**	**14%**	**42%**	**43%**	**49%**
	Skilled workers and support personnel	**46%**	**45%**	**40%**	**10%**	**9%**	**9%**	**56%**	**54%**	**49%**
	Total	**77%**	**77%**	**76%**	**23%**	**23%**	**24%**	**100%**	**100%**	**100%**

PUBLIC

405-1

Total workforce by region, gender and age										
		Men			Women			Total		
	Age	2018	2017	2016	2018	2017	2016	2018	2017	2016
Spain	Up to 30 years old	341	329	401	100	74	88	441	403	489
	Between 31 and 50 years old	4,298	4,284	4,370	1,332	1,323	1,367	5,630	5,607	5,737
	More than 50 years old	3,213	3,700	3,637	538	586	532	3,751	4286	4,169
	Total	7,852	8,313	8,408	1,970	1,983	1,987	9,822	10,296	10,395
United Kingdom	Up to 30 years old	592	601	605	192	194	210	784	795	815
	Between 31 and 50 years old	1,965	2,069	2,177	1,272	1,341	1,407	3,237	3,410	3,584
	More than 50 years old	1,164	1,424	1,498	426	438	476	1,590	1,862	1,974
	Total	3,721	4,094	4,280	1,890	1,973	2,093	5,611	6,067	6,373
United States	Up to 30 years old	515	492	506	155	157	161	670	649	667
	Between 31 and 50 years old	2,136	2,119	2,197	881	902	950	3,017	3,021	3,147
	More than 50 years old	1,951	2,054	2,135	811	837	900	2,762	2,891	3,035
	Total	4,602	4,665	4,838	1,847	1,896	2,011	6,449	6,561	6,849
Brazil	Up to 30 years old	2,488	2,212	2,155	630	595	596	3,118	2,807	2,751
	Between 31 and 50 years old	5,458	4,838	4,218	1,203	1,170	1,133	6,661	6,008	5,351
	More than 50 years old	850	1,110	1,157	120	171	170	970	1,281	1,327
	Total	8,796	8,160	7,530	1,953	1,936	1,899	10,749	10,096	9,429
Mexico	Up to 30 years old	247	171	184	82	60	38	329	231	222
	Between 31 and 50 years old	587	541	489	117	100	95	704	641	584
	More than 50 years old	75	67	63	4	5	5	79	72	68
	Total	909	779	736	203	165	138	1,112	944	874
Rest of countries	Up to 30 years old	19	30	9	17	9	2	36	39	11
	Between 31 and 50 years old	191	167	112	73	58	25	264	225	137
	More than 50 years old	27	21	12	8	6	2	35	27	14
	Total	237	218	133	98	73	29	335	291	162
Iberdrola total	**Up to 30 years old**	**4,202**	**3,835**	**3,859**	**1,176**	**1,089**	**1,095**	**5,378**	**4,924**	**4,954**
	Between 31 and 50 years old	**14,635**	**14,018**	**13,564**	**4,878**	**4,894**	**4,977**	**19,513**	**18,912**	**18,541**
	More than 50 years old	**7,280**	**8,376**	**8,502**	**1,907**	**2,043**	**2,085**	**9,187**	**10,419**	**10,587**
	Total	**26,117**	**26,229**	**25,925**	**7,961**	**8,026**	**8,157**	**34,078**	**34,255**	**34,082**

PUBLIC

405-1

Total workforce by region, gender and age (%)										
		Men			Women			Total		
	Age	2018	2017	2016	2018	2017	2016	2018	2017	2016
Spain	Up to 30 years old	3%	3%	4%	1%	1%	1%	4%	4%	5%
	Between 31 and 50 years old	44%	42%	42%	14%	13%	13%	58%	54%	55%
	More than 50 years old	33%	36%	35%	5%	5%	5%	38%	42%	40%
	Total	**80%**	**81%**	**81%**	**20%**	**19%**	**19%**	**100%**	**100%**	**100%**
United Kingdom	Up to 30 years old	11%	10%	9%	3%	3%	3%	14%	13%	13%
	Between 31 and 50 years old	35%	34%	34%	23%	22%	22%	58%	56%	56%
	More than 50 years old	21%	24%	24%	8%	7%	8%	28%	31%	31%
	Total	**66%**	**67%**	**67%**	**34%**	**33%**	**33%**	**100%**	**100%**	**100%**
United States	Up to 30 years old	8%	8%	8%	2%	2%	2%	10%	10%	10%
	Between 31 and 50 years old	33%	32%	32%	14%	14%	14%	47%	46%	46%
	More than 50 years old	30%	31%	31%	13%	13%	13%	43%	44%	44%
	Total	**71%**	**71%**	**71%**	**29%**	**29%**	**29%**	**100%**	**100%**	**100%**
Brazil	Up to 30 years old	23%	22%	23%	6%	6%	6%	29%	28%	29%
	Between 31 and 50 years old	51%	48%	45%	11%	11%	12%	62%	60%	57%
	More than 50 years old	8%	11%	12%	1%	2%	2%	9%	13%	14%
	Total	**82%**	**81%**	**80%**	**18%**	**19%**	**20%**	**100%**	**100%**	**100%**
Mexico	Up to 30 years old	22%	18%	21%	7%	6%	4%	29%	24%	25%
	Between 31 and 50 years old	53%	57%	56%	11%	11%	11%	64%	68%	67%
	More than 50 years old	7%	7%	7%	0%	1%	1%	7%	8%	8%
	Total	**82%**	**83%**	**84%**	**18%**	**17%**	**16%**	**100%**	**100%**	**100%**
Rest of countries	Up to 30 years old	6%	10%	6%	5%	3%	1%	11%	13%	7%
	Between 31 and 50 years old	57%	58%	69%	22%	20%	15%	79%	77%	85%
	More than 50 years old	8%	7%	8%	2%	2%	1%	10%	9%	9%
	Total	**71%**	**75%**	**82%**	**29%**	**25%**	**18%**	**100%**	**100%**	**100%**
Iberdrola total	**Up to 30 years old**	**12%**	**11%**	**11%**	**3%**	**3%**	**3%**	**15%**	**14%**	**15%**
	Between 31 and 50 years old	**43%**	**41%**	**40%**	**14%**	**14%**	**15%**	**57%**	**55%**	**54%**
	More than 50 years old	**22%**	**25%**	**25%**	**6%**	**6%**	**6%**	**28%**	**30%**	**31%**
	Total	**77%**	**77%**	**76%**	**23%**	**23%**	**24%**	**100%**	**100%**	**100%**

PUBLIC

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Breakdown of Board of Directors by gender and age group						
Number of members of the Board	2018		2017		2016	
	no.	%	no.	%	no.	%
Men						
Up to 30 years old	0	0%	0	0%	0	0%
Between 31 and 50 years old	1	7%	1	7%	1	7%
More than 50 years old	8	57%	8	57%	8	57%
Women						
Up to 30 years old	0	0%	0	0%	0	0%
Between 31 and 50 years old	1	7%	1	7%	2	14%
More than 50 years old	4	29%	4	29%	3	21%

PUBLIC

Supplier social assessment

414-1 414-2

Volume of general procurement purchases in countries considered to be at risk (%)	2018
Brazil	17.33
Mexico	8.56

Volume of fuel purchases in countries considered to be at risk (%)	2018
Brazil	3
Mexico	37
Others (Colombia + Algeria + Nigeria + Peru + Trinidad and Tobago)	11

The standards used to identify countries at risk are the same as those described in the "Protection of Human Rights" section of Chapter "II.5. Contribution to the well-being of our communities" of this report.

PUBLIC

Access to electricity

EU27

Residential disconnections of electricity for non payment by region (no.)				
		2018	2017	2016
Spain	Paid up to 48 h after disconnection	37,428	24,811	103,802
	Paid between 48 h and one week after disconnection	3,166	1,942	11,473
	Paid between one week and one month after disconnection	4,146	2,212	14,963
	Paid between one month and one year	2,131	1,095	11,465
	Paid after more than one year	0	0	0
	Outstanding and unclassified	0	0	0
	Total	**46,871**	**30,060**	**141,703**
United Kingdom	Paid up to 48 h after disconnection	0	0	0
	Paid between 48 h and one week after disconnection	0	0	0
	Paid between one week and one month after disconnection	0	0	0
	Paid between one month and one year	0	0	0
	Paid after more than one year	0	0	0
	Outstanding and unclassified	0	0	0
	Total	**0**	**0**	**0**
United States[145]	Paid up to 48 h after disconnection	62,878	40,229	64,437
	Paid between 48 h and one week after disconnection	35,675	7,487	9,004
	Paid between one week and one month after disconnection	3,181	3,441	4,299
	Paid between one month and one year	1,805	1,723	2,221
	Paid after more than one year	0	0	0
	Outstanding and unclassified	0	0	0
	Total	**103,539**	**52,880**	**79,961**
Brazil	Paid up to 48 h after disconnection	1,170,543	1,239,946	1,014,227
	Paid between 48 h and one week after disconnection	214,718	227,007	217,099
	Paid between one week and one month after disconnection	231,919	221,001	195,483
	Paid between one month and one year	193,486	178,323	174,818
	Paid after more than one year	8	7	0
	Outstanding and unclassified	0	0	48,606
	Total	**1,810,674**	**1,866,284**	**1,650,233**
Iberdrola total	Paid up to 48 h after disconnection	1,270,849	1,304,986	1,182,466
	Paid between 48 h and one week after disconnection	253,559	236,436	237,576
	Paid between one week and one month after disconnection	239,246	226,654	214,745
	Paid between one month and one year	197,422	181,141	188,504
	Paid after more than one year	8	7	0
	Outstanding and unclassified	0	0	48,606
	Total	**1,961,084**	**1,949,224**	**1,871,897**

[145] The 2016 and 2017 data do not include the U.S. subsidiary UI.

PUBLIC

Residential reconnections of electricity following payment of unpaid bills, by region (no.) EU27				
		2018	2017	2016
Spain	Less than 24 h after payment	46,234	28,784	139,706
	Between 24 h and one week after payment	760	803	3,537
	More than one week after payment	141	141	173
	Unclassified	0	0	0
	Total	**47,135**	**29,728**	**143,416**
United Kingdom	Less than 24 h after payment	0	0	0
	Between 24 h and one week after payment	0	0	0
	More than one week after payment	0	0	0
	Unclassified	0		0
	Total	**0**	**0**	**0**
United States	Less than 24 h after payment	38,322	42,560	43,262
	Between 24 h and one week after payment	3,324	4,180	5,663
	More than one week after payment	0	7,082	5,296
	Unclassified	0	0	0
	Total	**48,440**	**53,822**	**54,221**
Brazil	Less than 24 h after payment	1,555,944	1,541,234	1,378,234
	Between 24 h and one week after payment	158,660	179,797	182,132
	More than one week after payment	117,787	109,172	96,599
	Unclassified	0	0	14,634
	Total	**1,832,391**	**1,830,203**	**1,671,599**
Iberdrola total	Less than 24 h after payment	1,640,500	1,612,578	1,561,202
	Between 24 h and one week after payment	162,744	184,780	191,332
	More than one week after payment	124,722	116,395	102,068
	Unclassified	0	0	14,634
	Total	**1,927,966**	**1,913,753**	**1,869,236**

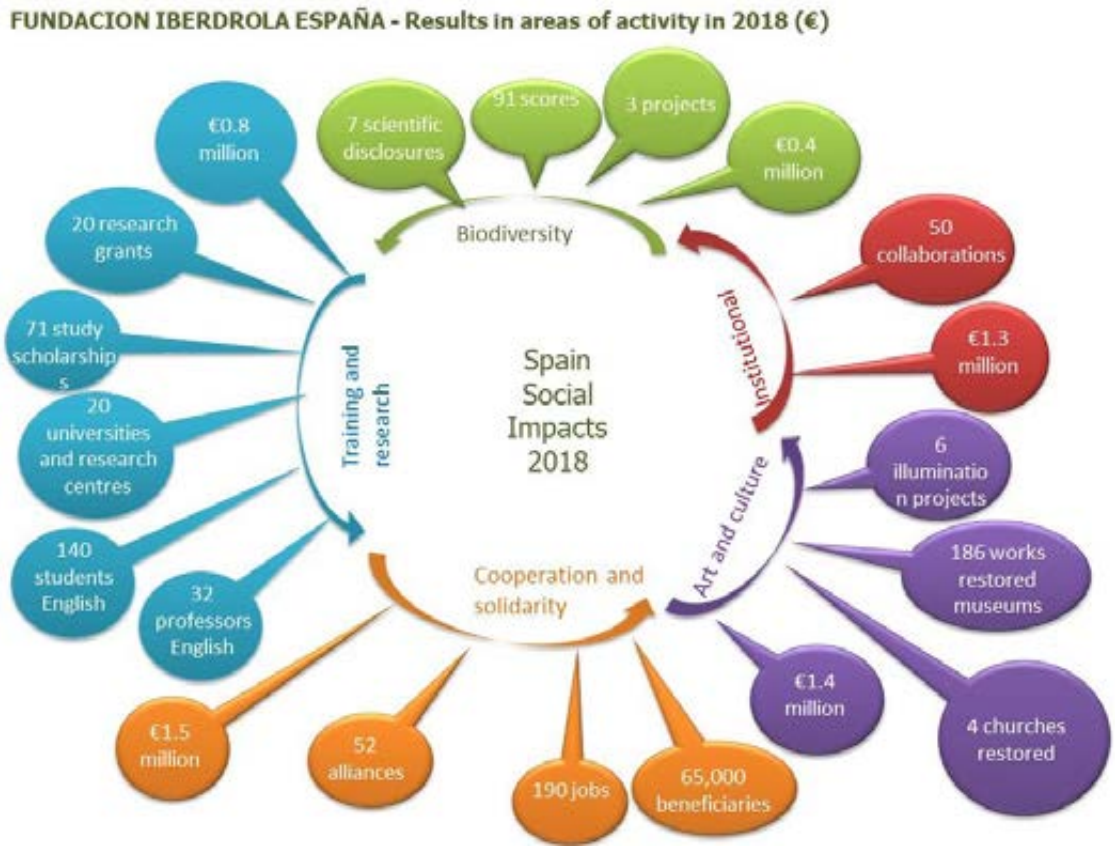
PUBLIC

Iberdrola's contribution to the community

Outputs and impacts

Iberdrola has been measuring the results achieved by its community support programmes using various parameters. Iberdrola's foundations are applying a methodology adapted from LBG to measure outputs and impacts for its most important programmes and projects.

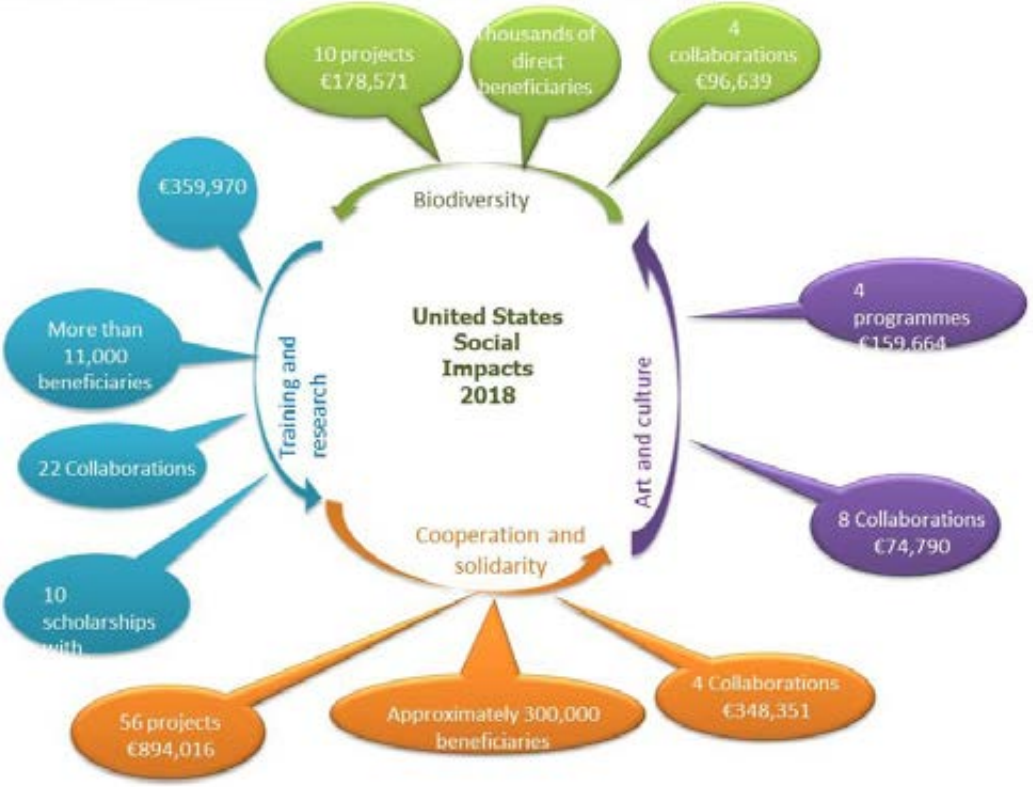
The charts below show the results and achievements by country during 2018:



PUBLIC

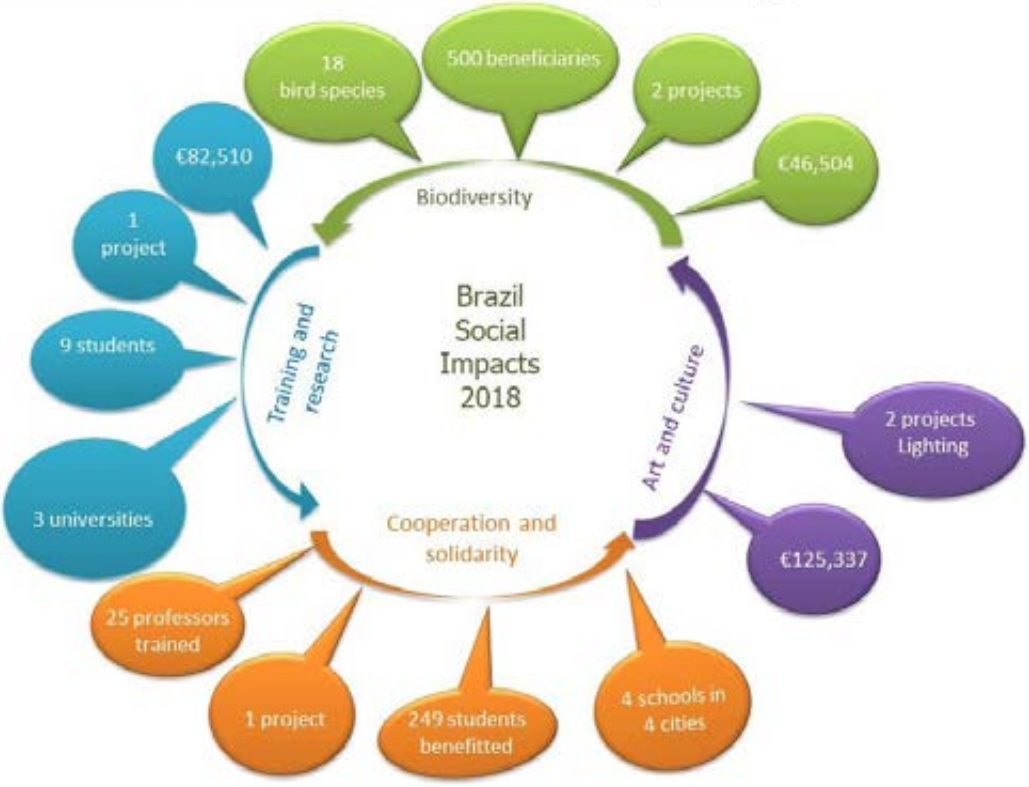
ScottishPower FOUNDATION: Results in areas of activity in 2018 (€)

AVANDGRID FOUNDATION - Results in areas of activity in 2018 (€)



PUBLIC

INSTITUTO NEOENERGIA BRASIL - Results in areas of activity in 2018 (€)



FUNDACION IBERDROLA MEXICO - Results in areas of activity in 2018 (€)

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Annex 2: Iberdrola's Contribution to the SDGs and Targets of the 2030 Agenda

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The information regarding the company's contribution to SDGs 7 and 13 is contained in the "Our main focus" section of Chapter I.2.

Goal 1: End poverty

End poverty in all its forms everywhere

From an economic standpoint, the expansion of electricity systems drives the regional economy in the region where it occurs and creates employment opportunities, contributing to economic and social enhancement. Positive effects include:

– Facilities for the production, transmission and distribution of electrical energy are built in dispersed geographic locations. This contributes to the generation of economic activity and jobs in urban and rural environments. This can also support the revitalisation and repopulation of underpopulated rural areas.

– These same facilities create significant indirect employment in the region in the form of local contracting companies, creating demand for various lodging, security, health, mechanical, supplier services, etc.

– In local communities, professional training is promoted and skilled labour, such as services for building and maintaining wind farms, is boosted.

– Local communities are supported through sponsorship of the initiatives of social and environmental institutions and organisations.

– Due to their geographic reach, electricity activities generate fees, taxes and duties at the local, regional and national levels.

During the construction and operation of its facilities, Iberdrola also carries out certain infrastructure activities that are unrelated to its facilities and without a specific commercial purpose, but rather that are intended to meet the needs of the social environment, resolving existing shortcomings in the local communities.

Target	*GRI Indicator*	*Description*	*Pag.*
1.2.- By 2030, **reduce at least by half the proportion of men, women and children of all ages living in poverty** in all its dimensions according to national definitions.	202-1	Ratios of entry level wage to local minimum wage.	97
	203-2	Significant indirect economic impacts.	79
1.4.- By 2030, **ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources**, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance.	413-1	Local community engagement, impact assessments and development programmes.	217

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Goal 2: Zero hunger

End hunger, achieve food security and improved nutrition and promote sustainable agriculture

One third of the food we produce is wasted on the world scale. Approximately 1,300 million tons of food are thrown into the trash each year. While food is thrown away in some countries, the reality is different in others: 815 million people (11% of the world population) suffers from malnutrition. 155 million of them are children less than 5 years old, who suffer delayed growth as a result of chronic malnutrition.

Changes in the system for cultivation and for sustainably feeding the population, ending malnutrition, ensuring sustainability in the production systems and doubling small-scale productivity and income are some of the targets proposed by the United Nations to end hunger.

At Iberdrola, our donations of primary products needed by groups at risk of exclusion are collected from various points at the work centres. Everything collected is distributed to needy families and people with limited resources by various local associations like Cáritas, Banco de Alimentos, Red Acoge and Casa de la Caridad, as well as directly by our volunteers. We have already distributed 27 tons of donations since we began the Operation in 2012.

4,222 kg were collected in Spain and Portugal and 1,897 kg in Mexico at 11 work centres during 2018. Employees also participated in volunteer initiatives to distribute food at soup kitchens

Target	*GRI Indicator*	*Description*	*Pag.*
2.3.- By 2030, **double the agricultural productivity and incomes of small-scale food producers**, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment.	411-1	Total number of incidents of violations involving rights of indigenous people.	210
2.a.- **Increase investment, including through enhanced international cooperation, in rural infrastructure, agricultural research** and extension services, technology development and plant and livestock gene banks in order to enhance agricultural productive capacity in developing countries, in particular least developed countries.	LBG	LBG contribution.	222
	203-1	Development and impact of infrastructure investments and services supported.	81
	203-2	Significant indirect economic impacts.	79

PUBLIC

Goal 3: Good health and well-being

Ensure healthy lives and promote well-being for all at all ages

Iberdrola has an *Occupational Safety and Health Policy* approved by the Board of Directors, which describes the principles that should guide the behaviour of the group's companies in this area. It also has a Global Occupational Safety and Health System, which is aligned with said policy and with the strictest of international standards, and incorporates the group's best practices from all of the countries where it has a presence.

Furthermore, the System is based on the principle that the group's contractors are its collaborators, and Iberdrola involves them in its occupational safety culture.

The company has a health and safety organisational structure created within a Prevention Area, within the Human Resources Division, in most countries. The companies of the group also have occupational safety and health committees, under different names, to establish channels for consultation and participation with the employee representatives in this area, to monitor indicators, and to plan and take measures to correct deficiencies and to improve the Safety and Health System.

As regards protection of the environment, leadership in the development of clean energy and respect for the environment being significant aspects of our business model, a competitive element that distinguishes us in the industry as one of the leading companies worldwide.

Iberdrola supports this vision in a benchmark Environmental Management System for all organisations of the group. This system allows for alignment of the environmental dimension within the group's sustainability model, articulating the mechanisms to measure and evaluate the group's environmental performance from the Life Cycle perspective, including in the management thereof the concept of circular economy and return on natural capital.

Target	*GRI Indicator*	*Description*	*Pag.*
3.4.- By 2030, **reduce by one third premature mortality from non-communicable diseases** through prevention and treatment and promote mental health and well-being.	403-1	Employees represented on health and safety committees, by region (%).	109
	Own indicator	Programmes and projects relating to healthy living habits, balanced meals.	107
3.9.- By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.	305-1	Direct greenhouse gas emissions. Scope 1 (per GHG Protocol).	152
	305-2	Indirect greenhouse gas emissions. Scope 2 (per GHG Protocol).	153
	305-6	Emissions of ozone-depleting substances.	158
	305-7	NOx, SOx and other significant air emissions.	157
	306-2	Total weight of waste by type and disposal method.	164

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Goal 4: Quality education

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

	Target	GRI Indicator	Description	Pag.
Iberdrola has a *Knowledge Management Policy*, approved by the Board of Directors, the objective of which is to disseminate and share knowledge within the company, encouraging continuous learning and cultural exchange. Iberdrola reaffirms that the company's intellectual capital depends on its people, its operational and organisational structures, and its internal and external relationships with all Stakeholders. At Iberdrola, learning is thus permanent, ongoing and aligned with the strategy of the group.	4.3.- By 2030, ensure **equal access** for all women and men to affordable and quality technical, vocational and tertiary education, including university.	404-1	Average hours of training per employee trained by gender.	118
		Own indicator	*Iberdrola U* programme.	96
At Iberdrola, specific programmes are designed to equip its professionals with the qualifications needed to perform their roles, and to foster a culture of development, value creation and ongoing improvement that allows them to assume new responsibilities in the future.	4.4.- By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship.	404-1 Shift of SDG indicator C040501	Average hours of training per employee trained.	118
		404-2	Programmes for skills management and lifelong learning.	116

PUBLIC

Goal 5: Gender equality

Achieve gender equality and empower all women and girls

The development of labour relations based on equal opportunity, non-discrimination and respect for diversity are key goals in Iberdrola's *Human Resources Framework Policy*. The company also has an *Equal Opportunity and Reconciliation Policy*, which strengthens the commitments to equal treatment between men and women.

The group's companies, in the various countries in which they operate, promote equal opportunity and respect diversity, effective equality between men and women in access to employment, training, promotion and working conditions.

Iberdrola has appropriate procedures in place to prevent any discrimination for reasons of gender, marital status, pregnancy, sexual orientation or other any personal condition that is unrelated to job-performance requirements.

The principles of non-discrimination and equal opportunity applied at the Iberdrola group are contained in both the *Code of Ethics* and in the global policies and procedures that have been approved and implemented (*Recruitment and Selection Policy, Equal Opportunity and Reconciliation Policy,* etc.) and in local collective bargaining agreements and policies.

Iberdrola has been included in Bloomberg's 2018 GEI (Gender Equality Index) as one of the best companies recognised for its policies in favour of gender equality and its best practices in the area of work/life balance.

Target	*GRI Indicator*	*Description*	*Pag.*
5.1.- **End all forms of discrimination against all women and girls** everywhere.	401-3	Return to work and retention rates after parental leave, by gender.	127
	404-1	Average hours of training per employee trained by gender.	118
	405-1	Composition of governance bodies and employees	376
	405-2	Ratio of basic salary and remuneration of women to men.	126
	406-1	Incidents of (gender) discrimination.	210
5.4.- **Recognize and value unpaid care and domestic work** through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate.	401-3	Return to work and retention rates after parental leave, by gender.	127
5.5.- Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life.	102-22 Shift of indicators C050501 and C050502 from SDGs	Composition of the highest governance body and its committees.	32
	102-24	Selection and nomination of the members of the highest governance body.	256

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Goal 6: Clean water and sanitation

Ensure availability and sustainable management of water and sanitation for all.

Water is a basic and irreplaceable natural resource in many of Iberdrola's activities. The company's awareness of this dependency and of the risks arising from water shortages has led it to set itself the objective of ensuring an increasingly rational and sustainable use of this resource.

The main actions taken by the group for a more sustainable use of water are:

– Limiting the volume of withdrawal and consumption of inland water in all technologies.

– Establishing and controlling limits on ecological flows at the hydroelectric generation reservoirs.

– Continually improving processes at facilities to reduce consumption and impact.

– Avoiding withdrawal of water in water-stressed areas.

– Reusing and recycling water at facilities.

– Conducting awareness-raising campaigns to achieve a more efficient and responsible use of sanitary water by employees at offices.

During their respective life cycles, generation, transmission, distribution and sales activities cause interactions with various ecosystems, landscapes and species. For this reason, Iberdrola has a Biodiversity Policy establishing a commitment to progress in developing methods of analysis of effects and actions for the preservation of biodiversity into the planning and subsequent implementation of their activities.

Target	*GRI Indicator*	*Description*	*Pag.*
6.3.- By 2030, **improve water quality by reducing pollution**, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally.	303-3	Water recycled and reused (% of water used that is returned to the ecosystem in optimum conditions).	161
	303-3	Water recycled and reused (% of water used that comes from waste water).	161
	306-1	Total water discharge by quality and destination.	163
	306-2	Total weight of waste by type and disposal method (hazardous and non-hazardous).	164
	306-3	Significant spills.	178
6.4.- By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity.	303-1 Shift of indicator C060402 (hydraulic stress level)	Total water withdrawal by source (use and source of water).	159
	303-3	Water recycled and reused.	161
	306-1	Total water discharge by quality and destination.	163
6.6 By 2020, **protect and restore water-related ecosystems**, including mountains, forests, wetlands, rivers, aquifers and lakes.	306-5	Identity, size, protected status and biodiversity value of water bodies and related habitats significantly affected by the organisation's discharges of water and runoff.	163

PUBLIC

Goal 8: Decent work and economic growth

Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

The policies defined for the management of human resources (*Human Resources Framework Policy, Recruitment and Selection Policy, Knowledge Management Policy, Equal Opportunity and Reconciliation Policy, Occupational Safety and Health Policy*) contain guidelines governing labour relations among the various companies of the group and serve as a reference to define the company's employment-related goals: maintaining employment guarantees and a stable relationship with workers; strengthening of occupational health and safety and training aspects; protection of diversity and equal opportunity in access to employment; promotion of professional development; and promotion of behaviour and attitudes among its entire workforce in line with principles of ethics and integrity.

In relation to Iberdrola's commitment to defend human rights, the main goal is to incorporate the management thereof into the group's operations, thus forming an integral part of operating procedures. This focus is included in the *Policy on Respect for Human Rights* approved by the Board of Directors. The company's practices are in line with the Guiding Principles on Business and Human Rights: Implementing the United Nations 'Protect, Respect and Remedy' Framework, the principles of the United Nations Global Compact, the OECD Guidelines for Multinational

Target	*GRI Indicator*	*Description*	*Pag.*
8.1.- Sustain per capita economic growth in accordance with national circumstances and, in particular, at least 7 per cent gross domestic product growth per annum in the least developed countries.	201-1	Direct economic value generated and distributed.	334
8.2 Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors.	Own indicator	Investments in Innovation.	194
	Own indicator	Research agreements with universities, technology centres, etc.	96
8.3 Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services.	204-1	Spending on local suppliers.	244
8.4.- **Improve progressively, through 2030, global resource efficiency in consumption and production** and endeavour to decouple economic growth from environmental degradation, in accordance with the 10-Year Framework of Programmes on Sustainable Consumption and Production, with developed countries taking the lead.	301-1	Materials used for power generation.	142
	301-2	Percentage of materials used that are recycled.	146
	302-4	Reduction of energy consumption (efficiency).	143
	302-5	Energy savings of green products and services.	146
	303-3	Water recycled and reused.	161
	Own indicator	Corporate Environmental Footprint.	136
8.5.- By 2030, **achieve full and productive employment and decent work for all women and men**, including for young people and persons with disabilities, and equal pay for work of equal value.	102-8	Information on employees by gender, employment type and contract type.	28
	202-1 Shift of indicator C080501 from SDG	Ratios of entry level wage to local minimum wage.	97
8.6.- By 2020, substantially reduce the proportion of youth not in employment, education or training.	401-1	New employee hires and employee turnover (by age and region).	357
8.7.- Take immediate and effective measures to eradicate forced labour, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labour, including recruitment and use of child soldiers, and	408-1	Operations and suppliers identified as having significant risk for incidents of child labour.	206
	409-1	Operations and suppliers identified as having significant risk for incidents of forced or compulsory labour.	206

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Enterprises, the International Labour Organization's Social Policy and the Tripartite Declaration of Principles Concerning Multinational Enterprises and Social Policy. Iberdrola has designed a Human Rights Management Model in order to promote a culture of respect for human rights and to raise awareness in this area for all professionals, especially those who perform their activities in countries with a potentially higher risk of violation of these rights due to lax laws. The company also has other tools approved by the Board, such as the *Code of Ethics*, which governs the behaviour of all directors, including individuals appointed by corporate directors to represent them in the position, professionals and suppliers of the companies of the group, establishing control measures as well as disciplinary measures in the event of noncompliance, which must be expressly accepted to by all suppliers and is included as an annex to the respective contracts.	by 2025 end child labour in all its forms.			
	8.8.- **Protect labour rights and promote safe and secure working environments** for all workers, including migrant workers, in particular women migrants, and those in precarious employment.	102-41 Shift of indicator C080802 from SDG.	Employees covered by collective bargaining agreements.	101
		407-1	Operations and suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk.	206
		403-1	Employees represented on formal health and safety committees (management/employees).	369
		403-2	Type of injury and rates of injury, occupational diseases, lost days, absenteeism and total number of work-related fatalities, by region and by gender.	369

PUBLIC

Goal 9: Industry, innovation and infrastructure

Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

The electricity sector is a significant driver of the economy, to which it continuously contributes through significant investments and the creation of high-quality jobs, both direct and indirect. Its function is to provide safe, competitive and sustainable supply. Generation technologies using renewable sources are decisive in the fight against climate change, as they allow for increased electrification of the economy, thus reducing dependency on fossil fuels.

Analysts describe a global scenario characterised by an increase in energy demand, tied to a need to reduce CO_2 emissions. Estimates call for high growth in demand in the medium and long term in emerging countries and moderate growth in the developed world. In any event, this energy transition will require extremely large investments in renewable generation facilities, in smart grids and in efficient storage; all accompanied by greater digitalization to support efficiency and the development of new products.

Iberdrola's strategy, implemented more than a decade ago, has been based precisely on these growth vectors: investment in renewables, smart grids, efficient storage and digitalization. The strategic pillars defined by the company are profitable growth, operational excellence, customer-focused operations, the optimisation of capital, and innovation.

Specifically, innovation is Iberdrola's primary tool for ensuring the company's sustainability, efficiency and competitiveness, based on:

– Disruptive technologies.
– Digitalization and automation in all businesses and processes.
– Innovation with start-ups, entrepreneurs and suppliers.
– Culture of innovation and talent.

Target	*GRI Indicator*	*Description*	*Pag.*
9.1.- **Develop quality, reliable, sustainable and resilient infrastructure**, including regional and trans-border infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all.	203-1	Development and impact of infrastructure investments and services supported.	81
	EU4	Transmission and distribution lines Annual evolution.	331
9.4.- By 2030, **upgrade infrastructure and retrofit industries to make them sustainable**, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities.	Own indicator	Installed capacity from renewable sources (MW).	326
	Shift indicator C090401 from SDG	CO_2 emissions by MWh.	152
9.5.- **Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries**, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending.	Own indicator	Amount dedicated to R&D+i activities.	194
	Own indicator	Agreements with universities and with scientific and technical organisations to improve facilities.	96
9.a.- **Facilitate sustainable and resilient infrastructure development in developing countries** through enhanced financial, technological and technical support to African countries, least developed countries, landlocked developing countries and small island developing States.	Own indicator	Subsidies for the electrification of underdeveloped or developing countries ("Electricity for All" programme).	202

PUBLIC

Goal 10: Reduced inequalities

Reduce inequality within and among countries

The group's companies, in the various countries in which they operate, promote equal opportunity and respect diversity, effective equality between men and women in access to employment, training, promotion and working conditions, and provide support to workers with diverse abilities, facilitating their integration into the workplace.

The main goals in this area currently focus on:

– The encouragement of reconciliation between employees' work and family life, which includes measures to ensure compatibility between a positive experience of parenthood and a successful professional career.

– The development of labour relations based on equal opportunity, non-discrimination and respect for diversity.

– The fostering of diversity and the social inclusion of vulnerable groups through the corporate volunteer programme, which affords our employees an opportunity to participate in various community support initiatives to raise awareness of this group and to improve the quality of their life.

Target	*GRI Indicator*	*Description*	*Pag.*
Target 10.2. By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status.	Own indicator	Inclusion of people with disabilities in the workforce (no.).	128
	Own indicator	Volunteer activities to reduce inequality.	226
10.3.- **Ensure equal opportunity and reduce inequalities of outcome**, including by eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and action in this regard.	102-8	Information on employees and other workers (changes in workforce by gender, and type of employment and contract).	28
	401-1	New employee hires and employee turnover (by age and region) Evolution of the workforce.	357
	404-3	Employees receiving regular performance and career development reviews.	375
	405-2	Ratio of basic salary and remuneration of women to men.	126
	406-1	Incidents of discrimination.	210
10.b.- **Encourage official development assistance and financial flows**, including foreign direct investment, to States where the need is greatest, in particular least developed countries, African countries, small island developing States and landlocked developing countries, in accordance with their national plans and programmes.	203-2	Significant indirect economic impacts (Investments in developing countries).	79
	204-1	Spending on local suppliers.	244

PUBLIC

Goal 11: Sustainable cities and communities

Make cities and human settlements inclusive, safe, resilient and sustainable.

Iberdrola has developed a Sustainable Mobility Plan with the ultimate goal of contributing to a rational use of the means of transportation and which is framed within the commitment made by the company in its *Sustainable Management Policy*, approved by the Board of Directors.

The inclusive nature of the programme involves employees, the business activity, customers and suppliers, covering approximately 23 specific actions in which the company seeks to strengthen its wager on sustainability.

These initiatives include Iberdrola's launch of a new edition of the *Electric Vehicle for Employees* programme in Spain and the United Kingdom and the pilot project launch in the United States, which consists of special advances and financial assistance for the purchase of electric vehicles. Thanks to this initiative, the local emission of 244 t CO_{2e} in employee travel to the work place in Spain and the United Kingdom was avoided in 2017.

Iberdrola's commitment to sustainable mobility was recognised in 2017 with the award received at the V Best Mobility Practices Award delivered by Renault.

Iberdrola's efforts to protect cultural heritage focus on the areas of preservation and restoration thereof, including specific activities in order for these projects to drive local development and sustainable tourism.

Target	*GRI Indicator*	*Description*	*Pag.*
11.2.- By 2030, **provide access to safe**, affordable, accessible and sustainable **transport systems** for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons.	Own indicator	Promotion of the electric vehicle.	156
11.4.- Strengthen efforts to protect and safeguard the world's cultural and natural heritage.	Shift indicator C110401 from SDG	LBG contribution to SDG 11.	222
11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management.	305-1	Direct greenhouse gas emissions. Scope 1 (per GHG Protocol).	152
	305-2	Indirect greenhouse gas emissions. Scope 2 (per GHG Protocol).	153
	305-6	Emissions of ozone-depleting substances.	158
	305-7	NOx, SOx and other significant air emissions.	157

PUBLIC

Goal 12: Responsible consumption and production

Ensure sustainable consumption and production patterns

The Iberdrola group ensures optimisation in the use of energy throughout its entire energy chain (production, transmission, distribution, supply and end use), contemplating energy efficiency from a three-fold perspective:

– As an electricity generator and distributor, it seeks to improve efficiency by introducing the most advanced technologies and equipment in the generation, transportation and distribution of energy.

– As an energy consumer, Iberdrola promotes the on-going improvement of energy efficiency across all its activities (offices and building, vehicles, water, mobility, employee awareness, etc.).

– As an electricity supplier, it wishes to contribute to a more efficient use of energy by consumers, through information, promotion and supply of solutions and technologies that help them improve their energy efficiency and reduce the environmental impact of their energy habits and consumption.

As to information and labelling of electricity sold, Iberdrola is governed by the regulatory requirements established in each of the countries in which it does business. In Spain, the company informs its customers about the source of the energy sold by the retail supplier and the associated environmental impact thereof by means of a label included in the electricity bills and in advertising to customers. In the United Kingdom, ScottishPower also reports the origin of its energy and the environmental impact thereof. New customers receive this information as part of their Welcome Cycle communications, and existing customers receive this information in each invoice or notice, in accordance with the guarantees of origin rules established by Ofgem. There is no obligation to label electricity in the United States or Brazil.

Iberdrola provides additional information as may be of help for consumers to make a more rational, efficient and safe use of these products.

Target	*GRI Indicator*	*Description*	*Pag.*
12.2.- By 2030, achieve the sustainable management and efficient use of natural resources.	302-3	Energy intensity.	141
	302-4	Reduction of energy consumption.	143
	302-5	Reductions in energy requirements of products and services.	146
	303-3	Water recycled and reused.	161
	Shift indicator C120201 from SDG	Corporate environmental footprint.	136
12.4 .- By 2020, **achieve the environmentally sound management of chemicals and all wastes** throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment.	306-1	Total water discharge by quality and destination.	163
	306-3	Significant spills.	178
12.5.- By 2030, **substantially reduce waste generation** through prevention, reduction, recycling and reuse.	301-2	Level of reuse and recycling of materials.	140
	306-2	Total weight of waste by type and disposal method.	164
12.6.- Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle.	Own indicator	Publication of Statement of Non-Financial Information. Sustainability Report.	8
12.8.- By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature.	Own indicator	Awareness-raising activities regarding climate change and renewable energy.	149

PUBLIC

Goal 14: Life below water

Conserve and sustainably use the oceans, seas and marine resources for sustainable development

The oceans cover three quarters of the surface area of the Earth and 40% of this large mass of salt water is seriously affected as a result of human activity. According to the UN, water is deteriorating due to pollution and the accumulation of organic waste: each year close to 12 million tons of plastic end up in the sea.

Beyond the serious environmental consequences of these practices, the economic and social development of our planet is also being seriously affected: more than 3,000 million people depend directly on marine and coastal biodiversity to survive (UN).

Given this situation, Iberdrola adopts the newest technologies in order to protect undersea life in the areas around its facilities. It has engaged in various initiatives to preserve marine life around the offshore wind farms, as well as the insulation of undersea cables and noise mitigation for mammals.

Among the more noteworthy activities, in 2018 ScottishPower developed the *Dolphin Watch* project, with disclosure and awareness-raising activities for the population, given them the opportunity to see bottlenose dolphins in their natural habitat, establishing a long-lasting connection with marine fauna.

Target	*GRI Indicator*	*Description*	*Pag.*
14.1.- By 2025, prevent and **significantly reduce marine pollution** of all kinds, in particular from land-based activities, including marine debris and nutrient pollution.	306-1	Total water discharge by quality and destination.	163
	306-3	Significant spills.	178
14.2.- By 2020, **sustainably** manage and **protect marine and coastal ecosystems** to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans.	304-1	Operational sites owned, leased, managed in or adjacent to, protected areas and areas of high biodiversity value outside protected areas.	172
	304-2	Significant impacts of activities, products and services on biodiversity.	169
	304-3	Habitats protected or restored.	174
14.3.- Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels.	305-1	Direct greenhouse gas emissions. Scope 1 (per GHG Protocol).	152
	305-2	Indirect greenhouse gas emissions. Scope 2 (per GHG Protocol).	153
	305-4	Intensity of GHG emissions.	151
	305-5	Reduction of GHG emissions.	155
	305-7	NOx, SOx and other significant air emissions.	157

PUBLIC

Goal 15: Life on land

Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

Natural capital, understood as natural resources affected in the performance of the company's activities, is one of the fundamental assets in the Iberdrola group's creation of value and a fundamental asset for all of its Stakeholders. During their respective life cycles, generation, transmission, distribution and sales activities cause interactions with various ecosystems, landscapes and species.

Therefore, these ecosystems occupy a leading role in the business strategy through four priority lines of action:

– Mediation for the protection, preservation and sustainable use of natural capital.

– Information through impact assessment and the development and application of guidelines on biodiversity for new projects.

– Relations with Stakeholders, which seeks to consider the legitimate aspirations of the Stakeholders and develop action plans in accordance therewith.

– Commitment to internal and external training, awareness-raising and communication.

Various instruments are used to carry out these lines of action, including:

– *Biodiversity Policy*: applicable in all of the geographic areas in which the Iberdrola group does business, the basic principles of which are reflected in the lines of action.

– Biodiversity plans based on avoiding and/or mitigating impact, restoring natural capital, assessing impact, Stakeholder relations and awareness-raising.

– Environmental management systems certified in accordance with ISO 14001 or EMAS standards, in order to prevent and control environmental risks.

– Corporate environmental footprint.

Target	*GRI Indicator*	*Description*	*Pag.*
15.1.- By 2020, **ensure the conservation, restoration and sustainable use** of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements. 15.5.- **Take urgent and significant action to reduce the degradation of natural habitats**, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species.	304-1	Operational sites owned, leased, managed in or adjacent to, protected areas and areas of high biodiversity value outside protected areas.	172
	304-2	Significant impacts of activities, products and services on biodiversity.	169
	304-3	Habitats protected or restored.	174
	304-4	Number of species broken down, based on danger of extinction, included in IUCN Red List species and national conservation list species with habitats in areas affected by operations.	173
	306-5	Identity, size, protected status and biodiversity value of water bodies and related habitats significantly affected by the organisation's discharges of water and runoff.	163
15.a.- Mobilize and **significantly increase financial resources from all sources** to conserve and sustainably use biodiversity and ecosystems.	Own indicator	LBG contribution to SDG 15.	222

PUBLIC

Goal 16: Peace, justice and strong institutions

Promote peaceful and inclusive societies

The group's firm commitment to fight corruption and to establish mechanisms to ensure the existence of a culture for preventing irregularities is reflected in such documents as the group's *Code of Ethics*, the *Crime Prevention Policy* and the *Anti-Corruption and Anti-Fraud Policy*, all of which have been approved by the Board of Directors.

Within the framework of the Compliance System, various activities are carried out to encourage the organisation to act in accordance with the most stringent ethical standards and in accordance with applicable laws and regulations. In order to develop the *Crime Prevention Policy,* the company has implemented a specific and effective programme (the *Crime Prevention Programme*) as a set of measures focused on the prevention and detection of and reaction to possible crimes, which also extends to the prevention and control of other frauds, administrative infractions and serious irregularities.

The company also has a *Protocol for Conduct in Professional Relations with Governments, Political Parties, Authorities and Public Officials* in order to strengthen the specific mechanisms already existing at the companies of the group to prevent any acts that might be considered corrupt or bribery in relations with said third parties.

In addition, as part of the Compliance System, the Compliance Unit promotes the development and maintenance of other initiatives for compliance with the *Code of Ethics* and legal provisions on fraud and corruption, the main goal of which is to foster a culture of corporate ethics and transparency, disseminating the principle of "zero tolerance" with respect to fraud and promoting mechanisms and actions to prevent corruption and fraud.

Target	*GRI Indicator*	*Description*	*Pag.*
16.5 Substantially reduce corruption and bribery in all their forms.	205-1	Business units assessed for risks related to corruption	271
	205-2	Training and communication on anti-corruption policies and procedures	278
	205-3	Incidents of corruption.	281
	415-1	Contributions to political parties or to related institutions.	294
16.6.- Develop effective, accountable and transparent institutions at all levels.	102-23	State whether the chair of the highest governance body is also an executive officer and the reasons for this arrangement.	33
	102-25	Processes for the highest governance body to avoid conflicts of interest.	314
16.7.- Ensure responsive, inclusive, participatory and representative decision-making at all levels.	102-21	Consulting stakeholders on economic, environmental and social topics.	257
	102-24	Selection and nomination of the members of the highest governance body.	256
	102-29	Identifying and managing economic, environmental and social impacts.	258
	102-37	Stakeholders' involvement in remuneration.	261
16.b.- Promote and enforce non-discriminatory laws and policies for sustainable development.	406-1 Shift indicator C200204 from SDG	Incidents of discrimination.	210

PUBLIC

Goal 17: Partnerships for the goals

Revitalise the Global Alliance for Sustainable Development

Iberdrola participated with the Global Compact on numerous initiatives to promote and develop the Sustainable Development Goals, including topic support for the preparation of the book "SDGs, Year 2: Analysis, trends and business leadership".

Especially noteworthy is the **Chair for the Sustainable Development Goals**: since its creation in 2014, the Iberdrola/UPM Chair has engaged in numerous activities to strengthen the university/company relationship model that can face the challenges of the international sustainability agenda. After the approval of the Sustainable Development Goals in 2015, the Universidad Politécnica de Madrid and Iberdrola have focused their activity on contributing to meeting these Goals. This department is configured as a space for shared learning and support for the implementation of the SDGs.

Iberdrola and the Red Española del Pacto Mundial have developed the Moving for Climate NOW initiative, within the framework of the COP23 Climate Summit held in Bonn in November 2017. Similarly, Iberdrola has joined a number of initiatives, the most high profile of which are: Terrawatt, United Nations Climate, We mean business, CEO Climate Leaders (World Economic Forum), Un millón de Compromisos por el Clima (MAGRAMA), Comunidad por el Clima (Red Española Pacto Mundial), Carbon Pricing Leadership Coalition, World Business Council for Sustainable Development, Corporate Leaders Group, Grupo Español de Crecimiento Verde, Powering Past Coal Alliance, Plataforma Nacional de Acción Climática, Asociación Española para la Economía Energética, UN Global Compact (Action Platform).

Iberdrola has joined the Partnering Against Corruption Initiative (PACI), a platform through which leaders belonging to the World Economic Forum undertake to promote business conduct and practices designed to fight corruption within their organisations and to make such commitments binding on the third parties with whom they engage.

Target	*GRI Indicator*	*Description*	*Pag.*
17.1.- Strengthen domestic resource mobilization, including through international support to developing countries, to improve domestic capacity for tax and other revenue collection.	Own indicator	Tax contribution.	284
17.3.- Mobilize additional financial resources for developing countries from multiple sources.	203-2	Significant indirect economic impacts.	79
	204-1	Spending on local suppliers.	244
17.16.- Enhance the Global Partnership for Sustainable Development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of the Sustainable Development Goals in all countries, in particular developing countries.	Own indicator	Participation in seminars, events and workshops to share best practices on SDGs	53
	Own indicator	Performance of international cooperation projects together with other players.	52
	Own indicator	SDG training and awareness-raising activities for employees, suppliers and other Stakeholders.	41
17.17.- Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships.	Own indicator	Number of volunteer activities performed.	226
17.19.- Build on existing initiatives to develop measurements of progress on sustainable development.	Own indicator	Annual publication of Statement of Non-Financial Information. Sustainability Report.	8

PUBLIC

Annex 3: Report on Green Financing Returns

PUBLIC

Iberdrola has issued a total of 11 *green* bonds. The issue dates, as well as the principal characteristics thereof, are as follows:

Green bonds							
ISIN	**Issue date**	**Issuer**	**Public / Private**	**Senior / Subordinate**	**Face value (€ millions)**	**Maturity**	**Coupon**
XS1057055060	24-Apr-14	Iberdrola International	Public	Senior	750	Oct-22	2.500%
XS1398476793	21 Apr-16	Iberdrola International	Public	Senior	1,000	Apr-26	1.125%
XS1490726590	15-Sep-16	Iberdrola International	Public	Senior	700	Sep-25	0.375%
XS1527758145	07-Dec-16	Iberdrola Finanzas	Public	Senior	750	Mar-24	1.000%
XS1564443759	20-Feb-2017 (extended on 22-Jun-2017)	Iberdrola Finanzas	Private	Senior	250	Feb-24	Euribor 3 M + 0.670%
XS1575444622	07-Mar-17	Iberdrola Finanzas	Public	Senior	1,000	Mar-25	1.000%
XS1682538183	13-Sept-17	Iberdrola Finanzas	Public	Senior	750	Sep-27	1.250%
XS1721244371	22-Nov-17	Iberdrola International	Public	Subordinate	1,000	Perpetual	1.875%
XS1797138960	26-Mar-18	Iberdrola International	Public	Subordinate	700	Perpetual	2.625%
XS1847692636	28-Jun-18	Iberdrola Finanzas	Public	Senior	750	Oct-26	1.250%
XS1924319301	21-Dec-18	Iberdrola Finanzas	Private	Senior	44[146]	Dec-25	3.724%

In November 2017 Iberdrola also issued a *green* bond in the U.S. market through its subsidiary Avangrid in the amount of 600 million U.S. dollars, with a coupon of 3.15%. Information on the projects that received the proceeds of this bond, as well as the environmental benefits achieved therefrom, are described in Avangrid's *Sustainability Report 2018*.

In April 2018 Iberdrola México, a 100%-owned subsidiary of Iberdrola, also obtained a *green* bank loan with a number of international financial institutions in the amount of 400 million U.S. dollars, which was used to refinance the company's renewable assets in Mexico.

The proceeds of all of these transactions have been used to fund the refinancing of investments in projects that met certain environmental and sustainable development criteria validated both by Iberdrola and subsequently by VigeoEiris (an independent entity). These projects are mainly within the area of renewable energy.

Iberdrola used VigeoEiris as an independent expert in validating the "green" nature of its financing instruments. VigeoEiris issues its rating of the issuer not only with respect to the management of the selected projects, but also regarding its general environmental commitments and the sustainable development that it implements in the ordinary course of its business.

The methodology followed for the assignment of the various projects to different transactions is described in the document *Iberdrola Framework for green financing* (the "**Framework**"), which has been verified by PriceWaterhouseCoopers Auditores, who also verify this *Sustainability Report.* The principal sections contemplated in the *Framework* are described below.

[146] USD 50 million nominal value.

PUBLIC

1. **Use of funds**

The proceeds from the various *green* financing instruments are used to finance or refinance *Eligible Green Projects*.

Consistent with the *Green Bond Principles*, Iberdrola considers *Eligible Green Projects* to be those that meet the Eligibility Standards described in the Framework.

2. **Evaluation and selection of the project**

The Green Financing Committee selects and evaluates projects that are susceptible to (re)financing by *green* instruments. This selection and evaluation process is performed in 5 phases described in the Framework.

3. **Management of funds**

The proceeds from the *green* financing instruments will be managed based on the phase of development and expense incurred in the selected assets or projects. Therefore, Iberdrola distinguishes between two types: refinancing of projects in operation and (re)financing of projects under development.

4. **Reporting**

Iberdrola commits to report annually until the maturity date of each of the *green* bonds or *green* financing instruments.

5. **External assurance**

The *green* financing issued by Iberdrola is supported by three external reviews, depending on the type of instrument.

In the first bond, issued in 2014, the eligible projects were reviewed by VigeoEiris using an analysis of a sample that covered approximately 50% of the nominal value of the financing obtained. In subsequent financings, the complete inventory of assigned assets was provided for review. On all occasions, VigeoEiris also performed an analysis classifying Iberdrola's sustainability policies and practices, finding that the required standards were met with a level of security that was more than satisfactory.

The conclusions of VigeoEiris, including the controversies identified in the issues, together with the eligibility standards, are described in the *Second Party Opinion* corresponding to each *green* transaction. In the case of the bonds[147], this information is available in the Green Bonds section of the corporate website.

Report on returns

The structure of this report on returns is grouped by benefits and indicators for each issue, so that investors can know the impact of the projects financed by each of them.

[147] Excludes the loans, as they are private contracts between a limited number of parties.

PUBLIC

- **April 2014 Bond (ISIN code XS1057055060)**

  - **Assets allocated**

Area	Technology	Name of project	Location	Start-up year	Installed Capacity (MW)	Installed capacity attributable to the bond (MW)[148]
Distribution	Networks	Renewable generation connection in Scotland	United Kingdom	2011-2016	N/A	N/A
Distribution	Networks	Strengthen international connection in Scotland	United Kingdom	2011-2016	N/A	N/A
Distribution	Networks	Castile-La Mancha photovoltaic connection plan	Spain	2011-2014	N/A	N/A
Distribution/Smart grids	Networks	STAR project	Spain	2011-2018	N/A	N/A
Renewables	Onshore wind	Pico Collalbas	Spain	2006	30	30
Renewables	Onshore wind	Carrascosa	Spain	2006	38	29
Renewables	Onshore wind	Sierra Menera	Spain	2006	40	40
Renewables	Onshore wind	Clares	Spain	2006	32	32
Renewables	Onshore wind	Escalón	Spain	2006	30	17
Renewables	Onshore wind	Tarayuela	Spain	2006	30	20
Renewables	Onshore wind	Morón de Almazán	Spain	2006	50	15
Renewables	Onshore wind	Los Campillos	Spain	2006	34	26
Renewables	Onshore wind	Dólar I	Spain	2006	49	22
Renewables	Onshore wind	Dólar III	Spain	2006	49	8
Renewables	Onshore wind	Doña Benita	Spain	2006	32	1
Renewables	Onshore wind	Ferreira II	Spain	2006	49	7
Renewables	Onshore wind	Hueneja	Spain	2006	49	8
Renewables	Onshore wind	Sil Expansion	Spain	2006	40	8
Renewables	Onshore wind	O Vieiro	Spain	2006	20	1
Renewables	Onshore wind	Luzón-Norte	Spain	2006	38	9
Renewables	Onshore wind	Bordecorex Norte	Spain	2006	44	7
Renewables	Onshore wind	Cerro Blanco	Spain	2006	42	3
Renewables	Onshore wind	Grijota	Spain	2006	5	4
Renewables	Onshore wind	Cabezuelo	Spain	2006	30	22
Renewables	Onshore wind	Mark Hill	United Kingdom	2011	56	12
Renewables	Onshore wind	Collados	Spain	2011	11	10
Renewables	Onshore wind	Fuentesalada	Spain	2011	46	44
Renewables	Onshore wind	Cruz de Carrutero	Spain	2011	40	30
Renewables	Onshore wind	Cabras	Spain	2012	22	22
Renewables	Onshore wind	Ventosa del Ducado	Spain	2012	44	0
Renewables	Onshore wind	Layna	Spain	2012	50	50

[148] Installed capacities attributable to each Green Bond take into account the proportion represented by the allocated amount of the total investment in each of them.

PUBLIC

- **Total amount invested by area**

Area	Investment allocated to the bond (€ millions)
Distribution	94
Distribution/Smart grids	80
Renewables	576
TOTAL	**750**

- **Sustainability indicators in the area of distribution**

Name of project	Increase in capacity within the horizon of the investment plan (MW)
Renewable generation connection in Scotland	2,167
Strengthen international connection in Scotland	6,640
Castile-La Mancha photovoltaic connection plan	604

- **Sustainability indicators in the area of smart grids**

STAR Project	Status as of 2011[149]	Status as of 2012
Smart meters (no.)	154,428	449,441
Smart meters installed (%)	1.44	4.16
Transformer centres adapted for remote management (no.)	583	2,692
Transformer centres adapted for remote management (%)	0.88	4.01

- **Sustainability indicators in the area of renewable energy[150]**

Installed capacity attributable to the bond (MW)	2018 output attributable to the bond (GWh)	CO_2 avoided due to the bond (Tm)[151]
478	1,000	220,493

[149] Takes data from 2011 and 2012 in order to allow for identification of profits from investments made.

[150] Emissions avoided take into account the percentage of production of each facility that corresponds to the percentage of the amount invested and installed capacity allocated to each *green* bond issue.

[151] Emissions avoided, reported throughout this Annex 2: *Report on green financing returns*, have been calculated as a product of 2018 production attributable to the bond and the emission factor for the country in which the assets are geographically located. Sources: REE, DEFRA, Eurostat 2016 (January 2019) Greenhouse gas emissions by source sector (source EEA): http://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do.

PUBLIC

➢ April 2016 Bond (ISIN code XS1398476793)

▪ Assets allocated

Area	Technology	Name of project	Location	Start-up year	Installed Capacity (MW)	Installed capacity attributable to the bond (MW)
Renewables	Onshore wind	Alvao	Portugal	2009	42	42
Renewables	Onshore wind	Puerto de Malaga	Spain	2008	12	12
Renewables	Onshore wind	Cortijo Linera	Spain	2008	28	28
Renewables	Onshore wind	Cabezas	Spain	2009	17	17
Renewables	Onshore wind	Centenar	Spain	2009	40	40
Renewables	Onshore wind	Majal Alto	Spain	2009	50	50
Renewables	Onshore wind	Retuerta	Spain	2009	38	38
Renewables	Onshore wind	Saucito	Spain	2009	30	30
Renewables	Onshore wind	Tallisca	Spain	2009	40	40
Renewables	Onshore wind	Valdefuentes	Spain	2009	28	28
Renewables	Onshore wind	Torrecilla	Spain	2009	16	16
Renewables	Onshore wind	Coterejon II	Spain	2009	6	6
Renewables	Onshore wind	Altamira	Spain	2009	49	49
Renewables	Onshore wind	Lirios	Spain	2010	48	48
Renewables	Onshore wind	Nogueira	Spain	2010	3	3
Renewables	Onshore wind	Alto de la Degollada	Spain	2010	50	50
Renewables	Onshore wind	Gomera	Spain	2010	12	12
Renewables	Onshore wind	Savalla	Spain	2010	18	18
Renewables	Onshore wind	Conesa II	Spain	2011	32	32
Renewables	Onshore wind	Espartal	Spain	2012	6	6
Renewables	Onshore wind	Torrecilla II	Spain	2012	22	22
Renewables	Onshore wind	Gomera II	Spain	2012	6	6
Renewables	Onshore wind	Las Cabras	Spain	2012	22	22
Renewables	Onshore wind	Ventosa del Ducado	Spain	2012	44	0
Renewables	Onshore wind	Arecleoch	United Kingdom	2011	120	120

▪ Total amount invested by area

Area	Investment allocated to the bond (€ millions)
Renewables	**1,000**

▪ Sustainability indicators

Installed capacity attributable to the bond (MW)	2018 output attributable to the bond (GWh)	CO_2 avoided due to the bond (Tm)
736	1,384	324,862

PUBLIC

➢ September 2016 Bond (ISIN code XS1490726590)

▪ Assets allocated

Area	Technology	Name of project	Location	Start-up year	Installed Capacity (MW)	Installed capacity attributable to the bond (MW)
Renewables	Onshore wind	Whitelee Ext	United Kingdom	2012	217	139
Renewables	Onshore wind	Middleton	United Kingdom	2013	12	12
Renewables	Onshore wind	Lynemouth	United Kingdom	2012	26	26
Renewables	Onshore wind	Beinn An Tuirc 2	United Kingdom	2013	44	44
Renewables	Onshore wind	Carland Cross Ext	United Kingdom	2013	20	20
Renewables	Onshore wind	Coal Clough Repowering	United Kingdom	2014	16	16
Renewables	Onshore wind	Blacklaw Ext	United Kingdom	2016	38	38
Renewables	Onshore wind	Blacklaw Ext Ph2	United Kingdom	2016	25	25
Renewables	Onshore wind	Dersalloch	United Kingdom	2016	69	69
Renewables	Onshore wind	Ewe Hill	United Kingdom	2016	14	14

▪ Total amount invested by area

Area	Investment allocated to the bond (€ millions)
Renewables	**700**

▪ Sustainability indicators

Installed capacity attributable to the bond (MW)	2018 output attributable to the bond (GWh)	CO_2 avoided due to the bond (Tm)
403	805	227,687

PUBLIC

➢ December 2016 Bond (ISIN code XS1527758145)

▪ Assets allocated

Area	Technology	Name of project	Location	Start-up year	Installed Capacity (MW)	Installed capacity attributable to the bond (MW)
Renewables	Onshore wind	Doña Benita	Spain	2008	32	31
Renewables	Onshore wind	Sabina	Spain	2008	48	48
Renewables	Onshore wind	Vieiro	Spain	2008	20	20
Renewables	Onshore wind	Argañoso	Spain	2009	22	21
Renewables	Onshore wind	Bullana	Spain	2009	38	36
Renewables	Onshore wind	Carril	Spain	2008	28	27
Renewables	Onshore wind	Cerro Blanco	Spain	2009	42	37
Renewables	Onshore wind	Cotera	Spain	2009	18	17
Renewables	Onshore wind	Paramo Vega	Spain	2009	18	17
Renewables	Onshore wind	Radona I	Spain	2009	24	23
Renewables	Onshore wind	Radona II	Spain	2009	32	30
Renewables	Onshore wind	Sombrio	Spain	2008	28	27
Renewables	Onshore wind	Valdecarrion	Spain	2010	34	32
Renewables	Onshore wind	Valdeperondo	Spain	2010	46	44
Renewables	Onshore wind	Viñas	Spain	2010	38	36
Renewables	Onshore wind	Bolaños	Spain	2008	24	24
Renewables	Onshore wind	Dos Pueblos	Spain	2008	20	20
Renewables	Onshore wind	Nacimiento	Spain	2008	24	24
Renewables	Onshore wind	Tacica de Plata	Spain	2008	26	26

▪ Total amount invested by area

Area	Investment allocated to the bond (€ millions)
Renewables	**750**

▪ Sustainability indicators

Installed capacity attributable to the bond (MW)	2018 output attributable to the bond (GWh)	CO_2 avoided due to the bond (Tm)
540	1,128	247,033

PUBLIC

➢ February 2017 Bond (ISIN code XS1564443759)

▪ Assets allocated

Area	Technology	Name of project	Location	Start-up year	Installed Capacity (MW)	Installed capacity attributable to the bond (MW)
Renewables	Onshore wind	Bureba	Spain	2010	12	11
Renewables	Onshore wind	Cueza	Spain	2010	8	8
Renewables	Onshore wind	Candal	Spain	2012	44	24
Renewables	Onshore wind	Cerro Higuera	Spain	2009	38	30
Renewables	Solar	Puertollano	Spain	2009	50	36
Renewables[152]	Onshore wind	Venta III	Mexico	2012	103	49
Renewables[129]	Onshore wind	Dos Arbolitos	Mexico	2015	70	42

▪ Total amount invested by area

Area	Investment allocated to the bond (€ millions)
Renewables	**250**

▪ Sustainability indicators

Installed capacity attributable to the bond (MW)	2018 output attributable to the bond (GWh)	CO_2 avoided due to the bond (Tm)
165	237	63,533

[152] As a result of the sale of the interest of Iberdrola Renovables Castilla-La Mancha, S.A. (Sociedad Unipersonal) in the capital of Iberdrola Energía Solar de Puertollano, S.A., this asset replaces the prior one effective 1 December 2018. The time that each asset has been assigned to the transaction during the year has been taken into account to calculate production and CO_2 avoided attributable to the bond.

PUBLIC

- **March 2017 Bond (ISIN code XS1575444622)**

  - **Assets allocated**

Area	Technology	Name of project	Location	Start-up year	Installed Capacity (MW)	Installed capacity attributable to the bond (MW)
Renewables	Onshore wind	Valdelanave	Spain	2012	10	6
Renewables	Onshore wind	Ventosa del Ducado	Spain	2012	44	42
Renewables	Onshore wind	Peñaflor III	Spain	2012	49	49
Renewables	Onshore wind	Peñaflor IV	Spain	2012	49	49
Renewables	Offshore wind	Wikinger	Germany	2017	350	195

  - **Total amount invested by area**

Area	Investment allocated to the bond (€ millions)
Renewables	**1,000**

  - **Sustainability indicators**

Installed capacity attributable to the bond (MW)	2018 output attributable to the bond (GWh)	CO_2 avoided due to the bond (Tm)
340	794	313,010

PUBLIC

➢ September 2017 Bond (ISIN code XS1682538183)

▪ Assets allocated

Area	Technology	Name of project	Location	Start-up year	Installed Capacity (MW)	Installed capacity attributable to the bond (MW)
Renewables	Onshore wind	Whitelee Ext	United Kingdom	2012	217	78
Renewables	Onshore wind	Clachan Flats	United Kingdom	2009	15	15
Renewables	Onshore wind	Mark Hill	United Kingdom	2011	56	44
Renewables	Onshore wind	Ewe Hill 16	United Kingdom	2017	22	8
Renewables	Onshore wind	Hare Hill Ext	United Kingdom	2017	33	30
Renewables	Offshore wind	Wikinger	Germany	2017	350	104

▪ Total amount invested by area

Area	Investment allocated to the bond (€ millions)
Renewables	**750**

▪ Sustainability indicators

Installed capacity attributable to the bond (MW)	2018 output attributable to the bond (GWh)	CO_2 avoided due to the bond (Tm)
279	587	223,618

PUBLIC

- **November 2017 Bond (ISIN code XS1721244371) (hybrid)**

  - **Assets allocated**

Area	Technology	Name of project	Location	Start-up year	Installed Capacity (MW)	Installed capacity attributable to the bond (MW)
Renewables	Onshore wind	Whitelee	United Kingdom	2008	322	251
Renewables	Onshore wind	Harestanes	United Kingdom	2014	136	136
Renewables	Onshore wind	Kilgallioch	United Kingdom	2017	239	239
Renewables	Onshore wind	Glen App	United Kingdom	2017	22	22

  - **Total amount invested by area**

Area	Investment allocated to the bond (€ millions)
Renewables	**1,000**

  - **Sustainability indicators**

Installed capacity attributable to the bond (MW)	2018 output attributable to the bond (GWh)	CO_2 avoided due to the bond (Tm)
648	1,309	370,542

PUBLIC

- **March 2018 Bond (ISIN code XS1797138960) (hybrid)**

  - **Assets allocated**

Area	Technology	Name of project	Location	Start-up year	Installed Capacity (MW)	Installed capacity attributable to the bond (MW)
Renewables	Offshore wind	EAST ANGLIA	United Kingdom	2020	714	225

  - **Total amount invested by area**

Area	Investment allocated to the bond (€ millions)
Renewables	**700,000**

  - **Sustainability indicators**

Installed capacity attributable to the bond (MW)	2018 output attributable to the bond (GWh)	CO_2 avoided due to the bond (Tm)
225	0	0

PUBLIC

➢ June 2018 Bond (ISIN code XS1847692636)

▪ Assets allocated

Area	Technology	Name of project	Location	Start-up year	Installed Capacity (MW)	Installed capacity attributable to the bond (MW)
Renewables	Offshore wind	EAST ANGLIA	United Kingdom	2020	714	241

▪ Total amount invested by area

Area	Investment allocated to the bond (€ millions)
Renewables	**750,000**

▪ Sustainability indicators

Installed capacity attributable to the bond (MW)	2018 output attributable to the bond (GWh)	CO_2 avoided due to the bond (Tm)
241	0	0

PUBLIC

➢ December 2018 Bond (ISIN code XS1924319301)

▪ Assets allocated

Area	Technology	Name of project	Location	Start-up year	Installed Capacity (MW)	Installed capacity attributable to the bond (MW)
Renewables	Onshore wind	Dos Arbolitos	Mexico	2015	70	25

▪ Total amount invested by area

Area	Investment allocated to the bond (€M)
Renewables	**44,000**

▪ Sustainability indicators

Installed capacity attributable to the bond (MW)	2018 output attributable to the bond (GWh)	CO_2 avoided due to the bond (Tm)
25	81	46,874

PUBLIC

- **April 2018 loan (Iberdrola Mexico)**

  - **Assets allocated**

Area	Technology	Name of project	Location	Start-up year	Installed Capacity (MW)	Installed capacity attributable to the loan (MW)
Renewables	Onshore wind	VENTOSA	Mexico	2009	101.9	101.9
Renewables	Onshore wind	BII NEE STIPA	Mexico	2010	26.35	26.35
Renewables	Onshore wind	VENTA III	Mexico	2012	102.85	54

  - **Total amount invested by area**

Area	Investment allocated to the bond (€M)
Renewables	**325,000**[153]

  - **Sustainability indicators**

Installed capacity attributable to the bond (MW)	2018 output attributable to the loan (GWh)	CO_2 avoided due to the loan (Tm)
182	483	281,236

[153] Exchange rate used €1 = $1.23 (April 2018).

PUBLIC

External Independent Assurance Report on Green Financing

PUBLIC

This version of our report is a free translation of the original, which was prepared in Spanish. All possible care has been taken to ensure that the translation is an accurate representation of the original. However, in all matters of interpretation of information, views or opinions, the original language version of our report takes precedence over this translation.

INDEPENDENT ASSURANCE REPORT

To the Management of Iberdrola S.A.:

We have carried out our work to provide a limited assurance on the information related to (re)financed project of the Green Bonds in 2014, 2016,2017 and 2018 (ISIN XS1057055060, ISIN XS1398476793, ISIN XS1490726590, ISIN XS1527758145, ISIN XS1564443759, ISIN XS1575444622, ISIN XS1682538183, ISIN XS1721244371, ISIN XS1797138960, ISIN XS1847692636 and ISIN XS1924319301) issued by Iberdrola International B.V. and Iberdrola Finanzas, S.A.U. (hereinafter, "the Bonds"), as well as the subscription of a green bank loan by Iberdrola Mexico contained in the "Annex 3: Report on green financing returns" of the 2018 Statement of Non Financial Information – Sustainability Report of Iberdrola, S.A. and its subsidiaries (hereinafter, "Iberdrola") for the year ended 31 December 2018, and prepared in accordance with the "Iberdrola Framework for Green Financing" document (hereinafter, "the Framework"), available in the web page https://www.iberdrola.com/shareholders-investors/investors/fixed-income/information-related-to-green-bonds.

The aspects of the information subject of our review are the following:

- The application of the eligibility criteria in the projects financed by the Bonds described in the Framework, and the final list of assets or projects re(financed).

- The allocation of the funds obtained through the Bonds to the assets or projects financed by them and that the capital invested in the refinanced assets or projects is attributable to the Bonds.

- The verification that the sustainability indicators are prepared in accordance with their calculation methodology, defined in the mentioned Annex 3, including the description of material exceptions.

- Verification that the information related to the "controversies" referred to in Annex 3, is included in the "Second Party Opinion" of those public bond issued, as indicated in "the Framework",at the time of the issuance of the Bonds published on the website https://www.iberdrola.com/shareholders-investors/investors/fixed-income/information-related-to-green-bonds.

Responsibility of Management

Management of Iberdrola is responsible for the preparation, content and presentation of the "Annex 3: Report on green financing returns", in accordance with the requirements included in the Framework in which the eligibility criteria of the projects, the allocation of funds, the sustainability indicators and the information related to the "controversies" are described.

Management's responsibility includes establishing, implementing and maintaining the internal control required to ensure that the information included in the "Annex 3: Report on green financing returns" is free from any material misstatement due to fraud or error.

R. M. Madrid, hoja 87.250-1, folio 75, tomo 9 207, libro 8.054, sección 3ª
Inscrita en el R.O.A.C. con el número S0242 - CIF B-79 031290

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Management of Iberdrola is also responsible for defining, implementing, adapting and maintaining the management systems from which the information required to prepare the mentioned Annex 3, is obtained.

Our responsibility

Our responsibility is to issue a limited assurance report based on the procedures that we have carried out and the evidence obtained. Our limited assurance engagement was done in accordance with the International Standard on Assurance Engagements 3000 (Reviewed) "Assurance Engagements other than Audits or Reviews of Historical Financial Information", issued by the International Auditing and Assurance Standards Board (IAASB) of the International Federation of Accountants (IFAC).

The scope of a limited assurance engagement is substantially less extensive than the scope of a reasonable assurance engagement and thus, less security is provided.

The procedures that we have carried out are based on our professional judgment and have included consultations, observation of processes, document inspection, analytical procedures and random sampling test. The general procedures employed are described below:

- Meetings with Iberdrola's personnel from various departments who have been involved in the preparation of the "Annex 3: Report on green financing returns" of the 2018 Statement of Non Financial Information – Sustainability Report in order to know the characteristics of the projects (re)financed by the Bonds, the internal management procedures and systems in place, the data collection process and the environment control.

- Verification of the application of the eligibility criteria, described in the Framework, for the selection of projects (re)financed by the Bonds.

- Analysis of the procedures used for gathering and validating the information and data presented in the sustainability indicators included in the "Annex 3: Report on green financing returns" of the 2018 Statement of Non Financial Information – Sustainability Report.

- Verification of the traceability of the funds obtained through the Bonds to finance projects and verification that the investments undertaken by Iberdrola in the projects refinanced have been made in accordance with the Framework criteria.

- Verification that the information related to the "controversies" referred to in Annex 3 is included in the "Second Party Opinion" for the public Green Bonds issued.

- Verification through random sampling tests revisions and substantive tests of the information related to sustainability indicators. We have also verified whether they have been appropriately compiled from the data provided by Iberdrola´s sources of information.

- Obtainment of a management representation letter from the Directors.

Our Independence and Quality Control

We have fulfilled our work in accordance with the independence requirements and other ethical requirements of the Code of Ethics for Professional Accountants of the International Ethics Standard Board for Accountants (IESBA), which are based on basic principles of integrity, objectivity, professional competence and diligence, confidentiality and professional conduct.

Our firm applies the International Standard on Quality Control 1 (ISQC 1) and thus employs an exhaustive quality control system which includes documented policies and procedures on the compliance of ethical requirements, professional standards, statutory laws and applicable regulations.

PUBLIC

Limited and moderate assurance conclusion

As a result of the procedures carried out and the evidence obtained, no matters have come to our attention which may lead us to believe that:

- The list of assets or projects financed by the Bonds included in Annex 3 does not comply, in all its significant aspects, with the eligibility criteria described in the Framework.

- The funds obtained through the Bonds have not been assigned to the assets or projects financed by them and that the capital invested in the refinanced assets or projects is not attributable to the Bonds.

- The sustainability indicators contain significant errors or have not been prepared, in all their significant aspects, in accordance with what is indicated in the Framework and as indicated in Annex 3 in relation to its calculation.

- The "controversies" referred to in the Annex 3, have not been included in the "Second Party Opinion" at the time of issuance of public Green Bonds.

Use and distribution

Our report is only issued to the Management of Iberdrola, in accordance with the terms and conditions of our engagement letter. We do not assume any liability to third parties other than Iberdrola's Management.

PricewaterhouseCoopers Auditores, S.L.

Original in Spanish signed by
Pablo Bascones

22 February 2019

PUBLIC

Annex 4: External Independent Assurance Report on the Sustainability Report

PUBLIC

This version of our report is a free translation of the original, which was prepared in Spanish. All possible care has been taken to ensure that the translation is an accurate representation of the original. However, in all matters of interpretation of information, views or opinions, the original language version of our report takes precedence over this translation.

INDEPENDENT VERIFICATION REPORT

To the shareholders Iberdrola, S.A.:

Pursuant to Article 49 of the Code of Commerce, we have verified, under a limited assurance scope, the accompanying Statement of Non-Financial Information –Sustainability Report attached ("SNFI") for the year ended 31 December 2018 of Iberdrola, S.A. and subsidiaries (Iberdrola or the Group or the Company) which forms part of Iberdrola's 2018 Consolidated Directors' Report.

The content of the SNFI includes additional information to that required by current commercial legislation on non-financial reporting which has not been covered by our verification work. In this respect, our work has been restricted solely to verifying the information identified in the tables included in the section "III About this report: Statement of Non-Financial Information and GRI Content Index" " in the accompanying SNFI.

Likewise, we have carried out a moderate assurance engagement of the application of the principles of inclusivity, materiality and responsiveness, related to the information included in the section "Stakeholder engagement" of the SNFI attached, in accordance with the provisions of the 2008 Accountability Principles Standard AA1000 (AA1000APS) issued by AccountAbility.

Responsibility of the Board of Directors

The preparation of the SNFI included in Iberdrola's Consolidated Directors' Report, and the content thereof are the responsibility of the Board of Directors of Iberdrola, S.A.. The SNFI has been drawn up in accordance with the provisions of current commercial legislation and with the Sustainability Reporting Standards of the Global Reporting Initiative ("GRI Standards") in accordance with the Comprehensive Option, and Electric Utilities Sector Disclosures of the GRI Guidelines version G4 (hereinafter, Electric Utilities Sector Disclosures), in line with the details provided for each matter in the table included in the section " III About this report: Statement of Non-Financial Information and GRI Content Index" included in SNFI's Annex.

This responsibility also includes the design, implementation and maintenance of the internal control that is considered necessary to ensure SNFI is free from material misstatement, due to fraud or error.

The directors of Iberdrola, S.A. are also responsible for ensuring the definition, implementation, adaptation and maintenance of the management systems from which the information required to prepare the SNFI is obtained, and also for the application of AA10000APS (2008) principles.

Our independence and quality control

We have complied with the independence requirements and other ethical requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants ("IESBA") which is based on the fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

R. M. Madrid, hoja 87.250-1, folio 75, tomo 9 267, libro 8 054, sección 3ª
Inscrita en el R.O.A.C. con el número S0242 - CIF: B-79 031290

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Our firm applies the International Standard on Quality Control 1 (ISQC 1) and therefore has in place a global quality control system which includes documented policies and procedures related to compliance with ethical requirements, professional standards and applicable legal and regulatory provisions.

The engagement team has been formed by professionals specialising in non-financial information reviews and specifically in information on economic, social and environmental performance.

Our responsibility

Our responsibility is to express our conclusions in an independent limited assurance verification report based on the work carried out in relation solely to fiscal year 2018. The data relating to previous years were not subject to the verification envisaged in current commercial legislation. Our work has been carried out in accordance with the requirements laid down in the current International Standard on Assurance Engagements 3000 Revised, Assurance Engagements Other than Audits or Reviews of Historical Financial Information (ISAE 3000 Revised) issued by the International Auditing and Assurance Standards Board (IAASB) of the International Federation of Accountants (IFAC) and with the Guidelines for verification engagements on non-financial statements issued by the Spanish Institute of Auditors ("Instituto de Censores Jurados de Cuentas de España"). We have also carried out our moderate assurance engagement (type 2) in accordance with the 2008 AA1000 Assurance Standard (AA1000AS) issued by AccountAbility.

In a limited assurance engagement, the procedures performed vary in terms of their nature and timing of execution, and are more restricted than those carried out in a reasonable assurance engagement. Accordingly, the assurance obtained is substantially lower.

Our work has consisted of posing questions to Management and several Iberdrola's units that were involved in the preparation of the SNFI, in the review of the processes for compiling and validating the information presented in the SNFI and in the application of certain analytical procedures and review sampling tests, as described below:

- Meetings with Iberdrola personnel to ascertain the business model, policies and management approaches applied and the main risks related to these matters, and to obtain the information required for the external review.

- Analysis of the scope, relevance and integrity of the content included in the SNFI based on the materiality analysis carried out by Iberdrola and described in the "III About this report: Defining Report Content. Materiality Analysis" section, and considering the content required under current commercial legislation.

- Analysis of the procedures used to compile and validate the information presented in SNFI for 2018.

- Review of information concerning risks, policies and management approaches applied in relation to material issues presented in the SNFI for 2018.

- Analysis of the documentation and actions related to the application of the inclusivity, materiality and responsiveness principles of the AA1000APS (2008).

- Verification, through sample testing, of the information relating to the content of the SNFI for 2018 and its adequate compilation using data supplied by Iberdrola's information sources.

- Obtainment of a management representation letter from the Company.

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Conclusions

Based on the procedures performed and the evidence we have obtained, no matters have come to our attention which may lead us to believe that:

- Iberdrola's SNFI for the year ended 31 December 2018 has not been prepared, in all of their significant matters, in accordance with the provisions of current commercial legislation and with the GRI Standards in accordance with the Comprehensive Option, and Electric Utilities Sector Disclosures, in line with the details provided for each matter in the table included in the section "III About this report: Statement of Non-Financial Information and GRI Content Index" in the accompanying SNFI.

- The information included in the section "Stakeholder engagement" of the Iberdrola's SNFI, regarding the application of the principles of inclusivity, materiality and responsiveness, has not been prepared, in all of their significant matters, in accordance with the provisions of the AA1000APS (2008).

Recommendations

Regarding the observations and recommendations for improvements that have come to our attention during our assurance engagement, set out below is a summary of the main recommendations regarding improvements to the application of the AA1000APS (2008) principles of inclusivity, materiality and responsiveness, which do not alter our limited or moderate assurance conclusions given in this report.

Inclusivity

Iberdrola, as a company committed to the promotion and improvement of the relationship with its stakeholders, approved in 2016 its Stakeholder Engagement Model as a procedure for Iberdrola Group to establish relations with the stakeholders in the same way, understanding the particularities and singularities of each country and business.

In 2018, following the global implementation of the Model in the 8 stakeholders and in the 3 businesses of the five reference countries, progress was made in identifying Substakeholders within the 8 stakeholders and the existing engagement channels with these subgroups. Likewise, the Substakeholders have been prioritised according to their impact/influence on the Company, their alignment with the Company and their social influence.

In this respect, it is recommended to advance in the alignment between the priority of the Substakeholders and the engagement channels used with them, exploring differential and innovative engagement channels with the most priority Substakeholders. In addition, as a good practice, it is recommended to include in the Statement of Non-financial Information - Sustainability Report more information on how the participation of Stakeholders in the Company's decisions is promoted and favoured throughout the year.

Materiality

Compared to the previous year, this time the relevant issues have been prioritised taking into account their risk and opportunity and the main trends have been detected, both for Stakeholders and for businesses.

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In addition, in 2018 a first alignment exercise was carried out between the relevant issues identified at subgroup, country and business level through the Iberdrola Model and global materiality analysis, to ensure the capture of the same relevant issues and identify possible differences. In the future, it is recommended to deepen this alignment exercise, especially in relation to the priority of the relevant issues, ensuring the capture of the real expectations of stakeholders and contrasting with them the priority of each of them.

Responsiveness

Iberdrola, in its Statement of Non-financial Information - Sustainability Report 2018, reflects the way in which the Model is able, through its ten phases, to respond in a systematic and unified manner for the entire organization to the expectations of its Stakeholders in time and form according to its priority. In this sense, it is recommended that the responses to stakeholder expectations are monitored through objective and measurable indicators that allow their adaptation to the needs of the Stakeholders to be evaluated and that these are increasingly integrated into the definition of these responses.

Use and distribution

This report has been drawn up in response to the requirement laid down in current Spanish commercial legislation and therefore might not be suitable for other purposes or jurisdictions.

PricewaterhouseCoopers Auditores, S.L.

Original in Spanish signed by
Pablo Bascones

22 February, 2019

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000-42

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Contact point for questions regarding the report

102-53

General questions regarding this report may be addressed to Iberdrola's Social Responsibility Division at C/ Tomás Redondo, 1 - 28033 Madrid – Spain, or via responsabilidad_social@iberdrola.es.

Specific questions relating to the environment may be addressed to Iberdrola's Innovation, Sustainability and Quality Division at C/ Tomás Redondo, 1 - 28033 Madrid – Spain, or via medioambiente@iberdrola.es.

The addresses and telephone numbers of the various Iberdrola centres worldwide, available channels of contact, customer service and the query mailboxes can be found in the Contact section of the website.

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VINEYARD WIND

ATTACHMENT TO SECTION 5

Attachment 5.6-22: Iberdrola Annual Report 2019

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Annual financial report

Iberdrola, S.A., and subsidiary companies

Year 2019

IBERDROLA

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AUDITOR’S REPORT

PUBLIC

KPMG Auditores, S.L.
Torre Iberdrola
Plaza Euskadi, 5
Planta 17
48009 Bilbao

Independent Auditor's Report on the Consolidated Annual Accounts

(Translation from the original in Spanish. In the event of discrepancy, the Spanish-language version prevails.)

To the Shareholders of *Iberdrola, S.A.*

REPORT ON THE CONSOLIDATED ANNUAL ACCOUNTS

Opinion

We have audited the consolidated annual accounts of Iberdrola, S.A. (the "Parent") and subsidiaries (together the "Group"), which comprise the consolidated statement of financial position at 31 December 2019, and the consolidated income statement, consolidated statement of comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flows for the year then ended, and consolidated notes.

In our opinion, the accompanying consolidated annual accounts give a true and fair view, in all material respects, of the consolidated equity and consolidated financial position of the Group at 31 December 2019 and of its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards as adopted by the European Union (IFRS-EU) and other provisions of the financial reporting framework applicable in Spain.

Basis for Opinion

We conducted our audit in accordance with prevailing legislation regulating the audit of accounts in Spain. Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Consolidated Annual Accounts* section of our report.

We are independent of the Group in accordance with the ethical requirements, including those regarding independence, that are relevant to our audit of the consolidated annual accounts in Spain pursuant to the legislation regulating the audit of accounts. We have not provided any non-audit services, nor have any situations or circumstances arisen which, under the aforementioned regulations, have affected the required independence such that this has been compromised.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key Audit Matters

Key audit matters are those matters that, in our professional judgement, were of most significance in the audit of the consolidated annual accounts of the current period. These matters were addressed in the context of our audit of the consolidated annual accounts as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

KPMG Auditores S.L., sociedad española de responsabilidad limitada y firma miembro de la red KPMG de firmas independientes afiliadas a KPMG International Cooperative ("KPMG International"), sociedad suiza.
Paseo de la Castellana, 259C – Torre de Cristal – 28046 Madrid

Inscrita en el Registro Oficial de Auditores de Cuentas con el nº.S0702, y en el Registro de Sociedades del Instituto de Censores Jurados de Cuentas con el nº.10.
Reg. Mer Madrid, T. 11.961, F. 90, Sec. 8, H. M -188.007, Inscrip. 9
N.I.F. B-78510153

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Recoverability of non-current assets See note 13 to the consolidated annual accounts	
Key Audit Matter	*How the Matter was Addressed in Our Audit*
The principal activities of the different businesses included in the consolidated annual accounts of the Group are related to the generation, transmission, distribution and supply of electricity, and therefore the balances recognised under other intangible assets and property, plant and equipment are highly significant. Furthermore, as a result of the acquisitions made in recent years, the consolidated annual accounts include goodwill for an amount of Euros 8,153 million. IFRS-EU determine the need to carry out an analysis of the recoverable amounts of assets in those cases in which indications of impairment were identified. Goodwill, intangible assets with indefinite useful lives and in-process intangible assets are not amortised, but are instead tested for impairment at least on an annual basis. The calculation of the recoverable amount of non-current assets indicated in the preceding paragraphs is determined through the use of methodologies based on discounted cash flows, the estimation of which requires the use of a high degree of judgement.	Our audit procedures included the following: ▪ Assessing the design and implementation of the key controls related to the process of determining recoverable amount. ▪ Assessing the reasonableness of the methodology used to calculate value in use and the main assumptions considered, with the involvement of our specialists. ▪ Analysing the consistency of the estimated growth in future cash flows with the business plans approved by the governing bodies. We also contrasted the cash flow forecasts estimated in prior years with the actual cash flows obtained. ▪ Assessing the sensitivity of the recoverable amount to changes in certain assumptions that are considered reasonable. ▪ Assessing whether the disclosures in the consolidated annual accounts comply with the requirements of the applicable financial reporting framework.

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Pension commitments See note 25 to the consolidated annual accounts	
Key Audit Matter	*How the Matter was Addressed in Our Audit*
The Group has important commitments with personnel in relation to retirement and other long-term liabilities. These commitments are mainly in Spain, the United States, the United Kingdom and Brazil. The present value of commitments undertaken is Euros 11,198 million, while the fair value of the different plan assets amounts to Euros 8,750 million, of which Euros 1,844 million is classified as level 3 in the fair value hierarchy. Non-material variations in the main assumptions that determine the valuation of the commitments undertaken or the fair value of the associated assets could have a significant impact on the amounts recognised in the consolidated annual accounts.	Our audit procedures included the following: ▪ Assessing the design and implementation of controls related to the valuation process. ▪ Reading and understanding of collective agreements and other commitments assumed with personnel. ▪ Evaluation of the integrity and accuracy of the databases used for the beneficiaries of the different commitments. ▪ Analysis of the reasonableness of the main actuarial assumptions and calculation methods applied by the Group in the different jurisdictions in which it operates through the involvement of our specialists. ▪ Performance of substantive procedures on a sample of the assets subject to the different plans in order to verify the reasonableness of their valuation. Our procedures included obtaining external confirmations. ▪ Analysis of compliance with the disclosure requirements established in IFRS-EU.

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Provisions for litigation and claims See note 26 to the consolidated annual accounts	
Key Audit Matter	*How the Matter was Addressed in Our Audit*
As a result of the operations carried out by the entities that comprise the Group, the consolidated statement of financial position includes provisions for litigation procedures underway amounting to Euros 1,196 million that are shown in the "provisions for litigation, indemnities and other items" and "other provisions" columns of note 26 to the consolidated annual accounts. Current tax liabilities under non-current liabilities amount to Euros 261 million. The calculation of amounts to be provided for is subject to significant uncertainties that affect both the determination of the probability of an outflow of resources and the quantification thereof..	Our audit procedures included the following: ▪ Assessing the design and implementation of the controls related to the process of recognising and evaluating litigations and claims. ▪ Obtaining details of litigation prepared by the Group's legal services department and analysing the reasonableness of the amounts recognised in the consolidated annual accounts. ▪ Sending confirmations to the lawyers with whom the Group operates. ▪ Reading of the minutes of board of directors' meetings. ▪ Selection of a sample of the main litigation procedures and analysis of the reasonableness of provisions, if any, with the involvement of our specialists. ▪ Analysis of compliance with the disclosure requirements established in IFRS-EU.

Revenue recognition See note 5 to the consolidated annual accounts	
Key Audit Matter	*How the Matter was Addressed in Our Audit*
The Group's businesses that carry out electricity supply activities must make estimates of unbilled supplies to end customers in the period between the last meter reading and the end of the fiscal year. Unbilled electricity supplied is estimated based on internal and external information that is compared with the measurements contained in the management systems used by the businesses. Revenue is calculated by multiplying the volume of estimated unbilled use by the tariff agreed for each customer, a process that is subject to a high degree of uncertainty. Estimated electricity supplied and not invoiced amounts to Euros 2,137 million.	Our audit procedures included the following: ▪ Analysis of the design, implementation and operating effectiveness of the key controls related to the estimation of unbilled revenue. ▪ Evaluation of the reasonableness of the calculation model used by comparing the estimates made at the close of the previous period and actual invoicing data (retrospective analysis). ▪ Verification of the reasonableness of the volume of unbilled electricity through an analysis of historical information and other available internal and external data. ▪ Verification, for a sample selected, of the tariffs applied by comparing them with the data contained in the customer contract databases.

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Other information: Consolidated Directors' Report

Other information solely comprises the 2019 consolidated directors' report, the preparation of which is the responsibility of the Parent's Directors and which does not form an integral part of the consolidated annual accounts.

Our audit opinion on the consolidated annual accounts does not encompass the consolidated directors' report. Our responsibility regarding the content of the consolidated directors' report is defined in the legislation regulating the audit of accounts, which establishes two different levels:

a) A specific level applicable to the consolidated non-financial information statement and to certain information included in the Annual Corporate Governance Report (ACGR), as defined in article 35.2. b) of Audit Law 22/2015, which consists solely of verifying that this information has been provided in the directors' report, or where applicable, that the consolidated directors' report makes reference to the separate report on non-financial information, as provided for in legislation, and if not, to report on this matter.

b) A general level applicable to the rest of the information included in the consolidated directors' report, which consists of assessing and reporting on the consistency of this information with the consolidated annual accounts, based on knowledge of the Group obtained during the audit of the aforementioned accounts and without including any information other than that obtained as evidence during the audit. Also, assessing and reporting on whether the content and presentation of this part of the consolidated directors' report are in accordance with applicable legislation. If, based on the work we have performed, we conclude that there are material misstatements, we are required to report them.

Based on the work carried out, as described above, we have verified that the non-financial information mentioned in section a) above is presented in the separate report, "Non-financial information statement – Consolidated sustainability report of Iberdrola, S.A. and its subsidiaries", to which reference is made in the consolidated directors' report, that the information contained in the ACGR, mentioned in said section, is included in the consolidated directors' report, and that the rest of the information contained in the consolidated directors' report is consistent with that disclosed in the consolidated annual accounts for 2019 and the content and presentation of the report are in accordance with applicable legislation.

Directors' and Audit Committee's Responsibility for the Consolidated Annual Accounts

The Parent's Directors are responsible for the preparation of the accompanying consolidated annual accounts in such a way that they give a true and fair view of the consolidated equity, consolidated financial position and consolidated financial performance of the Group in accordance with IFRS-EU and other provisions of the financial reporting framework applicable to the Group in Spain, and for such internal control as they determine is necessary to enable the preparation of consolidated annual accounts that are free from material misstatement, whether due to fraud or error.

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In preparing the consolidated annual accounts, the Parent's Directors are responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Directors either intend to liquidate the Group or to cease operations, or have no realistic alternative but to do so.

The Parent's Audit and Risk Supervision Committee is responsible for overseeing the preparation and presentation of the consolidated annual accounts.

Auditor's Responsibilities for the Audit of the Consolidated Annual Accounts

Our objectives are to obtain reasonable assurance about whether the consolidated annual accounts as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with prevailing legislation regulating the audit of accounts in Spain will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence economic decisions of users taken on the basis of these consolidated annual accounts.

As part of an audit in accordance with prevailing legislation regulating the audit of accounts in Spain, we exercise professional judgement and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated annual accounts, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Parent's Directors.

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- Conclude on the appropriateness of the Parent's Directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated annual accounts or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated annual accounts, including the disclosures, and whether the consolidated annual accounts represent the underlying transactions and events in a manner that achieves a true and fair view.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated annual accounts. We are responsible for the direction, supervision and performance of the Group audit. We remain solely responsible for our audit opinion.

We communicate with the Audit and Risk Supervision Committee of Iberdrola, S.A. regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide the Parent's Audit and Risk Supervision Committee with a statement that we have complied with the applicable ethical requirements, including those regarding independence, and to communicate with them all matters that may reasonably be thought to bear on our independence and, where applicable, related safeguards.

From the matters communicated to the Audit and Risk Supervision Committee of the Parent, we determine those that were of most significance in the audit of the consolidated annual accounts of the current period and which are therefore the key audit matters.

We describe these matters in our auditor’s report unless law or regulation precludes public disclosure about the matter.

REPORT ON OTHER LEGAL AND REGULATORY REQUIREMENTS

Additional Report to the Audit Committee of the Parent

The opinion expressed in this report is consistent with our additional report to the Parent's Audit and Risk Supervision Committee dated 28 February 2020.

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Contract Period

We were appointed as auditor of the Group by the shareholders at the ordinary general meeting on 31 March 2017 for a period of three years, from the year ended 31 December 2017.

KPMG Auditores, S.L.
On the Spanish Official Register of Auditors ("ROAC") with No. S0702

(Signed on original in Spanish)

Enrique Asla García
On the Spanish Official Register of Auditors ("ROAC") with No. 1,797

28 February 2020

PUBLIC

CONSOLIDATED ANNUAL ACCOUNTS AND CONSOLIDATED DIRECTORS' REPORT

FOR THE YEAR ENDED 31 DECEMBER 2019

IBERDROLA
PUBLIC

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Translation of Annual accounts originally issued in Spanish and prepared in accordance with IFRS as adopted by the European Union (see Note 55). In the event of a discrepancy, the Spanish-language version prevails.

IBERDROLA, S.A. AND SUBSIDIARIES
CONSOLIDATED STATEMENT OF FINANCIAL POSITION AT 31 DECEMBER 2019

Thousands of Euros			
ASSETS	**Note**	**31.12.2019**	**31.12.2018 (*)**
Intangible assets	**8**	**20,367,861**	**21,000,248**
Goodwill		8,152,918	7,837,843
Other intangible assets		12,214,943	13,162,405
Investment property	**9**	**342,286**	**428,592**
Property, plant and equipment	**10**	**71,289,209**	**66,109,320**
Property, plant and equipment in use		63,448,544	58,517,671
Property, plant and equipment under construction		7,840,665	7,591,649
Right-of-use asset	**2.a, 11**	**1,782,247**	**–**
Non-current investments		**5,818,537**	**5,191,132**
Equity-accounted investees	14.a	1,956,827	1,709,518
Non-current securities portfolio		86,058	68,831
Other non-current investments	14.b	3,019,222	2,685,387
Derivative financial instruments	28	756,430	727,396
Trade and other non-current assets	**15**	**2,850,970**	**814,577**
Current tax assets	**2.d, 33**	**665,675**	**665,675**
Deferred tax assets	**33**	**5,694,528**	**5,485,999**
NON-CURRENT ASSETS		**108,811,313**	**99,695,543**
Assets held for sale		**–**	**62,164**
Nuclear fuel	**17**	**305,501**	**272,674**
Inventories	**18**	**2,541,593**	**2,173,831**
Trade and other receivables current		**7,499,400**	**6,854,733**
Current tax assets	34	318,082	252,907
Public entities, other	34	507,031	503,444
Trade and other receivables current	15	6,674,287	6,098,382
Current investments		**1,097,920**	**1,177,821**
Other current financial investments	14.b	692,561	571,568
Derivative financial instruments	28	405,359	606,253
Cash and cash equivalents	**19**	**2,113,279**	**2,801,157**
CURRENT ASSETS		**13,557,693**	**13,342,380**
TOTAL ASSETS		**122,369,006**	**113,037,923**

(*) The Consolidated statement of financial position at 31 December 2018 is presented for comparative purposes only.

The accompanying Notes 1 to 55 and the Appendix are an integral part of the Consolidated statement of financial position at 31 December 2019.

Translation of Annual accounts originally issued in Spanish and prepared in accordance with IFRS as adopted by the European Union (see Note 55). In the event of a discrepancy, the Spanish-language version prevails.

IBERDROLA, S.A. AND SUBSIDIARIES
CONSOLIDATED STATEMENT OF FINANCIAL POSITION AT 31 DECEMBER 2019

Thousands of Euros			
EQUITY AND LIABILITIES	**Note**	**31.12.2019**	**31.12.2018 (*)**
Of the parent company	**20**	**37,678,307**	**36,582,199**
Subscribed capital		4,771,554	4,798,222
Valuation adjustments		(544,109)	(32,196)
Other reserves		33,581,946	32,731,625
Treasury shares		(1,436,205)	(1,010,348)
Translation differences		(2,101,190)	(2,919,156)
Net profit for the year		3,406,311	3,014,052
Non-controlling interests		**9,516,358**	**7,394,355**
EQUITY		**47,194,665**	**43,976,554**
Capital grants	**23**	**1,398,523**	**1,477,928**
Facilities assigned and financed by third parties	**24**	**4,987,463**	**4,823,396**
Non-current Provisions		**5,990,106**	**5,267,918**
Provision for pensions and similar obligations	25	2,661,283	2,420,032
Other provisions	26, 2.d	3,328,823	2,847,886
Non-Current financial liabilities		**33,639,307**	**31,778,763**
Loans and borrowings and obligations or other securities	27	30,125,903	30,751,710
Equity instruments having the substance of a financial liability	22	193,384	140,582
Derivative financial instruments	28	471,221	387,153
Leases	2.a, 30	1,613,880	–
Other non-current financial liabilities	31	1,234,919	499,318
Other non-current liabilities	**32**	**407,347**	**374,688**
Current tax liabilities	**2.d**	**261,467**	**179,669**
Deferred tax liabilities	**33**	**9,358,886**	**9,042,567**
TOTAL NON-CURRENT LIABILITIES		**56,043,099**	**52,944,929**
Liabilities linked to assets held for sale		**–**	**561**
Current Provisions		**660,056**	**579,984**
Provision for pensions and similar obligations	25	24,669	22,874
Other provisions	26	635,387	557,110
Current financial liabilities		**16,534,288**	**13,639,597**
Loans and borrowings and obligations or other securities	27	8,800,387	6,574,762
Equity instruments having the substance of a financial liability	22	22,149	36,647
Derivative financial instruments	28	477,545	448,381
Leases	2.a, 30	153,237	–
Trade payables		5,097,884	5,259,414
Other non-current financial liabilities	31	1,983,086	1,320,393
Other current liabilities		**1,936,898**	**1,896,298**
Current tax liabilities	34	242,626	349,314
Public entities, other	34	1,020,645	1,039,449
Other current liabilities	32	673,627	507,535
TOTAL CURRENT LIABILITIES		**19,131,242**	**16,116,440**
TOTAL EQUITY AND LIABILITIES		**122,369,006**	**113,037,923**

(*) The Consolidated statement of financial position at 31 December 2018 is presented for comparative purposes only.

The accompanying Notes 1 to 55 and the Appendices are an integral part of the Consolidated statement of financial position at 31 December 2019.

Translation of Annual accounts originally issued in Spanish and prepared in accordance with IFRS as adopted by the European Union (see Note 55). In the event of a discrepancy, the Spanish-language version prevails.

IBERDROLA, S.A. AND SUBSIDIARIES
CONSOLIDATED INCOME STATEMENT FOR THE YEAR ENDED AT 31 DECEMBER 2019

Thousands of Euros	Note	31.12.2019	31.12.2018 (*)
PROFIT FOR THE YEAR FROM CONTINUING OPERATIONS			
Revenue	36	36,437,908	35,075,873
Supplies	37	(20,174,529)	(19,640,736)
GROSS MARGIN		**16,263,379**	**15,435,137**
Personnel expenses	38	(2,841,171)	(2,678,725)
Capitalised personnel expenses	38	695,114	658,719
Net personnel expenses		(2,146,057)	(2,020,006)
External services		(2,842,958)	(2,797,175)
Other operating income		658,578	661,950
Net external services		(2,184,380)	(2,135,225)
Net operating expenses		(4,330,437)	(4,155,231)
Taxes	39	(1,828,973)	(1,931,003)
GROSS OPERATING PROFIT (EBITDA)		**10,103,969**	**9,348,903**
Valuation adjustments, trade and contract assets	15	(297,315)	(253,656)
Amortisation, depreciation and provisions	40	(3,929,433)	(3,655,874)
OPERATING PROFIT (EBITDA)		**5,877,221**	**5,439,373**
Result of equity-accounted investees - net of taxes	14.a	13,998	55,904
Finance income	42	863,610	839,911
Financial costs	43	(2,163,701)	(1,996,005)
Financial result		(1,300,091)	(1,156,094)
Gains on disposal of non-current assets	41	206,215	48,468
Losses on disposal of non-current assets	41	(3,416)	(39,617)
Gains /(losses) from non-current assets		202,799	8,851
PROFIT BEFORE TAX		**4,793,927**	**4,348,034**
Corporate tax	33	(914,016)	(959,499)
PROFIT FOR THE YEAR FROM CONTINUING OPERATIONS		**3,879,911**	**3,388,535**
PROFIT FOR THE PERIOD FROM DISCONTINUED OPERATIONS (NET OF TAXES)		**(65,354)**	**(51,167)**
Non-controlling interests	20	(408,246)	(323,316)
NET PROFIT FOR THE PERIOD ATTRIBUTABLE TO THE PARENT		**3,406,311**	**3,014,052**
BASIC EARNINGS PER SHARE IN EUROS FOR CONTINUING OPERATIONS	**53**	**0.534**	**0.455**
DILUTED EARNINGS PER SHARE IN EUROS FOR CONTINUING OPERATIONS	**53**	**0.533**	**0.454**
BASIC AND DILUTED EARNINGS PER SHARE IN EUROS FOR DISCONTINUED OPERATIONS	**53**	**(0.010)**	**(0.008)**

(*) The Consolidated income statement at 31 December 2018 is presented for comparative purposes only.

The accompanying Notes 1 to 55 are an integral part of the Consolidated income statement for the year ended at 31 December 2019

Translation of Annual accounts originally issued in Spanish and prepared in accordance with IFRS as adopted by the European Union (see Note 55). In the event of a discrepancy, the Spanish-language version prevails.

IBERDROLA, S.A. AND SUBSIDIARIES
CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME FOR THE YEAR ENDED AT 31 DECEMBER 2019

		31.12.2019			31.12.2018 (*)		
Thousands of Euros	Note	Parent company	Non-controlling interests	Total	Parent company	Non-controlling interests	Total
NET PROFIT FOR THE YEAR		**3,406,311**	**408,246**	**3,814,557**	**3,014,052**	**323,316**	**3,337,368**
OTHER COMPREHENSIVE INCOME TO BE RECLASSIFIED TO THE INCOME STATEMENT IN SUBSEQUENT PERIODS							
In valuation adjustments		**(508,586)**	**(90)**	**(508,676)**	**19,981**	**(7,298)**	**12,683**
Change in value of cash flow hedges	20	(643,408)	1,438	(641,970)	32,787	(9,884)	22,903
Changes in hedging costs		(5,291)	–	(5,291)	1,041	–	1,041
Tax effect	33	140,113	(1,528)	138,585	(13,847)	2,586	(11,261)
In translation differences		**817,966**	**89,146**	**907,112**	**(90,686)**	**(193,420)**	**(284,106)**
TOTAL		**309,380**	**89,056**	**398,436**	**(70,705)**	**(200,718)**	**(271,423)**
OTHER COMPREHENSIVE INCOME NOT TO BE RECLASSIFIED TO THE INCOME STATEMENT IN SUBSEQUENT PERIODS							
In other reserves		**(285,649)**	**5,616**	**(280,033)**	**(39,595)**	**(634)**	**(40,229)**
Actuarial gains and losses on pension schemes	25	(340,118)	8,534	(331,584)	(48,501)	(333)	(48,834)
Tax effect	33	54,469	(2,918)	51,551	8,906	(301)	8,605
TOTAL		**(285,649)**	**5,616**	**(280,033)**	**(39,595)**	**(634)**	**(40,229)**
OTHER COMPREHENSIVE INCOME OF EQUITY-ACCOUNTED INVESTEES (NET OF TAXES)							
In other reserves		**–**	**–**	**–**	**(862)**	**–**	**(862)**
In valuation adjustments		**(3,327)**	**–**	**(3,327)**	**(11,031)**	**–**	**(11,031)**
TOTAL	**14.a**	**(3,327)**	**–**	**(3,327)**	**(11,893)**	**–**	**(11,893)**
TOTAL NET PROFIT RECOGNISED DIRECTLY IN EQUITY		**20,404**	**94,672**	**115,076**	**(122,193)**	**(201,352)**	**(323,545)**
TOTAL COMPREHENSIVE INCOME FOR THE PERIOD		**3,426,715**	**502,918**	**3,929,633**	**2,891,859**	**121,964**	**3,013,823**

(*) The Consolidated statement of comprehensive income at 31 December 2018 is presented for comparison purposes only.
The accompanying Notes 1 to 55 and the Appendix are an integral part of the Consolidated statement of comprehensive income for the year ended at 31 December 2019.

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Translation of Annual accounts originally issued in Spanish and prepared in accordance with IFRS as adopted by the European Union (see Note 55). In the event of a discrepancy, the Spanish-language version prevails.

IBERDROLA, S.A. AND SUBSIDIARIES
CONSOLIDATED STATEMENT OF CHANGES IN EQUITY FOR THE YEAR ENDED AT 31 DECEMBER 2019

			Other reserves									
Thousands of Euros	Subscribed capital	Treasury shares	Legal reserve	Revaluation reserves	Share premium	Other restricted reserves	Retained earnings	Valuation adjustments	Translation differences	Net profit for the year	Non-controlling interests	Total
Balance at 01.01.2019	**4,798,222**	**(1,010,348)**	**968,998**	**28,000**	**14,667,676**	**842,464**	**16,224,487**	**(32,196)**	**(2,919,156)**	**3,014,052**	**7,394,355**	**43,976,554**
Comprehensive income for the period	**–**	**–**	**–**	**–**	**–**	**–**	**(285,649)**	**(495,545)**	**779,419**	**3,406,311**	**502,918**	**3,907,454**
Transactions with shareholders or owners												
Share capital increase (Note 20)	183,675	–	–	(28,000)	(155,673)	–	(820)	–	–	–	–	(818)
Share capital reduction (Note 20)	(210,343)	2,015,182	–	–	–	210,343	(2,015,233)	–	–	–	–	(51)
Distribution of 2018 profit	–	–	–	–	–	–	2,684,445	–	–	(3,014,052)	(178,778)	(508,385)
Transactions with non-controlling interests (Notes 6 and 20)	–	–	–	–	–	–	445,220	(16,368)	38,547	–	1,033,997	1,501,396
Transactions with treasury shares (Note 20)	–	(2,441,039)	–	–	–	–	5,252	–	–	–	–	(2,435,787)
Other movements in equity												
Share based payments (Note 21)	–	–	–	–	–	–	4,585	–	–	–	542	5,127
Issuance of perpetual subordinated bonds (Note 20)	–	–	–	–	–	–	(4,120)	–	–	–	800,000	795,880
Other movements							(10,029)	–	–	–	(36,676)	(46,705)
Balance at 31.12.2019	**4,771,554**	**(1,436,205)**	**968,998**	**–**	**14,512,003**	**1,052,807**	**17,048,138**	**(544,109)**	**(2,101,190)**	**3,406,311**	**9,516,358**	**47,194,665**

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Thousands of Euros	Subscribed capital	Treasury shares	Other reserves					Valuation adjustments	Translation differences	Net profit for the year	Non-controlling interests	Total
			Legal reserve	Revaluation reserves	Share premium	Other restricted reserves	Retained earnings					
Balance at 01.01.2018 (*)	**4,738,136**	**(597,797)**	**968,998**	**236,866**	**14,667,676**	**693,684**	**14,868,427**	**(42,254)**	**(2,828,470)**	**2,803,994**	**7,223,926**	**42,733,186**
Adjustments due to IFRS 9 (Note 2.a)	–	–	–	–	–	–	100,731	1,108	–	–	(8,017)	93,822
Adjustments due to IFRS 15 (Note 2.a)	–	–	–	–	–	–	(40,325)	–	–	–	–	(40,325)
Adjusted balance at 01.01.2018(*)	**4,738,136**	**(597,797)**	**968,998**	**236,866**	**14,667,676**	**693,684**	**14,928,833**	**(41,146)**	**(2,828,470)**	**2,803,994**	**7,215,909**	**42,786,683**
Comprehensive income for the period	**–**	**–**	**–**	**–**	**–**	**–**	**(40,457)**	**8,950**	**(90,686)**	**3,014,052**	**121,964**	**3,013,823**
Transactions with shareholders or owners												
Share capital increase (Note 20)	208,866	–	–	(208,866)	–	–	(859)	–	–	–	–	(859)
Share capital reduction (Note 20)	(148,780)	1,245,420	–	–	–	148,780	(1,245,469)	–	–	–	–	(49)
Distribution of 2017 profit	–	–	–	–	–	–	2,661,298	–	–	(2,803,994)	(197,955)	(340,651)
Acquisition of free-of-charge allocation rights (Note 20)	–	–	–	–	–	–	(97,899)	–	–	–	–	(97,899)
Transactions with treasury shares (Note 20)	–	(1,657,971)	–	–	–	–	(225)	–	–	–	–	(1,658,196)
Other movements in equity												
Share based payments (Note 21)	–	–	–	–	–	–	2,671	–	–	–	(448)	2,223
Issuance of perpetual subordinated bonds (Note 20)	–	–	–	–	–	–	(2,538)	–	–	–	700,000	697,462
Write-off of subordinated perpetual obligations (Note 20)	–	–	–	–	–	–	–	–	–	–	(525,000)	(525,000)
Other movements	–	–	–	–	–	–	19,132	–	–	–	79,885	99,017
Balance at 31.12.2018 (*)	**4,798,222**	**(1,010,348)**	**968,998**	**28,000**	**14,667,676**	**842,464**	**16,224,487**	**(32,196)**	**(2,919,156)**	**3,014,052**	**7,394,355**	**43,976,554**

(*) The Consolidated statement of changes in equity at 31 December 2018 is presented for comparison purposes only.

The accompanying Notes 1 to 55 and the Appendix are an integral part of the Consolidated statement of changes in equity for the year ended at 31 December 2019.

Translation of Annual accounts originally issued in Spanish and prepared in accordance with IFRS as adopted by the European Union (see Note 55). In the event of a discrepancy, the Spanish-language version prevails.

IBERDROLA, S.A. AND SUBSIDIARIES
CONSOLIDATED STATEMENT OF CASH FLOWS FOR THE YEARS ENDED AT 31 DECEMBER 2018

Thousands of Euros	Note	31.12.2019	31.12.2018 (*)
Profit for the year from continuing activities before tax		4,793,927	4,348,034
Profit before tax from discontinued operations		(56,428)	(64,660)
Adjustments for			
Amortisation, provisions, valuation adjustments of financial assets and personnel expenses for pensions	38, 40	4,527,296	4,080,238
Net profit/loss from investments in associates and joint ventures	14	(7,345)	(55,904)
Capital grants and other deferred income	23	(273,805)	(282,898)
Finance income and finance costs	42, 43	1,304,337	1,156,094
Gains on disposal of non-current assets	41	(202,681)	(8,851)
Movement in working capital			
Change in trade receivables and other		(963,085)	(434,905)
Change in inventories		(344,626)	(313,389)
Change in trade payables and other liabilities		(500,482)	(24,057)
Change in receivables and other non-current payables		–	(24,520)
Provisions paid		(625,612)	(511,382)
Income taxes paid		(796,512)	(332,891)
Dividends received		60,133	55,339
Net cash flows from operating activities		**6,915,117**	**7,586,248**
Acquisition of intangible assets	8	(410,971)	(1,040,078)
Acquisition of associates	14.a	(204,823)	(91,305)
Acquisition of investment property	9	(2,673)	(11,878)
Acquisition of property, plant and equipment	10	(5,169,315)	(4,655,478)
Interest paid excluded capitalised interest	42	(222,990)	(193,424)
Capitalised personnel expenses paid		(695,114)	(658,719)
Capital grants and other deferred income	23	12,404	14,040
Collection/(payments) for securities portfolio		(17,227)	(1,746)
Collection/(payments) for other investments		(925,298)	(675,737)
Collection/(payments) for current financial assets		(135,209)	(63,360)
Interest collected		49,172	192,291
Income tax		–	22,076
Proceeds from disposal of non-financial assets		340,011	6,604
Proceeds from disposal of financial assets		–	47,152
Disposal of subsidiaries		–	1,059,150
Net cash flows used in investing activities		**(7,382,033)**	**(6,050,412)**
Acquisition of free allocation rights	20	–	(97,899)
Dividends paid		(329,607)	(142,696)
Dividends paid to non-controlling interests		(178,778)	(161,241)
Perpetual subordinated bonds	20		
Issue		795,880	697,462
Reimbursement		–	(525,000)
Interest paid		(37,125)	(39,563)
Loans and borrowings, obligations or other securities	29		
Issues and disposals		15,301,504	13,148,399
Reimbursement		(14,953,110)	(12,422,739)
Interest paid excluding capitalised interest		(818,659)	(873,853)
Financial liabilities from leases	30		
Payment of principal		(155,890)	(4,924)
Interest paid excluding capitalised interest		(33,101)	(5,536)
Equity instruments having the substance of a financial liability	22		
Issue		114,384	176,704
Payments		(99,786)	(65,658)
Cash outflows due to capital decrease	20	(51)	(49)
Cash outflows due to capital increase	20	(818)	(859)
Acquisition of treasury shares	20	(1,404,316)	(1,674,480)
Proceeds from disposal of treasury shares	20	49,723	63,286
Transactions with non-controlling interests	6	1,472,820	132,483
Net cash flows from/(used in) financing activities		**(276,930)**	**(1,796,163)**
Effect of exchange rate fluctuations on cash and cash equivalents		**55,968**	**(135,856)**
Net increase/(decrease) in cash and cash equivalents		**(687,878)**	**(396,183)**
Cash and cash equivalents at the beginning of period		**2,801,157**	**3,197,340**
Cash and cash equivalents at the end of period		**2,113,279**	**2,801,157**

(*) The Consolidated statement of cash flows for 2018 is presented for comparison purposes only.
The accompanying Notes 1 to 55 and the Appendix are an integral part of the Consolidated statement of cash flows at 31 December 2019.

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IBERDROLA, S.A. AND SUBSIDIARIES

Consolidated financial statement for the year ended at 31 December 2019

1. GROUP ACTIVITIES

Iberdrola S.A. (hereinafter, IBERDROLA), a company incorporated in Spain and with registered address at Plaza Euskadi 5, in Bilbao, is the parent of another group of companies whose main activities are:

- Production of electricity from renewable and conventional sources.
- Sale and purchase of electricity and gas in wholesale markets.
- Transmission and distribution of electricity.
- Retailing of electricity, gas and energy-related services.
- Other activities, mainly linked to the energy sector.

The aforementioned activities are performed in Spain and abroad, and totally or partially either directly by IBERDROLA or through the ownership of shares or other equity investments in other companies, subject in all cases to the legislation applicable at any given time and, in particular, to the applicable legislation in the electricity industry. The IBERDROLA Group carries out its activities mainly in five countries in the Atlantic region: Spain, the United Kingdom (UK), the United States of America (USA), Mexico and Brazil.

2. BASIS OF PRESENTATION OF THE CONSOLIDATED ANNUAL ACCOUNTS

2.a) Applicable accounting legislation

The IBERDROLA Group's 2019 Consolidated annual accounts were prepared by the directors on 24 February 2020, in accordance with International financial reporting standards (hereinafter, IFRS), as adopted by the European Union, in conformity with Regulation (EC) number 1606/2002 of the European Parliament and of the European Council. The directors of IBERDROLA expect these Consolidated annual accounts to be approved at the General Shareholders' Meeting without modification.

The IBERDROLA Group's 2018 Consolidated annual accounts were approved at the General Shareholders' Meeting on 29 March 2019.

At 31 December 2019, the annual accounts present a negative working capital of Euros 5,574 million. The directors declare the deficit will be offset by the generation of funds from the IBERDROLA Group's businesses. Moreover, as detailed in Note 4, the IBERDROLA Group has undrawn granted borrowings amounting to Euros 12,187 million.

These Consolidated annual accounts have been prepared on the basis of a historical cost, except for available-for-sale financial assets and derivatives, which have been measured at fair value. The carrying amounts of assets and liabilities that are hedged at fair value are adjusted to reflect variations in their fair value arising from the hedged risk.

On 1 January 2018, IFRS 9 “Financial instruments” and IFRS 15 “Revenues from contracts with customers” published by the International Accounting Standards Board (IASB), adopted by the European Union for its use in Europe, were applied for the first time.

The accounting policies used in the preparation of these Consolidated annual accounts correspond with those used for the year ended on 31 December 2018, except for the application on 1 January 2019, of the IFRS 16 “Leases” adopted by the European Union to be used in Europe.

Application of IFRS 16 Leases

Transition

From the perspective of the lessee, IFRS 16 eliminates the previous classification between operating and financial leases based on the transfer of risks and benefits and sets, in relation to lease contracts, that the lessee should recognise a right-of-use asset (Note 11) and a liability for the present value of the lease during said period (Note 30) in the statement of financial position. From the perspective of the lessor, IFRS 16 does not introduce relevant changes.

The IBERDROLA Group made the transition to IFRS 16 through the modified retroactive alternative, which involves not restating the comparative period and applying IFRS 16 for the first time on 1 January 2019 (the date it was first applied). Therefore, in leases previously classified as operational in accordance with IAS 17 where the IBERDROLA Group is lessee, lease liabilities are measured at the present value of the remaining lease payments, discounted using the discount rate at the time of the first application will be applied.

In accordance with the transition options of the regulation, the IBERDROLA Group has opted for:

- Not recognising the right of use and lease liabilities related to contracts for which the termination date came up twelve months before the transition date, recognising them as current leases;

- Excluding initial direct costs related to contracts from right-of-use assets; and

- Calculating lease terms from information available at the time of the transition.

Lease contracts previously recognised as financial leases in accordance with IAS 17 where the IBERDROLA Group acted as lessee maintains lease assets and liabilities before the first application date. From said date, these agreements will be registered applying the IFRS 16.

Presentation of financial statements

In the Consolidated financial statements for 2019, the IBERDROLA Group has classified the right-of-use asset and the lease liabilities under the new headings "Right-of-use assets", "Non-current financial liabilities - Leases", and “Current financial liabilities - Leases” respectively, in the Consolidated statement of financial position.

At 31 December 2018, the IBERDROLA Group classified assets and liabilities from financial leases in which it acted as lessee in “Property, plant and equipment”, “Non-current financial liabilities-Loans and other financial liabilities” and “Current financial liabilities-Loans and other financial liabilities”, respectively. On 1 January 2019, Euros 215,465, 114,767 and 27,541 thousand have been respectively reclassified, moving to the new headings "Right-of-use asset", "Non-current financial liabilities - Leases" and “Current financial liabilities - Leases” of the Consolidated statement of financial position.

In addition, in the Consolidated annual accounts for 2019 the lease expense related to lease contracts classified as operating leases under IAS 17 is now recognised under the headings “Amortisation, depreciation and provisions” and “Financial expense” of the Consolidated income statement, whereas in the comparative year it was recognised under the heading “External services” of the Consolidated income statement.

Impact on IBERDROLA Group

The IBERDROLA Group has performed an analysis to assess whether an agreement constitutes or includes a lease on the date of first application, in accordance with the definition and conditions set out in IFRS 16.

The IBERDROLA Group has opted not to apply the exemption when recognising short-term leases (those with lease terms equivalent to or shorter than 12 months).

Contracts may include lease elements as well as non-lease elements. The IBERDROLA Group has opted not to separate such elements for accounting purposes and to recognise them as a single element.

In the Consolidated annual accounts for 2018 it was stated that the IBERDROLA Group considered agreements for the use of land where the wind energy generation facilities are located did not comply with the requirements for being considered leases. This conclusion coincided and coincides with the one applied under the American standards (ASC 842 Leases) whose definition of lease is the same as the one used in international standards. Moreover, condensed consolidated annual accounts for the six-month period ended on 30 June 2019 and the results information for the first and third quarter of 2019 were prepared using this criterion.

Note 2.a of the Consolidated annual accounts for 2018 and Note 6 of the Condensed consolidated accounts for the six-month period ended on 30 June 2019 included a mention regarding the accounting treatment of shared use agreements, i.e. agreements that convey the share use of the underlying assets. The accounting treatment of these agreements was subject to judgement that could change in accordance with future interpretations. Moreover, those notes stated that in case of agreements for the shared use of land for windfarms were considered to meet lease definition in IFRS 16, the maximum increase in lease liabilities for IBERDROLA Group that would have been recognised amounted to Euros 846,374 thousand at 1 January 2019. At 30 June 2019 that amount did not experienced significant changes .

In June 2019, the International Financial Rules Interpretation Committee (IFRIC) issued its conclusion on a query related to the accounting treatment of an agreement executed will a pipeline operator which allowed its installation underground during a specific period of time for a consideration (subsurface rights). Although the query does not specifically approach the problem of land assignment agreements for installing wind farms in which the agreed terms and conditions allow shared use of the land by the owner and the Group, the analysis carried out by the IFRIC and the interpretations of auditing firms from the publication of said query determined the need to restate the accounting treatment initially adopted. In this regard, as a result of the new information available, the Group decided to consider that agreements for the shared use of land where windfarms are located qualify as lease contracts within the scope of IFRS 16 and expanded, as such, the scope of application.

Bearing in mind this, the impact recognised by the IBERDROLA Group in implementing IFRS 16 at 1 January 2019 was as follows:

Thousands of Euros	01.01.2019
Property, plant and equipment	(215,465)
Right-of-use asset	1,419,528
NON-CURRENT ASSETS	**1,204,063**
TOTAL ASSETS	**1,204,063**
Provisions	9,243
Non-Current financial liabilities	
Loans and borrowings and obligations or other securities	(114,767)
Leases	1,244,809
Other financial liabilities	(31,021)
NON-CURRENT LIABILITIES	**1,108,264**
Provisions	843
Current financial liabilities	
Loans and borrowings and obligations or other securities	(27,541)
Leases	143,011
Trade payables	(20,514)
CURRENT LIABILITIES	**95,799**
TOTAL EQUITY AND LIABILITIES	**1,204,063**

Net increases in “Loans and borrowings and obligations or other securities” and “Leases” in current and non-current liabilities related to lease contracts correspond to the following type of assets:

Thousands of Euros	01.01.2019
Buildings and real property	231,437
Vehicle fleet	34,543
Fibre optic and other distribution facilities	38,334
Land associated to renewable facilities	892,394
Other	48,804
Total	**1,245,512**

Details of discount rates (minimum and maximum range) on the date of the first application are as follows:

	Less than 5 years		Between 20-30 years	
Currency	**Minimum**	**Maximum**	**Minimum**	**Maximum**
Euro	-	2.15	1.87	2.94
Sterling Pounds	1.12	3.21	3.19	4.94
US dollar	2.68	3.30	4.16	4.48
Mexican peso	9.09	9.46	11.36	12.62
Brazilian reals	8.68	11.96	14.55	15.15

Below is a detail of the reconciliation between minimum future payments of non-cancellable operating leases under the scope of IAS 17 at 31 December 2018 and lease liabilities recognised at 1 January 2019 in the transition to IFRS 16:

Thousands of Euros	
Future non-cancellable minimum lease payments in accordance with IAS 17	1,462,154
Lease contracts starting after 1 January and 2019 and other	(127,171)
Difference in finance discount	(89,471)
Lease liabilities at 1 January 2019 under IFRS 16	**1,245,512**

Standards issued pending of application

On the other hand, at the date these Consolidated financial statements were authorised for issuance, the following standards, amendments and interpretations had been issued, all of which are effective subsequent to 1 January 2020:

Regulation		Mandatory application	
		IASB	European Union
Amendments to IFRS 3	Business definition	01.01.2020	Pending approval
Amendments to IFRS 9, IAS 39 and IFRS 7	Reform of reference interest rate index	01.01.2020	01.01.2020

The amendments to IFRS 3 “Business combinations” clarify the definition of a business, aiming at helping entities to determine if a transaction should be recognised as a business combination under IFRS 3 or asset acquisition.

The amendments to IFRS 9, IAS 39 and IFRS 7 on financial instruments approach the uncertainties related to the reform of interbank rates (IBOR indexes) avoiding the discontinuation of existing hedges due to temporary exceptions to the application of certain specific requirements of hedging accounting (Note 4).

The IBERDROLA Group has not applied in advance of the formulation of these Consolidated financial statements any published standard, interpretation or amendment that has not yet come into force. The IBERDROLA Group believes that their application would not have had a material impact on these Consolidated annual accounts.

2.b) Basis of consolidation

The appendix I to these Consolidated annual accounts lists all IBERDROLA subsidiaries, jointly controlled entities and associates, together with the consolidation or measurement basis used and other related disclosures.

Subsidiaries

The subsidiaries over which the IBERDROLA Group exercises control are fully consolidated, except when they are scantily material with respect to presenting fairly the annual accounts of the IBERDROLA Group.

The IBERDROLA Group considers that it maintains control of a company when it is exposed, or has the right to variable yields from its involvement in the company, and has the capability to influence in these yields through its power thereon.

Results of subsidiaries acquired or sold in the year are included in the Consolidated income statement as from the effective date of acquisition or up to the effective date of sale. All accounts and transactions between fully consolidated companies have been eliminated in consolidation.

On the acquisition date, assets, liabilities and contingent liabilities of a subsidiary are recognised at fair value. Any excess of the subsidiary´s acquisition cost over the market value of its assets and liabilities is recognised as goodwill, as it corresponds to assets that cannot be identified and measured separately. If the difference is negative, it is recognised as a credit in the Consolidated income statement.

Holdings of non-controlling interests are recognised at the initial moment at an amount equivalent to their proportional interest in the net assets of the acquired company on the takeover date. The interest of non-controlling interests shareholders in equity and the results of the fully consolidated subsidiaries is presented under the "Equity – Non-controlling interests" heading on the liability side of the Consolidated statement of financial position and under the heading "Non-controlling interests" of the Consolidated income statement , respectively.

When there is a loss of control of a company of the Group, its assets, liabilities and any non-controlling interests are written off. The resulting gains or losses are recognised in the profit and loss account. Holdings maintained in the subsidiaries whose control has been lost will be measured by their fair value on the date when this loss of control occurred.

The income obtained in stock purchase transactions with minority shareholders in controlled companies and the sale of stock without loss of control will be recognised as charged or credited to reserves.

Investments accounted for using the equity method

Equity accounted investments include investments in associates and joint businesses. Associates are companies in which the IBERDROLA Group has significant influence, i.e., the power to intervene in decisions regarding financial and operating policies yet without having control or joint control. A joint business is a joint agreement in which the Group has the right to net assets of the agreement.

In the transactions carried out with associates and joint businesses, the gains or losses of the operation are eliminated in the percentage of holding interest in each company. The result of measuring investments in associates using the equity method is recognised under the headings “Other reserves” and “Result of equity-accounted investees - net of taxes” of the Consolidated balance sheet and income statement, respectively.

Closing date of the annual accounts

The closing date of the annual accounts of the subsidiaries, jointly controlled entities and associates is 31 December, with the exception of Siemens Gamesa Renewable Energy, S.A. (hereinafter, SIEMENS GAMESA), whose closing date was changed to 30 September. However, for the purposes of these Consolidated annual accounts harmonisation has been applied so that the equity method includes the equity of the associate at 31 December. As described in Note 51, the interest in SIEMENS GAMESA has been sold at the beginning of 2020.

The accounting policies applied by these companies are the same or have been harmonised with the ones used by the IBERDROLA Group.

Conversion of the annual accounts of foreign companies

The annual accounts of each foreign company were drawn up in their respective functional currencies, defined as the currency of the economy in which each company operates and in which it generates and uses cash.

The conversion of the annual accounts of foreign companies has been carried out by applying the year-end exchange rate method. This method consists of converting to euros all the assets, rights and obligations at the exchange rates prevailing at the date of the Consolidated annual accounts; for at the average exchange rates (provided that there are non-material transactions that do not deem appropriate to use the average exchange rate) for the year the Consolidated income statement items, keeping equity at the historical exchange rate at the time of the acquisition (or at the average exchange rate of the year in which they were generated in the case of accumulated results). The resulting translation differences are taken directly to reserves.

2.c) Comparative information

When comparing the figures for 2019 included in these Consolidated annual accounts with those corresponding to the year 2018, it is necessary to take into account the application on 1 January 2019 of IFRS 16 (Note 2.a).

2.d) Amendment to comparative information

- Classification of uncertain tax assets and liabilities: In the meeting held in 2019, the Interpretation Committee of the IASB concluded in a decision that uncertain assets and liabilities recognised in accordance with IFRIC 23 “Uncertainty over income tax treatments” are current (or deferred) tax assets and liabilities, defined in IAS 12 “Taxes”.

  Therefore, the IBERDROLA Group has reclassified the uncertain tax assets and liabilities in the Consolidated statement of financial position at 31 December 2018. Uncertain tax assets have been reclassified from the heading “Trade receivables and other non-current assets” to the new heading “Current tax assets” in non-current assets in the amount of Euros 665,675 thousand. Uncertain tax liabilities have been reclassified fromin the heading “Non-current provisions” to the new heading “Current tax liabilities” in non-current liabilities in the amount of Euros 179,669 thousand.

- Geographical and business segment reporting (Note 7) In the first half of 2019 it was decided to extend the breakdown of geographical information corresponding to the Liberalised segment. Thus, the activities included under Spain and continental Europe at 31 December 2018 have been disaggregated in Spain and Rest of the World bearing in mind the ever increasing importance of the retail business in other geographical areas.

- Earnings per share (Note 53): As described in Note 20 and 51 of these Consolidated annual accounts, in July 2019 and January 2020 two free capital increases took place in the context of the “Iberdrola flexible dividend” programme. In accordance with IAS 33: “Earning per share” these free capital increases have resulted in the correction of the earnings per share corresponding to the 2018 year-end included in the Consolidated annual accounts for that year, and they have been taken into account to calculate the 2019 year share basic and diluted earnings per share.

- Moreover, current liabilities and non-current liabilities in the Consolidated statement of financial position have been reorganised compared to the Consolidated annual accounts at 31 December 2018 in order to adapt the liabilities structure to the accounting standards in force.

3. ACCOUNTING POLICIES

3.a) Goodwill

Goodwill represents future economic benefits arising from other financial assets acquired in a business combination that are not individually identified and separately recognised.

Goodwill arising from acquisitions of companies with a functional currency other than the euro is converted to euros at the exchange rate prevailing at the reporting date of the Consolidated statement of financial position.

Goodwill acquired on or after 1 January 2004 is measured at acquisition cost and the one that is acquired earlier is measured at the carrying amount at 31 December 2003 in accordance with Spanish accounting standards in effect on that date, as provided in IFRS 1: “First-time adoption of IFRS”.

Goodwill is not amortised. However, at the end of each reporting period goodwill is reviewed for its recoverability and any impairment is written down (Note 3.i).

3.b) Other intangible assets

Concessions, Patents, licenses, trademarks and others

The amounts recognised as concessions, patents, licenses, trademarks and others relate to the cost incurred in their acquisition net of accumulated amortisation and depreciation and valuation changes due to impairment if applicable.

The electricity distribution and transmission concessions held in UK by SCOTTISH POWER and those linked to the activities of AVANGRID, are not subject to any legal or other nature limits. Accordingly, intangible assets with an indefinite useful life are not amortised by the IBERDROLA Group, although they are assessed for indications of impairment each year, as described in 3.i.

Intangible assets under IFRIC 12

IFRIC 12: “Service concession arrangements” concerning public-private service concession arrangements that meet two conditions:

- the grantor controls or regulates which services the operator must provide with the infrastructure, to whom it must provide them to and at what price; and
- the grantor controls any significant residual interest in the infrastructure at the end of the term of the arrangement.

Infrastructures within the scope of a service concession arrangement are not recognised as property, plant and equipment of the operator, because the operator does not have the right to control the use of the infrastructure.

If the operator performs more than one service (i.e. operation services and construction or upgrade services), the consideration received under the agreement for provision of services is recognised separately in the Consolidated income statement, in accordance with IFRS 15 “Revenues from contracts with customers”.

In the case of the IBERDROLA Group, IFRIC 12 only affects the electricity distribution activities carried out by the IBERDROLA Group in Brazil (Note 12). Remuneration for network construction and upgrade work carried out by the IBERDROLA Group in this country consisted, on the one hand, of an unconditional right to receive cash and, on the other hand, of the right to charge certain amounts to consumers. As a result, by applying CIIFRS 12, two different assets were recognised for the two types of consideration received:

- A financial asset, which is recognised under the heading "Other non-current financial assets" of the Consolidated statement of financial position (Note 14.b).

- An intangible asset, amortisable in the concession period, which is recognised under the heading "Other intangible assets" of the Consolidated statement of financial position (Note 8).

Computer software

The acquisition and development costs incurred in relation to the computer software are recorded with a charge to the heading “Other intangible assets” of the Consolidated statement of financial position. Maintenance costs of computer software are recorded with a charge to the Consolidated income statement for the year in which they are incurred.

Computer software is amortised on a straight-line basis over a period of between three and five years from the entry into service of each software asset.

Customer acquisition costs

The IBERDROLA Group recognises incremental costs from customer contracts related mainly to commissions for the execution of purchase agreements as intangible assets and are amortised on a systematic basis according to the average expected life of contracts with customers that are associated with such costs.

Research and development expenditure

The IBERDROLA Group’s policy is to record research expenses in the Consolidated income statement for the period when they are incurred.

Development costs are recognised as an intangible asset in the Consolidated statement of financial position if the Group can identify them separately and show the technical viability of the asset, its intention and capacity to use or sell it, and how it will generate probable future economic benefits.

3.c) Investment property

Investment properties will be recognised at their acquisition cost net of accumulated depreciation. They are depreciated on a straight-line basis, minus material residual value, over each asset’s estimated useful life which ranges between 37.5 y 75 years based on the features of each asset concerned.

3.d) Property, plant and equipment

Items of property, plant and equipment are measured at acquisition or production cost deducted the accumulated amortisations and value adjustments.

The acquisition cost includes, where applicable, are as follows:

1. Prior to the transition to IFRS (1 January 2004), the IBERDROLA Group updated certain Spanish assets under the heading “Property, plant and equipment” of the Consolidated statement of financial position as permitted by the applicable legislation, including the Royal Decree-law 7/1996, and considered the amount of these revaluations as part of the cost of the assets, in accordance with IFRS 1.

2. Finance expense related to external funding accrued exclusively during the construction period (Note 42) is determined as follows:

    - The interests accrued by specific-purpose sources of financing used to build certain assets are fully capitalised.

    - The interests accrued by general-purpose borrowings is capitalised by applying the average effective interest rate on this financing to the average cumulative investment qualifying for capitalisation, after deducting the investment financed with specific-purpose borrowings, provided that it does not exceed the total finance costs incurred in the year.

3. Personnel expenses related directly or indirectly to construction in progress (Note 38).

4. If the IBERDROLA Group is required to dismantle its facilities or renovate the place where it is located, the current value of said costs is included in the carrying value of assets for their present value, with a credit to the sub-heading "Provisions - Other provisions" of the Consolidated statement of financial position (Note 3.r).

    The IBERDROLA Group periodically checks their estimation of said current value increasing or decreasing the asset value depending on the results of said estimation.

The IBERDROLA Group transfers property, plant and equipment in progress to property, plant and equipment in use at the end of the related trial period.

The costs of expansion or improvements leading to increased productivity, capacity or to a lengthening of the useful lives of the assets are capitalised. Replacements or renewals of complete items are recorded as additions to property, plant and equipment, and the items replaced are derecognised.

Gains or losses arising on the disposal of items of property, plant and equipment are calculated as the difference between the amount received on the sale and the carrying amount of the asset disposed of.

3.e) Depreciation of property, plant and equipment in use

The cost of property, plant and equipment in use is depreciated on a straight-line basis, less any material residual value, at annual rates based on the following years of estimated useful life:

	Average years of estimated useful life
Conventional thermal power plants	25-50
Combined cycle power plant	40
Nuclear power plants	44-47
Onshore wind farms	
Structural components	40
Non-structural components	25
Offshore wind farms	25
Gas storage facilities	25-40
Transmission facilities	40-56
Distribution facilities	30-54
Conventional meters and measuring devices	10-40
Electronic or smart meters	10
Buildings	50-75
Dispatching centres and other facilities	4-50

As hydroelectric plants are operated under concessions (Note 12), the depreciation of civil engineering assets is performed over the life of the concession, while its electromechanical equipment is depreciated over the lower of the concession period or 50 years.

The important components of the plant and equipment that maintain different useful lives are considered separately.

Every year, the IBERDROLA group reviews the useful life of its assets based on internal and external information sources.

Following the agreement reached with the authorities, ENRESA and all other partners, the IBERDROLA Group amended the useful life of the nuclear facilities on 1 January 2019, based on the agreed closure schedule for said facilities. The useful life had been considered to be 40 years prior to the change. The closure calendar is as follows:

Nuclear facility	Closure date
Almaraz I	November 2027
Almaraz II	October 2028
Ascó I	October 2030
Ascó II	September 2032
Cofrentes	November 2030
Valdellós II	February 2035
Trillo	May 2035

As a result, the heading "Amortisation and provisions" of the Consolidated income statement for 2019 includes the impact of this change in the estimate, which as per accounting regulations had been applied prospectively since 1 January 2019, and produced a lower depreciation charge of approximately Euros 111,498 thousand.

3.f) Lease contracts

As indicated in Note 2.a, the IBERDROLA Group started applying IFRS 16 “Leases” from 1 January 2019 in lease contracts.

Criteria applied before 2019

Before 2019, the Group’s income was recognised, mainly, in accordance with IAS 17: “Leases” and IFRIC 4: “Determining whether an arrangement contains a lease”. The IBERDROLA Group classifies as finance leases all arrangements under which the lessor transfers to the lessee substantially all the risks and rewards incidental to ownership of the asset. All other leases are classified as operating leases. Said classification was applied both the IBERDROLA Group was the lessor and the lessee.

Assets acquired under finance leases are recognized as non-current assets in accordance with their nature and function. Assets are measured at the lower of the fair value of the leased asset and the present value of the future lease payments, and it is amortised by the useful life of each asset.

The expenses arising from operating leases are allocated to the Consolidated income statement on an accrual basis over the life of the lease agreement.

Criteria applied from 1 January 2019

After 1 January 2019, the Group’s lease was recognised in accordance with the criteria in IAS 16: “Leases”.

Right-of-use assets are initially recorded by cost, which includes:

- The initial valuation amount of the lease liability;
- Any lease payment made on or before the asset start date, minus incentives received;
- The initial direct costs incurred as a result of the lease; and
- An estimation of the costs that will be incurred by the lessee for the dismantling and restoration of assets.

After the initial recognition, right-of-use assets are recorded at cost minus accumulated amortisation and deterioration losses. The amortisation of right-of-use assets is recorded under the heading "Amortisations, depreciation and provisions" of the Consolidated income statement for the useful life of the underlying asset or the lease term, whichever is shorter (Note 40). If the property is transferred to the lessee or it is practically certain that the lessee will exercise the purchase option, it will be amortised over the useful life of the asset. Furthermore, for calculation loss due to right of use asset impairment, the Group applies impairment criteria on the value of non-current assets described in Note 3.i).

Moreover, right of-use asset is later on adjusted due to the impact of certain restatement affecting lease liabilities.

The initial value of lease liabilities is calculated as present value of future lease payments deducted at the implicit interest rate that may reliably be determined or, otherwise, at the incremental interest rate.

Lease payments include:

- Fixed or substantially fixed lease fees specified in the contract, minus any incentive to be received for the lessee;
- variable fees dependent on an index or rate initially valued by applying the indices or rates existing at the beginning of the lease;
- The amounts that the lessee expects to pay for guarantees on the residual value of the underlying asset;
- The exercise price of the purchase option, if it is reasonably certain that the lessee will exercise said option; and
- The payments corresponding to extension options whose exercise is considered to be fairly certain or early lease cancellation fines if the lease period are included in early cancellation.

Contingent rents subject to the occurrence of a specific event and the variable fees dependent on revenues or the use of the underlying asset are recorded at the time when they are incurred under the heading "External services" of the Consolidated income statement, rather than forming part of the lease liability.

Subsequently, lease liability is increased to show finance costs and is reduced in the amounts paid. The financial update is recorded under the heading "Finance costs" of the Consolidated income statement (Note 43).

Lease liability is revaluated when there is a change in indexes or rates, in the estimated amounts to be paid for guarantees on the residual value, in those cases where options to extend are reasonably certain or in those cases where options to cancel are considered not to be exercised within reasonable.

3.g) Nuclear fuel

The IBERDROLA Group measures its nuclear fuel stocks on the basis of the costs actually incurred in acquiring and subsequently processing the fuel.

Nuclear fuel costs include the finance costs accrued during construction, calculated as indicated in Note 3.d (Note 42).

The nuclear fuel consumed is recognised under the heading “Procurements” of the Consolidated income statement from when the fuel loaded into the reactor starts to be used, based on the cost of the fuel and the degree of burning in each reporting period.

3.h) Inventories

<u>Energy resources</u>

Energy resources are measured at acquisition cost, calculated using the average weighted price method, or net realisable value, if the latter is lower. No adjustments to the value of energy sources that are part of the production process are made if it is expected that the finished products into which they will be incorporated will be sold at above cost.

Real estate inventories

The real estate inventories were measured at acquisition cost, which includes both the acquisition cost of the land and plot and the costs of urban infrastructures and construction of real estate developments incurred until the year end. These costs include those incurred by the architecture and construction departments.

The acquisition cost also includes finance cost to the extent that such expenses relate to the period of town planning permits, urbanisation or construction up until the time at which the land or plot is ready for operation, calculated using the method set out in Note 3.d (Note 42).

Trade expenses are charged to the Consolidated income statement for the year in which they are incurred, except for those incremental costs required to obtain customer contracts.

The IBERDROLA Group periodically compares the cost of acquisition of real estate inventories with their net realisable value, recognising the necessary impairment losses with a charge to the Consolidated income statement when the latter is lower. If the circumstance leading to the valuation adjustment no longer exists, it is reversed recognising the corresponding income.

For land, construction in progress and unsold units, net realisable value is used taking into account the appraisals by independent experts. Net realisable value is the estimated selling price in the ordinary course of business, less the estimated costs to finish the production and the necessary costs to carry on with the sale of the element.

This value is determined using the residual method, where the estimated total cost of the work, is deducted from the gross value of the completed project, and the allowance for developer's risk and profit is added. The key variables of the residual method are:

- Expected income: it consists in the estimated price at which each of the promotion units may be sold, in accordance with a sales rate in accordance with estimates from independent experts.

- The cost of the development, including all disbursements to be made by the developer of the work depending on the type (e.g. government-sponsored or private single-family dwellings) and quality of the construction. In addition to the cost of the work, it includes the cost of projects and licenses (10%-12% of the physical construction project), legal fees (1%-1.5% of the material implementation project), marketing and promotional expenses (2%-4% of income) and unforeseen contingencies (3%).

- Development time: time required for the different planning, management and urban discipline stages, as well as expected construction and trade periods.

- The developer profit considered for each asset, depending on the zone state of the land, size and complexity of the development, ranging from 10% to 45% of total costs.

For land with licences, construction in progress and unsold units, the main difference with regard to unlicensed land is the developer profit, which in this case is lower given the stage of completion of the work and the decrease in risk as the completion of construction nears.

Emission allowances and renewable certificates

Energy resources are measured at acquisition cost, calculated using the average weighted price method, or net realisable value, if the latter is lower. No adjustments to the value of energy sources that are part of the production process are made if it is expected that the finished products into which they will be incorporated will be sold at above cost.

Emission allowances acquired for the purpose of benefiting through fluctuations in their market price are measured at fair value with a credit or debit to the Consolidated income statement.

Emission allowances and renewable energy certificates are derecognised from the Consolidated statements of financial position when they are sold to third parties, have been delivered or expire. When the allowances are delivered, they are derecognised with a charge to the provision made when the CO2 emissions were produced.

3.i) Non-Financial assets impairment

Each closing date at every accounting year, the IBERDROLA Group reviews the carrying amounts of its non-current assets to determine whether there is any indication that those assets have suffered an impairment loss. If such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss, if it is necessary. In the case of assets that do not generate cash inflows that are largely independent from those generated by other assets, the IBERDROLA Group estimates the recoverable amount of the cash-generating unit to which they belong.

In the case of goodwill and other intangible assets which have not come into use or which have an indefinite useful life, the IBERDROLA Group performs the recoverability analysis systematically every year, except when there are indications of impairment in another moment, in which case recoverability analysis is performed at the same time.

For purposes of this recoverability analysis, goodwill is allocated to the cash generating units in which it is controlled for internal management purposes (Note 8).

The recoverable amount is the higher of the asset's fair value less costs to sell and its value in use, measured as the present value of its estimated future cash flows. The assumptions used in assessing value in use, in making the estimates include discount rates, growth rates and expected changes in selling prices and direct costs. The discount rates reflect the time value of money and the risks specific to each cash-generating unit. The growth rates and the changes in prices and direct costs are based on contractual commitments that have already been signed, information in the public domain, sector forecasts and the experience of the IBERDROLA Group (Note 13).

If the recoverable amount of an asset is less than its carrying amount, the difference is registered as a charge to the heading "Amortisation and provisions" of the Consolidated income statement.

The IBERDROLA Group distinguishes between impairment allowances and write-offs depending on whether the impairment is reversible or not reversible. A write-off involves a decrease of the carrying amount of assets, either because the impairments are considered definitive and non-reversible, or because the accounting standards establish that, such as the case of goodwill, or when considering that the value of the asset is not going to be recovered for its use or disposal. Impairment losses are due to the fact that future expected earnings to be obtained are less than the carrying amount.

Impairment losses recognised for an asset are reversed with a credit under the heading "Amortisation and provisions" of the Consolidated income statement when there is a change in the estimates concerning the recoverable amount of the asset, increasing the carrying amount of the asset, but so the increased carrying amount does not exceed the carrying amount that would have been determined if no impairment loss had been recognised.

3.j) Associates and joint ventures

Investments in associates and joint ventures are accounted for using the equity method. Under this method, investments are measured initially at acquisition cost, subsequently adjusted for changes to each company's equity, taking into consideration the percentage of ownership and, if applicable, any valuation adjustments.

Some investments in associates and joint ventures which in the context of these Consolidated annual accounts are immaterial are recorded at acquisition cost within "Non-current financial assets – Non-current equity investments" heading of the Consolidated statements of financial position.

The IBERDROLA Group regularly analyses the existence of impairment at its associates and joint ventures by comparing the total carrying amount of the associate or joint venture, (including goodwill), to its recoverable amount. If the carrying amount exceeds the recoverable amount, the IBERDROLA Group recognises the related impairment with a debit to the Consolidated income statement within the "Results of equity-accounted investees - net of taxes" heading.

3.k) Joint operation

A joint operation is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the assets, and obligations for the liabilities, relating to the arrangement. These Consolidated annual accounts include the proportional part of the assets, liabilities, income and expenses of the joint operation in which the IBERDROLA Group takes part in (Note 45).

3.l) Financial instruments

Classification and measurement of financial assets

The IBERDROLA Group measures its current and non-current financial assets in accordance with the criteria described below:

1. Assets at amortised cost

   Under this category financial assets that met the following conditions are included:

   - The assets are held within a business model where the objective is to hold the assets to obtain the contract cash flows, and

   - The contract terms produce, on specific dates, cash flows which are only payments of the principal and interest on the amount of the outstanding principal.

These assets are initially recognised at fair value plus transactions costs and are subsequently measured at amortised cost. Interests accrued on these liabilities are recognised in the Income statement using the effective interest rate method. However, trade loans maturing in less than a year that do not have a contractual interest rate, as well as advances and loans granted to employees, receivable dividends and the unpaid portion of equity instruments expected to be received in the short term, are measured both initially and subsequently at nominal value when the impact of not discounting cash flows is not significant.

2. Financial assets at fair value through profit and loss:

   The IBERDROLA Group includes in this category the derivative financial instruments which do not satisfy the conditions necessary for hedge accounting based on the requirements established for this purpose in IAS 9: “Financial instruments (Note 28).

   Assets at fair value with changes are recognised at fair value. The transaction costs directly attributable to purchase or issuing are recognised as an expense in the Income Statement insofar as they are incurred. The changes that occur in their fair value are allocated to the Consolidated income statement for the period in the headings “Finance costs” and “Finance income” of the Consolidated income statement, as may be applicable.

The IBERDROLA Group determines the most appropriate classification for each asset on acquisition and reviews the classification at each year end date.

Impairment of financial assets at amortised cost and contract assets

The IBERDROLA Group recognised valuation changes resulting from credit losses expected from financial assets and contract assets at amortised cost.

The IBERDROLA Group will apply the general model for calculation of expected loss on financial assets other than trade and lease receivables, where the simplified model will be applied.

Under the general model, credit losses expected in the next twelve months are recorded unless the credit risk of financial instruments has significantly increased from the initial recording. In such case, they will qualify as expected credit losses over the life of the asset. The IBERDROLA Group recognises that the credit risk of a financial instrument has not increased in a significant manner since its initial recognition if it is determined that at the reporting date it as a low credit risk.

Under the simplified model, they qualify as expected credit losses over the life of the asset. The IBERDROLA Group has adopted the practical solution whereby it calculates the expected credit loss on trade receivables by using a matrix of provisions based on its experience of losses historically adjusted for available prospective information

Valuation changes and reversals of financial assets at amortised cost and contract assets are recognised under the heading “Valuation changes in trade and other receivables” of the Consolidated income statement. Valuation changes and reversals of financial assets due to impairment of the other financial assets at amortised cost are recognised under the heading “Finance costs” of the Consolidated income statement (Note 43).

Derecognition of financial assets

Financial assets are derecognised when the rights to receive cash flows in relation thereto have extinguished or have been transferred or when the risks and profits are considered to have been substantially assigned arising from its ownership.

The derecognition of a financial asset implies the recognising in the Consolidated statement of profit the difference between its carrying value and the sum of the consideration received less directly attributable transaction costs, including assets obtained or assets assumed and any deferred loss or gain in other comprehensive profit.

Classification and measurement of financial liabilities

The IBERDROLA Group classifies all financial liabilities measured at amortised cost using the effective interest method, except for financial instruments registered at reasonable value.

Derecognition of financial liabilities

Financial liabilities are derecognised when they are extinguished, this means, when the obligation under the liability is discharged or cancelled or expires. Moreover, when a debt instrument between IBERDROLA and the counterparty is replaced by another, on substantial different terms, the original financial liability is derecognised and the new liability is recognised.

IBERDROLA considers that the conditions are substantially different if the current value of the discounted cash flows under the new conditions, including any net paid fee of any received fee, and using the original effective interest rate for the discount, differs at least 10 per cent from the current discounted value of the cash flows that still remain from the original financial liability.

The difference between the carrying value of the financial liability or of the part of it that has given below and the paid consideration, including the attributable transaction costs, and in which any transferred asset different from the assumed cash or liability is also included, recognised in the Consolidated income statement of the period in which it takes place.

When there is an exchange in debt instruments that do not have substantial changes, changed flows are deducted at the original interest rate, and every difference with the previous accounting value is recognised in the Consolidated statement of profit. In addition, costs or commissions adjust the carrying value of financial liabilities and are amortised at amortised cost method during the rest of the life of the changed liabilities.

Interests and dividends

Interest income is accrued on a time proportional basis, by reference to the outstanding principal and the applicable effective interest rate, which is the rate that exactly discounts estimated future cash receipts through the expected life of the asset to that asset's carrying amount.

Dividend income is recognised when the IBERDROLA Group companies are entitled to receive them.

Contracts to buy or sell non-financial items

The IBERDROLA Group performs a detailed analysis of all its contracts to buy or sell non-financial items to ensure they are classified correctly for accounting purposes.

As a general rule, those contracts that are settled net of cash or in another financial asset are classified as derivatives and are recognised and measured as described in this note, except for contracts entered into and held for the purpose of the receipt or delivery of a non-financial item in accordance with the IBERDROLA Group´s purchase, sale, or usage requirements.

Purchase agreements for non-finance components for which IFRS 9 is not applicable: “Financial instruments” qualify as own-use contracts and are recognised as the IBERDROLA Group receives or delivers the rights or obligations originating thereunder.

Derivative financial instruments and hedge accounting

Financial derivatives are initially recognised at acquisition cost in the Consolidated statement of financial position and the required value adjustments are subsequently made to reflect their fair value at all times. Gains and losses arising from these changes are recognised in the Consolidated income statement, unless the derivative has been designated as a cash flow hedge or a hedge of a net investment in foreign countries.

At the start of the hedge, the hedging relationships are designed and documented formally, as well as the purpose and strategy of risk management. Moreover, at the beginning of the hedging relationship it is assessed, as well as periodically, if the relationship complies prospectively with efficiency requirements.

The accounting treatment for hedging transactions is as follows:

1. Fair value hedges:

   Both changes in the fair value of the derivative financial instruments designated as hedging, or the exchange rate component of a monetary item in the case of non-derivative hedge instruments, such as changes in the fair value of the hedged item produced by the hedged risk are recognised with a charge or credit to the same caption of the Consolidated income statement.

2. Cash flow hedges:

   The IBERDROLA Group recognises under the heading "Valuation adjustments" the profit or loss proceeding from the assessment at fair value of the hedge instrument that corresponds to the part identified as effective hedge. The hedging portion considered ineffective is recognised under the headings “Finance income” and “Finance expense” of the Consolidated income statement.

   Accumulated loss or gain in “Valuation adjustments” is taken to the heading of the Consolidated income statement affected by the hedged item insofar as it has an impact on the Consolidated income statement. If a hedge of a future transaction results in a non-financial asset or liability, this balance is taken into account when determining the initial value of the asset or liability generating the hedging transaction.

3. Net investment hedges:

   The IBERDROLA Group recognises in "Translation differences" the profit or loss proceeding from the assessment at fair value of the hedge instrument that corresponds to the part identified as effective hedge. The hedging portion considered ineffective is recognised under the heading “Finance income” and “Finance expense” of the Consolidated income statement.

Discontinuation of hedging accounting

The IBERDROLA Group prospectively discontinues the fair value hedge accounting in the cases in which the hedging instrument matures, is sold, let go of or exercised, the goal of the risk management has changes, there is no financial relation between the hedge element and the hedged item, the credit risk effect dominates value changes, the hedge instrument matures or is liquidated or the underlying hedge ceases to exist.

When hedge accounting is discontinued, the cumulative amount at that date recognised under the headings "Valuation adjustments" and "Translation differences" in cash flow hedges and net investment hedges, respectively, is retained under that heading until the hedged transaction occurs, at which time the gain or loss on the transaction will be adjusted. If a hedged transaction is no longer expected to occur, the gain or loss recognised under the aforementioned heading is transferred to the Consolidated income statement.

Embedded derivatives

Embedded derivatives in financial liabilities and transactions whose main contract is out of the scope of IFRS 9: "Financial instruments" are recognised separately when the IBERDROLA Group considers that their risks and characteristics are not closely related to the financial instruments in which they are embedded, providing the entire contract is not measured at fair value through profit or loss.

Fair value of derivative financial instruments

The fair value of the derivative financial instruments is calculated as follows (Note 16):

- For derivatives quoted on an organised market corresponds to its market price at year end.
- To measure derivatives not traded on an organised market, the IBERDROLA Group uses assumptions based on market conditions at year end. In particular,
    - the fair value of Exchange rate swaps is calculated as the value discounted at market interest rates of the interest rate swap contract spread.
    - In the case of currency futures, they are measured by discounting the future cash flows calculated using the forward exchange rates at year end; and
    - the fair value of contracts to trade non-financial items falling under the scope of IFRS 9 is calculated on the basis of the best estimate of future price curves for the underlying non-financial items at the year end of the Consolidated annual accounts, using, wherever possible, prices established on futures markets.

These measurement models take into account the risks of the asset or liability, among these, the credit risk of both the counterparty (Credit Value Adjustment) and the entity itself (Debit Value Adjustment). The credit risk is calculated according to the following parameters:

- Exposure at default: the amount of the risk arising at the time of non-payment by a counterparty, taking into account any collateral or compensation arrangements connected to the transaction.
- Probability of default: the probability that a counterparty will breach its obligations to pay the principal and/or interests, depending mainly on the features of the counterparty and its credit rating.
- Loss given default: the estimated loss in the event of default.

Financial instruments offsetting principles

The financial assets and liabilities are offset and corresponding net amount is shown in the Statement of financial position if the company currently has a legally enforceable right to set off the recognised amounts and the intention either to settle them on a net basis or to realise the assets and settle the liabilities simultaneously.

3.m) Treasury shares

At year end, the IBERDROLA Group's treasury shares are included under the heading "Treasury shares" of the Consolidated statement of financial position and are measured at acquisition cost.

The gains and losses obtained on disposal of treasury shares are recognised under the heading "Other reserves" of the Consolidated statement of financial position.

3.n) Capital grants

This heading includes any non-repayable government grants for financing property, plant and equipment, including the cash received from the US Government in the form of Investment Tax Credits as a result of setting up wind power facilities.

All capital grants are taken to the heading "Other operating income" of the Consolidated income statement as the facilities are depreciated.

3.o) Facilities transferred or financed by third parties

According to the regulation applicable to electricity distribution in the countries in which IBERDROLA operates, the Group occasionally receives cash payments from third parties for the construction of electricity grid connection facilities or direct assignment of such facilities. Both the cash received and the fair value of the facilities received are credited to the heading "Facilities transferred" of the Consolidated statement of financial position.

These amounts are subsequently recognised under the heading "Other operating income" of the Consolidated income statement as the facilities are depreciated.

3.p) Post-employment and other benefits

Contributions to defined contribution post-employment benefit plans are registered as an expense under the "Personnel expenses" of the Consolidated income statement on an accrual basis.

In the case of the defined benefit plans, the IBERDROLA Group recognises the expenditure relating to these obligations on an accrual basis over the working life of the employees by commissioning the appropriate independent actuarial studies using the projected unit credit method to measure the obligation accrued at the year end. The provision recognised under this concept represents the present value of the defined benefit obligation reduced by the fair value of the related plans.

New measurement of net liabilities corresponding to defined provision commitments including positive or negative actuarial differences, the performance of the plan assets, excluding amounts included in the net interest on assets or liabilities and any changed impacting the limit of assets, are recognised under the heading “Other reserves”.

If the fair value of the assets exceeds the present value of the obligation, the net asset is not recognised in the Consolidated statement of financial position.

The IBERDROLA Group determines the net financial expense (income) related with their commitments for pensions by applying the discount rate used in its measurement on their value at the beginning of the period once considering the changes in the net commitments for pensions made during the period in terms of contributions and repayments made. The net interest and the amount corresponding to other expenses related with the commitments undertaken are recorded in the Consolidated income statement.

The IBERDROLA Group determines the discount rate with reference to the market yields at the end of the reporting period, corresponding to the bonds or business obligations of high credit quality (The Iberdrola Group considers rating equivalent to AA/Aa). In the countries in which does not exist a deep market to such bonds and obligations, the discount rate is determined with reference to Government bonds.

For the Eurozone, United Kingdom and the United States of America, there is a deep bond market with a sufficient period of maturity to cover all payments expected. In reference to the countries related to the Eurozone, the depth of the bond or obligation market is evaluated at the level of the monetary union and not for the particular country. In the case of Brazil, the discount rate has been determined taking into account the Brazilian sovereign credit, because a deep corporative market does not exist as they don´t satisfy the indicated credit qualifications.

The IBERDROLA Group applies a weighted average discount rate that reflects the estimate timing and amount of benefit payment, as well as the currency in which the benefits are to be paid.

The calculation methodology is mainly based on the following principles:

- The universe and spectrum of the outstanding bonds that meet the criteria of an AA/Aa rating is generated. The source of the information used is Bloomberg. The IBERDROLA Group has adopted the notional issuances that are higher than Euros 50 million or its equivalent in local currency as the selection criteria.

- Once the bonds' database is obtained, the result is screened and the bonds that show any deficiencies are eliminated.

- The sample is grouped based on the bonds' duration and the return on each duration and outstanding nominal amount of the issuance is shown.

- The benefit payment is calculated using a mathematical formula, i.e., the discrete minimum approximation of the quadratic function, resulting in a market return curve based on the duration. The market curve result will provide the discount factors for each future maturity date of the bonds.

- For markets in which government bonds or corporate bonds with maturity dates beyond 25/30 years are not available, bench marking sovereign rates at said maturity periods are combined with the AA corporate credit spread.

The discount rate reflects the time value of money and estimated schedule for the benefit payments. However, it does not reflect the actuarial risk, investment, credit or deviation in compliance with the actuarial assumptions risk.

3.q) Collective redundancy procedure and other early retirement plans for employees

IBERDROLA recognises termination benefits when the Group can no longer remove the offer or when the expenses of restructuring are recognised from which the payment of severance payments arises, in the case that said recognition is made previously.

The payments related with restructuring processes are recognised when the IBERDROLA Group has an implicit debenture, i.e., at the time that there is a detailed formal plan to perform the restructuring (in which are identified, at least, the company activities, or part of them, implied, the main locations affected, the location, function and approximate number of employees that will be paid for the termination of their contracts, the repayments that will be carried out, and the dates on which the plan will be implemented) and has generated a valid expectation amongst the affected personnel which the restructuring will be carried out, either for having started to execute the plan or for having announced its main characteristics.

The IBERDROLA Group recognises the full amount of the expenditure relating to these plans when the obligation arises by performing the appropriate actuarial studies to calculate the present value of the actuarial obligation at year end. The actuarial gains and losses are recognised in the Consolidated income statement.

3.r) Production facility closure costs

The IBERDROLA Group will incur in several decommissioning costs of its production plants, among which include those arising from necessary tasks to fit the land where they are located. Additionally, in accordance with the current legislation, the Group must perform certain tasks prior to the decommissioning of its nuclear plants, of which Empresa Nacional de Residuos Radioactivos, S.A. (hereinafter, ENRESA) is responsible for.

The estimated present value of these costs is capitalised with a credit to “Provisions – Other provisions” at the beginning of the useful life of the related asset (Note 26).

This estimate is subject to annual revision so that the provision reflects the present value of the full amount of the estimated future costs. The value of the asset is only adjusted for variances with respect to the initial one.

The IBERDROLA Group applies a risk-free rate to financially update the provision because the estimated future cash flows to satisfy the obligation reflect the specific risks of the corresponding liability. The risk-free rate used corresponds to the yield at year end on which reports, government bonds with enough depth and solvency in the same currency and similar due date to the obligation.

Any change in the provision as a result of its discounting is recognised under the heading “Finance cost” of the Consolidated income statement.

3.s) Other provisions

The IBERDROLA Group recognises provisions to cover present obligations, whether these are legal or implied, which arise as a result of past events, provided that it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation (Note 26).

A provision is recognised when the liability or obligation arises, with a charge to the relevant heading of the Consolidated income statement depending on the nature of the obligation, for the present value of the provision when the effect of discounting the value of the obligation to present value is material. The change in the provision due to its discounting each year is recognised under the heading “Finance cost” of the Consolidated income statement.

These provisions include those recorded to cover environmental damage, which were determined on the basis of a case-by-case analysis of the situation of the polluted assets and the cost of decontaminating them.

3.t) Current and non-current debt classification

In the Consolidated statement of financial position debts are classified by their maturity date at year end. Debts that are due within twelve months are classified as current items and those due within more than twelve months as non-current items.

3.u) Recognition of income from customer contracts

Revenue from ordinary activities is recognised in such a manner that it depicts the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services.

In the case of contracts with customers with several performance obligations, income is assigned to each performance obligation based on individual sale price at the beginning of the contract. The individual sale price is estimated based on the observable price of sale of goods of services transactions when they are sold separately under similar circumstances to similar customers. If there are no observable prices in the market, the price is estimated based on the most adequate method based on the information available.

When the IBERDROLA Group acts as principal, it recognises ordinary income in the gross amount of the consideration it expects to have right in exchange for the goods or services transferred, whereas when it acts as agent, it recognises ordinary income in the amount of any payment or commission it expects to have right in exchange for organising for a third party the supply of the goods or services.

The IBERDROLA Group presents contracts with customers in the Consolidated statement of financial situation as a contract assets or liabilities depending on the relationship between the IBERDROLA Group’s performance and the payment settled by the customer.

- The contract with the customer is recognised as contract liabilities when the customer has paid a consideration before the control of the goods or services has been transferred to the customer, so there is an obligation from IBERDROLA Group’s side to transfer the goods or services for which it has already received a consideration.

- Contracts with customers are recognised as contract assets when the IBERDROLA Group has completed the performance by transferring the control of the goods or services to the customer before the customer has settled the consideration, so the IBERDROLA Group has a right to a consideration in exchange for the goods or services transferred to the customer.

Ordinary income beyond the scope of IFRS 15 "Ordinary income from contracts with customers" related to lease contracts (Note 3.f) and derivative financial instruments (Note 3.l) are recognised in accordance with the applicable accounting rules.

3.v) Transactions in foreign currency

Transactions carried out in currencies other than the functional currency of the Group companies are recorded at the exchange rates prevailing at the transaction date.

The monetary assets and liabilities denominated in foreign currency have converted to euros applying the existing rate at the close of the financial year, while the non-monetary ones assessed at historical cost are converted applying the exchange rates applied on the date on which the transaction took place.

During the year, the differences arising between the exchange rates at which the transactions were recorded and those in force at the date on which the related proceeds are made are charged or credited, as appropriate, to the Consolidated income statement.

Those foreign currency transactions in which the IBERDROLA Group has decided to mitigate translation risk through the use of financial derivatives or other hedging instruments are recorded as described in Note 3.l.

3.w) Income Tax

Since 1986, IBERDROLA has filed Consolidated Tax Returns with certain Group companies. Foreign companies are taxed according to the current legislation of their respective jurisdiction.

The expense or income for the Corporate income tax includes both the current and deferred tax. The tax on the current or deferred earnings are recognised in the Consolidated income statement, unless arising from a transaction or economic success that has been recognised in the same year or in a different one, against net equity or from a business combination.

The assets or liabilities from tax on the current earnings are assessed for the quantities expected to pay or recover from the tax authorities, using the regulations and tax rates that are approved or are about to be approved on the closing date.

The recognition of anticipated and deferred taxes based on the differences between carrying amount of assets and liabilities and its tax base, using the tax rates objectively expected to be in force when the assets and liabilities are realised.

The IBERDROLA Group recognises deferred tax liabilities in all cases but when:

- arise from the initial recognition of the goodwill or from an asset or liability in a transaction that is not a business combination and on the date of the transaction does not affect the accounting income or the taxable income;

- correspond to temporary differences related with investments in subsidiary companies, associates and joint ventures over which the Group has the ability to control the moment of their reversal and was not probable that their reversal occurred in a foreseeable future.

The IBERDROLA Group recognises deferred tax assets in all cases but when:

- it is probable that there are sufficient future tax earnings for clearing or when the tax legislation includes the possibility of future conversion of assets for deferred tax in a credit due to the public administration. However, the deferred tax assets that arise from the initial recognising of assets or liabilities in a transaction that is not a business combination and on the date of the transaction does not affect the accounting income or the taxable income, are not recognised;

- correspond to temporary differences related with investments in subsidiaries, associates and joint ventures inasmuch as the temporary differences will not be reinvested in a foreseeable future and are not awaiting creating future positive tax earnings to clear the differences.

Deductions in order to avoid double taxation and other tax credits as well as tax relief earned as a result of economic events occurring in the year are deducted from the Income Tax expense, unless there are doubts as to whether they can be realised.

The existence of uncertainties in the treatment of transactions for tax purposes is considered in the taxable events, credits for negative taxable income or applied deductions. In those cases, in which the asset or the liability for tax calculated with these criteria, exceeds the amount in the self-settlements, this is presented as current or not current on the Consolidated statement of financial position taking into account the expected recovery or settlement date, considering, where applicable, the amount of the corresponding interest on arrears on the liability as earned in the profit and loss account. The IBERDROLA Group records the changes in facts and circumstances regarding tax uncertainties as a change in the estimate.

3.x) Final radioactive waste management costs

On 8 November 2003, the Royal Decree 1349/2003 was published regulating the ENRESA activities and its financing. This royal decree grouped together the previous legislation regulating the activities that ENRESA develops as well as its financing, and repeals, inter alia, the Royal Decree 1899/1984, of 1 August.

Meanwhile, the Royal Decree-law 5/2005 and the Law 24/2005 establish that the costs relating to the management of radioactive waste and spent fuel from nuclear plants, and to the dismantling and closure of the plants attributable to their operation and incurred after 31 March 2005, will be financed by the owners of the nuclear plants in use.

On the other hand, on 7 May 2009, the Royal Decree-law 6/2009 was published, adopting various energy sector measures and approving the social tariff. The principal measures introduced are as follows:

- Necessary costs incurred in the management of radioactive waste and nuclear fuel at nuclear power stations that are definitively dismantled before the state-owned radioactive waste management company ENRESA begins operating, which had not yet been done at the date of these Consolidated annual accounts, and all necessary costs incurred in dismantling and closing these power stations, will be treated as diversification and capacity guarantee costs.

Amounts used to cover the cost of managing radioactive waste generated by research activities directly related to nuclear electricity generation and the costs deriving from the reprocessing of spent fuel sent overseas prior to the entry into force of the Electricity Industry Law 54/1997, and all other costs that may be specified by the royal decree, shall also be considered diversification and capacity guarantee costs.

- Amounts used to register provisions to cover the costs incurred in managing radioactive waste and spent fuel generated at operational nuclear power stations after the establishment of ENRESA as well as dismantling and closure costs will not be treated as supply diversification and security costs, since these will be financed by the owners of the nuclear power stations while they are operational, irrespective of the date on which they are generated.

- The balance of ENRESA's provision remaining after deduction of the amounts needed to cover the supply security and diversification costs will be used to cover costs not included in this category.

- To cover the costs associated with nuclear power plants in operation, the companies owning the stations must pay a charge directly proportional to the volume of energy generated at each plant in accordance with the methodology proposed for each plant.

After a detailed analysis of the impact of the Royal Decree-law 6/2009, the IBERDROLA Group considers that the rate is the best estimate available of the accrued expenses originated for that royal decree-law.

3.y) Earnings per share

Basic earnings per share are calculated by dividing the net profit for the year attributable to the Parent company by the weighted average number of ordinary shares outstanding during the year, excluding the average number of shares of the parent company held by Group companies (Notes 20 and 53).

Meanwhile, diluted earnings per share are calculated by dividing the net profit for the year attributable to the parent company and by the weighted average number of ordinary shares outstanding during the year, adjusted by the weighted average number of ordinary shares that would have been outstanding assuming the conversion of all the potential ordinary shares into ordinary shares of IBERDROLA. For these purposes, it is considered that shares are converted at the beginning of the year or at the date of issue of the potential ordinary shares, if the latter were issued during the current period.

3.z) Non-current assets held for sale and discontinued operations

If the carrying amount of a non-current asset (or a disposable group of assets) is recovered principally through its sale rather than through its continued use, the IBERDROLA Group classifies it as held for sale and values it at the lower of its carrying amount and its fair value less the costs of sale.

The impairment losses related with the disposal asset groups are assigned first to the goodwill and then to the rest of assets and liabilities proportionally. Value adjustments that could affect the stocks, financial assets, deferred tax assets, assets related with commitments with staff are not recognised. These assets are assessed in accordance with the principles contained in the previous sections. The losses recognised at the time of initial classification in this sub-heading and the capital gains and/or losses that are highlighted later are recognised in the Consolidated income statement.

The elements classified as non-current kept for their disposal are not amortised.

A discontinued operation is a component of the entity that either has been sold or disposed of by other means, or is classified as held for sale and:

- represents a business line or geographical area that is significant and can be considered separately from the rest;
- is part of a single and coordinated plan to sell or dispose by other means a business line or geographical area that can be considered separately from the rest; or
- is a subsidiary acquired exclusively with a view to resale.

If discontinued operations are deemed to exist, the IBERDROLA Group recognises a single heading in the Consolidated income statement comprising the total of:

- profit or loss after tax from discontinued operations, and
- profit or loss after tax recognized by measurement at fair value less costs of sale, or sale or disposal by other means of the assets or disposable groups of assets that constitutes the discontinued operation.

3.aa) Consolidated statements of cash flow

In the Consolidated statements of cash flow, which were prepared using the indirect method, the following terms are considered:

- Operating activities: the typical activities of the Group companies, as well as other activities that are not investing or financing activities.
- Investing activities: the acquisition, sale or disposal by other means of long-term assets and other investments not included in cash and cash equivalents.
- Financing activities: activities that result in changes in the size and composition of the equity and liabilities of the company that are not operating activities.

3.ab) Share-based employee compensation

The delivery of IBERDROLA shares to employees as compensation for their services is recognised under the heading “Personnel expenses” of the Consolidated income statement as the employees perform the remunerated services, with a credit to equity under “Equity – Other reserves” of the Consolidated statement of financial position at the fair value of the equity instruments on the delivery date, defined as the date the IBERDROLA Group and its employees reach an agreement establishing the terms of the share delivery.

Fair value is determined in reference to the market value of shares at the concession date deducting estimated dividends, to which employees are not entitled, during the irrevocability period. Market conditions and undetermined irrevocability conditions are taken into consideration on the date of the initial valuation and are not subject to subsequent adjustment. The rest of the conditions are considered adjusting the number of equity instruments included in the determination of the transaction amount, so that finally, the amount recognised for the services received, is based on the number of equity instruments that will prospectively be consolidated.

If remuneration based on equity instruments is paid in cash, the amount booked as "Personnel expenses" in the Consolidated income statement is credited to "Non-current financial liabilities - Other non-current financial liabilities" or "Current financial liabilities - Other current financial liabilities" on the liabilities side of the Consolidated statement of financial position, as appropriate. The fair value of the cash-settled compensation is remeasured at each reporting date.

The equity instruments retained to make the payment of the corresponding tax obligations to the employee do not change the qualification of the plan as settled on equity instruments.

4. FINANCING AND FINANCIAL RISK POLICY

The IBERDROLA Group is exposed to risks inherent to the different countries, industries and markets in which it operates and in the businesses it carries out, which could prevent it from achieving its objectives and executing its strategies successfully. Section 4 of the consolidated directors' report contains additional information on the Group's risks.

In particular, the *Financing and Financial Risk Policy* of the IBERDROLA Group approved by the Board of Directors identifies the risk factors described below. The IBERDROLA Group has an organisation and systems which allow the financial risks to which the group is exposed to be identified, measured and controlled.

Interest rate risk

The IBERDROLA Group is exposed with regards to its financial liabilities to the risk of fluctuations in interest rates affecting cash flows and fair value.

In order to adequately manage and limit this risk, the IBERDROLA Group yearly determines the desired structure of the debt between fixed and floating interest rate. Once the target structure has been defined, the Group carries out a dynamic management due to which the actions to be taken throughout the year are limited: new sources of financing at a fixed or floating rate and/or the use of interest rate derivatives, whether to set interest rate (or limit its variability) of variable rate debt or to change debt from fix rate to variable rate. Derivatives may also be used to establish the cost of future debt emissions, provided they are highly probable in accordance with the budget or the strategic plan in force.

The debt structure at 31 December 2019 and 2018, after taking into account hedges via derivatives (Note 28), is as follows:

Thousands of Euros	**31.12.2019**	**31.12.2018**
Fixed interest rate	23,044,770	22,081,044
Floating interest rate	15,881,520	15,245,428
Loans and borrowings and obligations or other securities (Note 27)	**38,926,290**	**37,326,472**
Cash and cash equivalents (Note 19)	2,113,279	2,801,157
CSA Derivatives value guarantee deposits (Notes 14.b and 20)	112,550	77,840
Total net loans and borrowings and obligations or other securities	**36,700,461**	**34,447,475**

Floating rate borrowings and cash placements of IBERDROLA Group are basically pegged to market rates (mainly Euribor, Libor-pound sterling, Libor-dollar and the CDI in the case of the debt of Brazilian subsidiaries).

IBOR (Interbank offered rates) Reform

The global reform of benchmark interest rates is crucial and is continuously followed-up by IBERDROLA Group since interbank interest rates (IBORs) are key benchmarks in many contracts of the Group.

In 2019, European institutions continued working on the reform of interest rate indices and in the transition towards alternative indices adapted to the Benchmarks - Regulation (EU) 2016/1011. The European Central Bank started publishing on 2 October 2019 the €STR (*Euro short-term rate*), a Euro short-term interest rate reflecting the financing cost of credit entities in the Eurozone in the wholesale market of daily deposits. EONIA, on the other part, is calculated as €STER +8.5 basis points until it is suspended following its publication on 2 January 2022. In the same line work has been carried out in the United States with the SOFR (*Secured Overnight Financing Rate*) and the United Kingdom with the reformed SONIA (*Sterling Overnight Index Average*), referenced to the RFR (*Risk Free Rate*).

With regards to Euribor, a new hybrid calculation methodology has been developed in 2019 based on real market transactions distinguishing three levels of estimates based on the observability of said transactions. This new methodology was approved by the authorities, so it is not required to amend the existing contracts. For the remaining IBORs, the cease of the publication of 31 December 2021 is expected. For this reason, the main market intervening parties (regulators, central banks, banks, institutions, ...) are working in the definition of the equivalences between those IBORs and the new RFR references.

As a result, IBERDROLA Group considers the on-going IBOR rates reform a risk, due to the impact it may have on any good linked to said references and, more specifically, due to a hypothetical discontinuation of cash flow hedges. In face of the existing uncertainty during the transition, IBERDROLA Group has initiated an action plan with the purpose of minimising any potential negative risk, identifying first the transactions affected, quantifying its notional and reviewing, with the counterparties, the drafting of the agreements.

At 31 December 2019, no amendments to the terms and conditions related to the on-going IBOR reform have been made.

<u>Exchange rate risk</u>

IBERDROLA Group is exposes to currency exchange rate variations used in the different financing and operating transactions compared to the operating currencies used by the different Group companies. Said operating currencies are mainly the Euro, the US dollar, the Sterling Pound and the Brazilian Real.

Moreover, IBERDROLA Group is exposed to exchange rate risks as a result of net investments in foreign companies (mainly Scottish Power, Avangrid, Iberdrola México and Neonergía) arising from fluctuations in cash exchange rate differences of operating currencies other than the Euro. Currency exchange variations imply a risk affecting the valuation of net assets and the translation of profit, impacting IBERDROLA Group's equity situation.

The IBERDROLA Group mitigates exchange rate risks ensures that all its economic flows are carried out in the currency of each Group company, maintaining an adequate percentage of debt in foreign currency and/or through derivatives.

Commodity price risk

The IBERDROLA Group's activities require the acquisition and sale of raw materials (natural gas, coal, fuel oil, gas oil, emission allowances, etc.), whose price is subject to the volatility of international markets (global and regional) where those raw materials are traded.

To reduce uncertainty, mainly linked to expected margin of scheduled IBERDROLA Group transactions, as a result of the volatility of said markets, the Group subscribes financial derivatives to close the cost of own generation and purchase of energy associated to the expected sales of gas and electricity to customers.

Derivatives for managing risk

In relation to the derivatives subscribed to mitigate the abovementioned interest rate, exchange rate and commodities prices risks, in accordance with the risk management policies developed by IBERDROLA Group, the critical terms of hedging instruments are set in terms and conditions equivalent to those of the hedged item, among other:

- The notional value of the hedging instrument is equal to or less than that of the hedged element.
- The underlying currency of the hedging instrument is the same as that of the hedged element.
- The term of the hedging instrument is equal to or less than that of the hedged element.
- The variable benchmark interest rate applicable to the hedging instrument is the same as that of the hedged operation, if appropriate.
- The interest frequency of the hedging instrument is the same as that of the hedged element.

Derivatives subscribed for interest rate hedges, exchange rate hedges and commodity hedges are described in Note 28.

Liquidity risk

Exposure to adverse situations in the debt or capital markets or the IBERDROLA Group´s economic and financial situation can hinder or prevent the IBERDROLA Group from obtaining the financing required to properly carry on its business activities.

IBERDROLA Group’s liquidity policy is designed to ensure that it can meet its payment obligations without having to obtain financing under unfavourable terms. For this purpose, various management measures are used, such as the arrangement of committed credit facilities of sufficient amount, term and flexibility, diversification of the hedge of financing needs through access to different markets and geographical areas, and diversification of the maturities of the debt issued.

For 2020 the IBERDROLA Group is expected to face the ordinary investment program established with the cash flow generated from its operations and access to the bank financial markets, capital markets and supranational moneylenders (such as EIB), even though, the Group has the treasury and sufficient credits and loans available to meet these investments.

At 31 December 2019 and 2018, the IBERDROLA Group had undrawn loans and credit facilities amounting to Euros 12,186,633 and 10,210,609 thousand, respectively. The breakdown is shown below by maturities of the liquidity position at 31 December 2019 and 2018, considering the balance of the heading "Cash and cash equivalents" of the Consolidated statement of financial position:

Thousands of Euros	2019	2018
Available maturity		
2019	–	671,213
2020	457,631	193,605
2021 (1)	100,259	9,345,791
2022 on	11,628,743	–
Total	**12,186,633**	**10,210,609**
Cash and cash equivalents (Note 19)	2,113,279	2,801,157
Liquidity position	**14,299,912**	**13,011,766**

(1) The information corresponding to 2018 refers to maturity dates from 2021 on.

Credit risk

The IBERDROLA Group is exposed to the credit risk arising from the possibility that counterparties (customers, financial institutions, partners, insurers, etc.) might fail to comply with contractual obligations.

Risk is properly managed and limited, depending on the type of transaction and the creditworthiness of counterparties. In particular, there is *Corporate credit risk policy* setting the framework and action principles for a correct risk management, developed at business and country level (admission criteria, approval flows, authority levels, rating tools, exposure measurement methodologies, etc.) through procedures.

Below is a breakdown by country of balances at 31 December 2019 and 2018 of financial assets and contract assets:

	Other non-current investments (Note 14.b)		Other current financial investments (Note 14.b)		Trade receivables and other non-current assets (Note 15)		Trade and other receivables current (Note 15)	
Thousands of Euros	31.12.2019	31.12.2018	31.12.2019	31.12.2018	31.12.2019	31.12.2018	31.12.2019	31.12.2018
Spain	78,575	94,686	397,427	186,617	466,959	339,815	2,658,350	2,369,953
United Kingdom	126	61	114,497	40,773	108,149	80,354	1,147,153	1,004,961
United States	53,418	55,187	47,656	65,044	17,821	10,247	991,722	1,021,981
Mexico	9,220	5,947	10,151	2,193	345,462	303,212	156,691	137,505
Brazil	2,857,998	2,514,505	120,974	276,831	1,908,080	76,813	1,320,096	1,227,174
Iberdrola Energía Internacional (IEI)	19,885	15,001	1,856	110	4,499	4,136	400,275	336,808
Total	**3,019,222**	**2,685,387**	**692,561**	**571,568**	**2,850,970**	**814,577**	**6,674,287**	**6,098,382**

Balances of "Other current and non-current financial investments" correspond to concession agreements executed with Brazilian public administrations (Note 12) and receivables related to regulated activities in Spain. With regard to credit risk on trade receivables, the historical cost of defaults has remained moderate, below 1% of total turnover of this activity at global level.

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With regard to the heading "Cash and cash equivalents" of the Consolidated statement of financial position, the credit quality of the counter parties is BBB+ according to the Standard and Poor's rating.

IBERDROLA and the United Kingdom leaving the EU (BREXIT)

Following a long process that started with the referendum in 2016, on 31 January 2020 the effective exit of the United Kingdom from the European Union took place under a provisional framework governing the relationships between the two, to be in force until 31 December 2020.

By virtue of said framework and for the purposes of the relationships between both parties, the United Kingdom will continue being considered another European Union country, although it will be able to close trade agreements with third parties. The purpose of this transition periods is for both parties to reach a trade agreement on their relationships from 1 January 2021. If no agreement is reached, the rules governing their relationship will be those of the World Trade Organisation, including its corresponding customs fees and customs controls.

Therefore, risks will have an impact on both the Group's activities in the United Kingdom and those of the IBERDROLA Group as a whole and will depend on whether an agreement is reached or not and, in case of agreement, on the conditions thereof.

In terms of the potential impacts to ScottishPower, for some time the business has been proactively analysing the performance of negotiations through the multidepartment group and has identified the most relevant risks and the response plans associated. It must be highlighted that risks may arise directly from the lack of agreement but also from the direct impact of other ScottishPower sectors.

Some of the key risks taken into consideration are:

Risk	Measures
Market reactions to the events during the negotiation (such as Sterling Pound and interest rate). In the longer term, there may be positive or negative impact on the UK's economy and the political and regulatory framework under which the Group operates.	Besides monitoring law developments and on-going measures related to Brexit, the Group's *Financial risk policy* bears in mind most common financial risks in the short-term. Any impact in the long-term on the British economy and its impact on the Group and its businesses will be managed based on future performance. A wide ScottishPower's regulatory team is monitoring any potential risk that may arise and is proactively in touch with regulators.
Interruption of supply change: delays in the import of equipment and components essential for the main maintenance projects and construction projects which may cause delays and extra costs.	Key materials and supplies have been identified placing additional orders to increase stock levels before 31 January 2020. This process could repeat itself at the end of 2020 based on the evolution of the negotiations.
Exposure to exchange rates and entry into force of additional custom fees if WTO's rules are applied.	Exchange rates have been covered by existing hedge contracts. All critical contracts have been reviewed from a legal perspective in order to determine potential exposure to additional fees.

Additionally, risks have been identified and action plans have been implemented regarding employee movement, transfer of personal data and potential impact on existing trading contracts and contracts of any other nature.

With regards to the possible impact on IBERDROLA Group, it must be highlighted that the main risks to which the Group is subject result from a greater or lower growth in the countries where the Group operates, directly or indirectly affected by Brexit, and the Sterling Pound / Euro translation risk of our businesses in the UK, which are mitigated by:

- ScottishPower represents 16.53% of the reported Groups' total EBITDA.
- Approximately 90% of said EBITDA is generated by the regulated business of distribution and transmission and the output of renewable energy.
- Said regulated business have stable long-term regulatory frameworks with updated income, totally or partially, based on the evolution of inflation or interest rates in the United Kingdom no subject to the risk of greater or lower demand growth at UK level.

Sensitivity analysis

The following sensitivity analyses show, for each type of risk (without reflecting the interdependence among risk variables), how income for the year and equity might be affected by reasonably possible changes in each risk variable at 31 December 2019 and 2018.

- Interest rates:

For calculating the sensitivity of consolidated profit to variations in interest rates, an increase or decrease of 25 basis points is used (the same for all currencies) on the average balance of net debt at variable rate, once derivative hedges have been taken into consideration, For calculating the sensitivity of equity, an increase or decrease of 25 basis points is used (the same for all currencies) on the fair value of cash flow hedges at reporting date, whose variation in fair value is recognised in equity.

The sensitivity of the consolidated profit and the equity to the variation of the interest rates is as follows:

Thousands of Euros	Increase/ decrease in interest rate (basis points)	Impact on profit of the year before taxes Income/(Expense)	Direct impact on equity before taxes	Impact on equity before taxes
2019	25	(34,727)	101,914	67,187
	(25)	34,727	(101,914)	(67,187)
2018	25	(34,929)	112,923	77,994
	(25)	34,929	(112,923)	(77,994)

- Exchange rates:

For calculating the sensitivity of consolidated profit to variations of exchange rates, a depreciation or appreciation of 5% is applied mainly on the profit of foreign subsidiary companies whose operating currency is different to the Euro (net of subscribed economic hedges), given the risk originated from other transactions in foreign currency, either due to financing or business operation, are covered by exchange rate hedges. The sensitivity of equity to exchange rates is calculated applying an appreciation or depreciation of 5% on net translation differences and on cash flow derivative hedges whose variation in fair value are recognised in equity.

The sensitivity of the consolidated profit and equity of the IBERDROLA Group to changes in the dollar/euro, sterling pound /euro and Brazilian real/euro exchange rate is as follows:

Thousands of Euros	Change in the dollar/euro exchange rate	Impact on profit of the year before taxes Income/(Expense)	Direct impact on equity before taxes	Impact on equity before taxes
2019	Depreciation 5%	(12,159)	(865,113)	(877,272)
	Appreciation 5%	1,173	956,177	957,350
2018	Depreciation 5%	(3,296)	(774,761)	(778,057)
	Appreciation 5%	3,643	856,315	859,958

Thousands of Euros	Change in the sterling pound/euro exchange rate	Impact on profit of the year before taxes Income/(Expense)	Direct impact on equity before taxes	Impact on equity before taxes
2019	Depreciation 5%	(11,166)	(693,359)	(704,525)
	Appreciation 5%	7,418	766,344	773,762
2018	Depreciation 5%	(4,137)	(583,133)	(587,270)
	Appreciation 5%	4,573	644,515	649,088

Thousands of Euros	Change in the Brazilian real/euro exchange rate	Impact on profit of the year before taxes Income/(Expense)	Direct impact on equity before taxes	Impact on equity before taxes
2019	Depreciation 5%	(4,050)	(232,823)	(236,873)
	Appreciation 5%	3,917	257,330	261,247
2018	Depreciation 5%	(1,744)	(221,775)	(223,519)
	Appreciation 5%	1,927	245,120	247,047

- Raw materials:

The sensitivity of the consolidated profit and the equity to changes in the market prices of the main raw materials is as follows:

		Thousands of Euros		
Year 2019	Variation in price	Impact on profit of the year before taxes Income/(Expense)	Direct impact on equity before taxes	Impact on equity before taxes
Gas	5%	511	13,796	14,307
	(5)%	(511)	(13,796)	(14,307)
Electricity	5%	(2,356)	30,100	27,744
	(5)%	2,360	(30,337)	(27,977)
CO_2	5%	–	–	–
	(5)%	–	–	–
Coal	5%	(72)	–	(72)
	(5)%	72	–	72

Year 2018	Variation in price	Thousands of Euros		
		Impact on profit of the year before taxes Income/(Expense)	Direct impact on equity before taxes	Impact on equity before taxes
Gas	5%	(2,356)	30,100	27,744
	(5)%	2,360	(30,337)	(27,977)
Electricity	5%	5,825	71,949	77,774
	(5)%	(5,581)	(71,949)	(77,530)
CO_2	5%	(171)	–	(171)
	(5)%	171	–	171
Coal	5%	(552)	621	69
	(5)%	552	(621)	(69)

5. USE OF ACCOUNTING ESTIMATES

The most significant estimates made by the IBERDROLA Group in these Consolidated annual accounts are as follows:

- Unbilled power supplied:

  The revenue figure for each year includes an estimate of the power supplied to customers of liberalised markets but not billed because it had not been measured at year end for reasons relating to the regular meter-reading period. The estimated unbilled power at 31 December 2019 and 2018 amounted to 2,137,292 and 2,066,981 thousand, respectively. This amount is included under the heading "Trade and other receivables" of the Consolidated statements of financial position at 31 December 2019 and 2018 (Note 15).

- Settlements relating to regulated activities in Spain:

  At the end of each year, the IBERDROLA Group estimates the definitive settlements relating to regulated activities in Spain for that year, establishing the shortfall in revenue, if any, that corresponds together with the amount that will be recovered in the future on the basis of the announcements made by the authorities and the periods during which this recovery will take place (Note 36).

  These estimates are made on the basis of the provisional settlements published up to the date of formulation of the Consolidated annual accounts and all available information on the sector.

- Provisions for contingencies and expenses:

  As indicated in Note 3.s, the IBERDROLA Group recognises provisions to cover present obligations arising from past events. For this purpose, it must assess the outcome of certain of legal or other nature procedures that are ongoing at the date of formulation of these Consolidated annual accounts based on the best information available.

- Useful lives:

  The IBERDROLA Group's tangible assets operate over very prolonged periods of time. The Group estimates their useful lives for accounting purposes (Note 3.e) taking into account each asset's technical characteristics, the period over which they are expected to generate economic benefits and the applicable legislation in each case.

- Costs incurred in closing and dismantling electrical energy facilities:

  The IBERDROLA Group periodically revises the estimates made concerning the costs to be incurred in the dismantling of its facilities.

- Provision for pensions and similar commitments and restructuring plans:

  At each year end, the IBERDROLA Group estimates the current actuarial provision required to cover obligations relating to restructuring plans, pensions and other similar obligations to its employees. In several cases, it involves the valuation of the assets affected to certain plans. In making these estimates, the IBERDROLA Group receives advice from independent actuaries and expert appraisers (Notes 3.p, 3.q and 25).

- Fair value of investment property:

  The IBERDROLA Group appraises its investment property each year.

- Impairment of assets:

  As described in Notes 3.i and 13, the IBERDROLA Group, in accordance with applicable accounting regulations, tests the cash-generating units that require testing for impairment each year. Specific tests are also conducted if indications of impairment are detected. These impairment tests require estimating the future cash flows of the businesses and the most appropriate discount rate in each case. The IBERDROLA Group believes its estimates in this respect are appropriate and consistent with the current market situation and reflect its investment plans and the best available estimate of its future expense and income. Also, the discount rates reflect the risk of cash-generating units.

- Determining lease term:

  With the entry into force of IFRS 16 (Note 2.a), in the determination of the lease term, the IBERDROLA Group considers all relevant facts and circumstances that create a significant economic incentive for the lessee to exercise the renewal option or not to exercise the cancellation option. Renewal or termination options are only included in the determination of the lease term if it is reasonably certain that the contract will be extended or will not be cancelled. In the event that a significant event or a significant change in circumstances occurs that may affect the term, the IBERDROLA Group reviews the valuations made in the determination of the lease term.

6. CHANGES TO THE SCOPE OF CONSOLIDATION AND OTHER SIGNIFICANT TRANSACTIONS

In 2019 the IBERDROLA GROUP carried out the following transactions:

- On 6 March 2019, Iberdrola España, S.A.U., I-DE Redes Eléctricas Inteligentes, S.A.U. (formerly, Iberdrola Distribución Eléctrica, S.A.U.) and Iberdrola Generación, S.A.U., belonging to the IBERDROLA Group, reached an agreement with Lyntia Networks, S.A.U. for the assignment of the right of use of part of its dark fibre optic network. The operation involves the exclusive long-term assignment to Lyntia Networks of the right of use of the surplus capacity of the fibre optic network to which the aforementioned companies have a right of ownership or right to exclusive long-term use. Furthermore, as part of the operation, Lyntia Networks is due to acquire Iberdrola Spain, S.A.U.'s portfolio of contracts with fibre optic (dark and lit) customers. The total consideration for the operation, subject to the usual adjustments for this type of operation, amounts to Euros 260 million.

  Following the authorisation from the Spanish Market and Competition Commission, the closing of the transaction took place in August 2019, resulting in a credit of Euros 48,630 thousand under the heading “Revenue” of the Consolidated income statement for 2019 for the sale of the contracts portfolio in force with optic fibre customers and a credit of Euros 113,816 thousand under the heading “Gains on disposal of non-current assets” of the Consolidated income statement for 2019 due to the long-term assignment of the right to use the exceeding capacity of the optic fibre networks (Note 41).

- On 20 June 2019, Iberdrola, S.A., Iberdrola Generación, S.A.U. and Iberdrola Generación España, S.A.U. reached an agreement with Pavilion Energy Trading & Supply Pte. Ltd. (Pavilion) for the assignment of their contractual position in the portfolio of liquid natural gas (LNG) supply contracts portfolio in the long term, sea transportation and use of gas infrastructures, as well as other ancillary contracts related to LNG.

  In consideration for this Transaction, Pavilion will pay to IBERDROLA Group the amount of Euros 119 million, to be paid in accordance with the transaction’s schedule subject to upward and downward changes agreed, as well as the value of the LNG inventory transferred at the time of closing the transaction. The closing of the transaction will take place on 1 January 2020, and Euros 96 million have been collected in advance on 31 December 2019.

  As a result of the transaction, in 2019, IBERDROLA has recognised LNG supply contracts which had not been previously recognised in the financial statements until the time of delivery at their fair value. These contracts were maintained for the purposes of supplying LNG based on expected use needs (own use contracts excluded from the scope of IFRS 9). “Financial instruments”. Moreover, raw materials and exchange rate hedges whose purpose was to manage risks associated to assigned LNG contracts have been discontinued

  As a result, IBERDROLA Group has recognised an income of Euros 86,747 thousand under the heading “Revenue” of the Consolidated income statement for 2019 and a reduction of Euros 85,109 thousand in the heading “Valuation adjustments” of the Consolidated statement of financial position at 31 December 2019.

Transactions with non-controlling interests

- On 27 June 2019, Neoenergia S.A., initial public offering took place in Brazil at a final price per share of BRL 15.65 (equivalent to Euros 3.576). In July the gross amount of Euros 101,835 thousand was collected. Prior to this, IBERDROLA Group had an interest of 52.45% that subsequent to the transaction was reduced to 50%. Later on, Iberdrola Group increased its interest in Neonergia Group up to 51.04% by purchasing 12,618,700 shares to Iberdrola, S.A.

  Since IBERDROLA Group holds the control over Neoenergia Group, the transaction was recognised as a transaction in non-controlling interests resulting in an increase of Euros 72,384 thousand of the heading "Non-controlling shares" (Note 20), a charge of Euros 70,498 thousand under the heading "Other reserves" and a credit of Euros 38,547 thousand under the heading "Translation differences" of the Consolidated statement of financial position at 31 December 2019.

- On 30 August 2019 the sale of 40% of the share capital in East Anglia One Ltd, holder of the offshore project East Anglia One in the United Kingdom, to Bilbao Offshore Holding Ltd, subsidiary of Macquarie Group was completed. Since IBERDROLA Group holds the control over the company, the transaction was recognised as a transaction in non-controlling interests resulting in an increase of Euros 765,293 thousand in "Non-controlling shares" (Note 20), a credit of Euros 515,718 thousand under the heading "Other reserves" and a charge of Euros 16,223 thousand under the heading "Translation differences" of the Consolidated statement of financial position at 31 December 2019. Additionally, subsequent share capital increases which have resulted in a credit of Euros 196,320 thousand under the heading "Net equity - Non-controlling interests" of the Consolidated statement of financial position at 31 December 2019 (Note 20).

With regards to 2018, the IBERDROLA Group carried out the following sales of interests in Group companies:

- On March 2018, Avangrid Renewables Holdings, Inc., subsidiary company of AVANGRID, executed the sale of the gas trading business operated through Enstor Energy Services, LLC, to CCI U.S. Asset Holdings LLC, subsidiary of Castleton Commodities International, LLC. Additionally, on 1 May 2018 the Final agreement for the sale of Enstor Gas, LLC, operating the gas storage business unit, to Amphora Gas Storage USA, LLC, subsidiary of ArcLight Capital Partners, LLC, was executed.

  Said transactions resulted in gross losses of Euros 13,881 thousand recorded under the heading "Losses on disposal of non-current assets" of the Consolidated financial statement for 2018 (Note 41).

- In November 2018, 90% of Iberdrola Energía Solar de Puertollano, S.A. was sold to Sociedad Ence Energía, S.L.U. for Euros 72,300 thousand. The transaction resulted in a gross surplus of 12,470 thousand, which was recorded under the heading "Earnings from sales of non-current assets" of the Consolidated income statement for (Note 41).

- On 16 October 2018 Scottish Power agreed the sale of Scottish Power Generation Ltd. to Drax Group Plc. (DRAX). The transaction was completed on 31 December 2018 for Sterling Pounds 693 million (Euros 779,101 thousand). The transaction implied a gross capital gain of Euros 25,579 thousand, which was registered under the heading "Gains on disposal of non-current assets" of the Consolidated income statement for 2018 (Note 41).

- In December 2018, the IBERDROLA Group sold 80% stake in Coyote Ridge Wind LLC to WEC Infrastructure, for an amount of Euros 50,789 thousand, which implied a gross capital gain of Euros 23,116 thousand recorded under the heading “Gains on sale of non-current assets” of the Consolidated income statement for 2018 (Notes 14.a and 41).

7. SEGMENT INFORMATION

The IBERDROLA Group combines their segments tending to the nature of the business activities in the different geographic areas in which said activities take place. The operating segments identified by the IBERDROLA Group bearing in mind the changes described in Note 2.d are as follows:

- Networks business: including all the energy transmission and distribution activities, and any other regulated activity carried out in Spain, the United Kingdom, the United States and Brazil.

- Liberalised business: includes the electricity generation and supply businesses carried out by the Group in Spain, the United Kingdom, Mexico, Brazil and the rest of the countries within the Iberdrola Energía Internacional (IEI) holding.

- Renewables business: activities related to renewable energies (principally wind, solar and hydroelectric) in Spain, the United Kingdom, the United States, Brazil and the rest of the countries within the Iberdrola Energía Internacional (IEI) holding.

- Other businesses: groups supply and gas storage up to the moment of sale (Notes 6 and 41) and other non-energy businesses.

Additionally, Corporation includes the costs of the Group's structure (Single Corporation), and of the administration services of the corporate areas that are subsequently invoiced to the other companies through specific service agreements.

The transactions between the different segments are usually executed under market conditions.

The key figures for the identified operating segments are as follows:

Business segment reporting for 2019:

Thousands of Euros	Liberalised						Renewables							Networks					Other business, Corporation and adjustments	Total
	Spain	United Kingdom	Mexico	Brazil	IEI	Total	Spain	United Kingdom	United States	Mexico	Brazil	IEI	Total	Spain	United Kingdom	United States	Brazil	Total		
REVENUE																				
External revenues	12,007,169	4,489,721	2,357,676	275,250	1,127,582	**20,257,398**	396,198	82,051	1,063,643	87,260	133,919	334,909	**2,097,980**	1,997,213	1,211,359	4,271,789	6,438,846	**13,919,207**	163,323	**36,437,908**
Intersegment sales	793,673	36,757	(30,678)	316,843	22,767	**1,139,362**	931,558	644,835	–	29,083	81,270	49,559	**1,736,305**	124,955	161,275	–	4,485	**290,715**	(5,851)	**3,160,531**
Eliminations						**(670,567)**							**–**					**–**	(2,489,964)	**(3,160,531)**
Total						**20,726,193**							**3,834,285**					**14,209,922**	(2,332,492)	**36,437,908**
RESULTS																				
Segment operating profit	1,114,748	(242,603)	636,406	41,634	(58,131)	**1,492,054**	394,826	363,155	116,394	43,448	76,278	227,805	**1,221,906**	1,162,449	641,037	713,278	779,569	**3,296,333**	(133,072)	**5,877,221**
Result of equity-accounted investees - net of taxes	5,568	–	–	–	–	**5,568**	8,594	992	(7,451)	–	6,741	(3)	**8,873**	2,259	21	9,417	–	**11,697**	(12,140)	**13,998**
ASSETS																				
Segment assets	7,023,024	6,742,499	4,995,347	466,664	462,003	**19,689,537**	9,106,209	7,216,645	13,216,433	1,459,204	1,577,999	2,307,791	**34,884,281**	12,377,117	13,357,858	22,407,312	6,342,791	**54,485,078**	4,280,374	**113,339,270**
Equity-accounted investees	23,008	–	–	–	–	**23,008**	59,513	9,311	444,791	–	665,750	–	**1,179,365**	29,186	3	123,839	–	**153,028**	601,426	**1,956,827**
LIABILITIES																				
Segment liabilities	3,065,195	1,364,898	1,227,133	115,523	158,819	**5,931,568**	1,120,927	1,278,708	4,040,677	297,830	255,514	344,632	**7,338,288**	5,496,257	2,644,733	7,255,157	2,551,720	**17,947,867**	2,098,912	**33,316,635**
OTHER INFORMATION																				
Total cost incurred during the period in the acquisition of property, plant and equipment and non-current intangible assets	306,940	213,142	312,286	32,564	81,953	**946,885**	727,426	954,482	1,314,524	111,210	32,114	58,885	**3,198,641**	548,763	688,908	1,263,662	11,140	**2,512,473**	168,935	**6,826,934**
Valuation adjustments, trade and other receivables (expense/income)	44,886	78,058	(402)	148	10,898	**133,588**	(149)	556	1,605	970	(210)	(751)	**2,021**	2,673	2,165	82,164	78,941	**165,943**	(4,237)	**297,315**
Amortization and depreciation	396,933	267,302	126,030	22,050	22,305	**834,620**	339,310	161,171	469,732	41,188	52,020	95,900	**1,159,321**	537,112	341,863	507,737	367,609	**1,754,321**	126,151	**3,874,413**
Reversal for asset impairment	–	–	–	–	–	**–**	–	–	(20,024)	–	–	–	**(20,024)**	–	–	–	–	**–**	–	**(20,024)**
(Charges)/Reversal for other provisions	1,152	7,345	(42)	10	(32)	**8,433**	1,208	96	23,588	33	(3,129)	45	**21,841**	8,453	1,760	27,170	8,181	**45,564**	(794)	**75,044**
Expenses for the period other than depreciation and amortisation not resulting in cash outflows	27,322	4,135	2,334	–	14	**33,805**	10,097	–	(591)	–	–	453	**9,959**	40,479	21,586	77,331	7,380	**146,776**	75,108	**265,648**

Business segment reporting for 2018:

Restated (Note 2.d)	Liberalised						Renewables							Networks						Other business, Corporation and adjustments	Total
Thousands of Euros	Spain	United Kingdom	Mexico	Brazil	IEI	Total	Spain	United Kingdom	United States	Mexico	Brazil	IEI	Total	Spain	United Kingdom	United States	Brazil	Total			
REVENUE																					
External revenues	11,810,659	4,942,455	2,252,552	477,457	978,369	**20,461,492**	367,908	119,913	1,026,925	92,976	56,100	250,988	**1,914,810**	1,994,890	1,113,669	4,274,777	5,184,180	**12,567,516**	132,055	**35,075,873**
Intersegment sales	778,788	80,220	(6,303)	315,432	49,323	**1,217,460**	1,328,206	577,560	–	(1,981)	187,701	38,697	**2,130,183**	130,644	161,879	–	1,199	**293,722**	3,046	**3,644,411**
Eliminations						**(686,775)**							**–**					**–**	(2,957,636)	**(3,644,411)**
Total						**20,992,177**							**4,044,993**					**12,861,238**	(2,822,535)	**35,075,873**
RESULTS																					
Segment operating profit	520,350	55,301	533,518	71,386	(41,484)	**1,139,071**	588,298	355,549	213,982	39,803	76,071	123,218	**1,396,921**	1,174,156	605,293	712,063	542,756	**3,034,268**	(130,887)	**5,439,373**
Result of equity-accounted investees - net of taxes	23,590	–	–	–	–	**23,590**	3,624	1,527	(3,548)	–	11,303	(9)	**12,897**	2,769	(18)	11,067	–	**13,818**	5,599	**55,904**
ASSETS																					
Segment assets	6,779,470	6,297,480	4,483,086	468,940	312,476	**18,341,452**	8,386,777	5,555,003	11,967,083	1,327,027	1,560,275	2,282,958	**31,079,123**	12,117,292	12,141,816	21,308,069	5,186,168	**50,753,345**	3,631,729	**103,805,649**
Equity-accounted investees	10,409	–	–	–	–	**10,409**	62,216	7,834	195,226	–	661,553	–	**926,829**	29,773	–	123,696	–	**153,469**	618,811	**1,709,518**
LIABILITIES																					
Segment liabilities	2,462,164	1,342,529	1,085,490	122,222	115,533	**5,127,938**	1,135,109	907,132	3,841,665	316,362	240,994	358,465	**6,799,727**	5,587,747	2,456,186	7,121,821	1,694,157	**16,859,911**	1,933,997	**30,721,573**
OTHER INFORMATION																					
Total cost incurred during the period in the acquisition of property, plant and equipment and non-current intangible assets	204,677	194,654	628,717	16,223	26,127	**1,070,398**	369,023	365,037	307,934	324,683	99,184	221,090	**1,686,951**	495,395	564,223	1,053,862	725,883	**2,839,363**	148,926	**5,745,638**
Valuation adjustments, trade and other receivables (expense/income)	39,209	66,495	2,323	(287)	7,349	**115,089**	9	(355)	(72)	14	260	1,059	**915**	611	955	72,462	61,629	**135,657**	1,995	**253,656**
Amortization and depreciation	469,628	169,129	102,485	20,742	8,471	**770,455**	323,898	159,641	410,177	25,616	45,595	119,533	**1,084,460**	519,395	313,229	474,685	344,740	**1,652,049**	80,135	**3,587,099**
Charges for asset impairment	–	13,565	–	–	–	**13,565**	–	–	–	–	–	–	**–**	–	–	–	–	**–**	–	**13,565**
Reversal for asset impairment	–	–	–	–	–	**–**	–	–	(52,688)	–	–	–	**(52,688)**	–	–	–	–	**–**	–	**(52,688)**
Write-off(Charges)/Reversal for other provisions	(2,788)	2,731	96	170	–	**209**	5,498	2,672	1,669	(1)	7,477	(2,220)	**15,095**	15,200	(34)	71,993	5,873	**93,032**	(438)	**107,898**
Expenses for the period other than depreciation and amortisation not resulting in cash outflows	13,492	8,189	(3,730)	–	310	**18,261**	5,415	–	429	–	–	363	**6,207**	14,744	8,033	72,905	2,845	**98,527**	95,299	**218,294**

Additionally, the breakdown of net revenue and non-current assets by geographical area is as follows:

Thousands of Euros	31.12.2019	31.12.2018
Revenue		
Spain	14,513,186	14,165,352
United Kingdom	5,807,931	6,247,767
United States	5,335,432	5,323,913
Mexico	2,443,367	2,337,219
Brazil	6,848,015	5,717,489
IEI	1,489,977	1,284,133
Total	**36,437,908**	**35,075,873**

Thousands of Euros	31.12.2019	31.12.2018
Non-current assets (*)		
Spain	23,553,881	22,681,809
United Kingdom	24,916,547	21,983,136
United States	32,769,241	30,071,080
Mexico	5,426,599	4,892,649
Brazil	4,821,302	5,703,513
IEI	2,294,033	2,205,973
Total	**93,781,603**	**87,538,160**

(*) Excluding non-current financial investments, deferred tax assets, current tax assets and non-current trade and other receivables.

In addition, the reconciliation between segment assets and liabilities and the total assets and liabilities of the Consolidated statement of financial position is as follows:

Thousands of Euros	31.12.2019	31.12.2018
Segment assets	**113,339,270**	**103,805,649**
Non-current financial investments	5,818,537	5,191,132
Current financial investments	1,097,920	1,177,821
Cash and cash equivalents	2,113,279	2,801,157
Assets held for sale	–	62,164
Total assets	**122,369,006**	**113,037,923**

Thousands of Euros	31.12.2019	31.12.2018
Segment liabilities	**33,316,635**	**30,721,573**
Equity	47,194,665	43,976,554
Non-Current financial liabilities	32,404,388	31,279,445
Loans and borrowings and obligations or other securities	30,125,903	30,751,710
Equity instruments having the substance of a financial liability	193,384	140,582
Derivative financial instruments	471,221	387,153
Leases	1,613,880	–
Current financial liabilities	9,453,318	7,059,790
Loans and borrowings and obligations or other securities	8,800,387	6,574,762
Equity instruments having the substance of a financial liability	22,149	36,647
Derivative financial instruments	477,545	448,381
Leases	153,237	–
Liabilities linked to assets held for sale	–	561
Total liabilities and equity	**122,369,006**	**113,037,923**

8. INTANGIBLE ASSETS

The changes in 2019 and 2018 in intangible assets and the appropriate accumulated amortisations and procurement has been as follows:

Thousands of Euros	Balance at 01.01.2018	First application of IFRS 15 (Note 2.a.)	Translation differences	Modification of the consolidation perimeter (Note 6)	Additions and charges/(reversals)	Capitalised Personnel expenses (Note 38)	Transfers	Decreases, disposals or reductions	Balance at 31.12.2018	Translation differences	Additions and charges/(reversals)	Capitalised Personnel expenses (Note 38)	Transfers	Decreases, disposals or reductions	Balance at 31.12.2019
Cost:															
Goodwill	7,932,404	–	(77,605)	(16,956)	–	–	–	–	7,837,843	359,228	–	–	–	(44,153)	8,152,918
Concessions, Patents, licenses, trademarks and others	7,930,667	–	(31,055)	(318,228)	5,704	8,725	23,888	(3,858)	7,615,843	168,903	30,535	2,726	(7,295)	(132)	7,810,580
Intangibles assets under IFRIC 12 (Notes 3.b and 12)	5,506,356	–	(688,654)	–	739,358	55,408	(271,146)	(64,639)	5,276,683	(41,521)	–	–	(512,330)	(65,425)	4,657,407
Computer software	2,040,009	–	25,506	(12,057)	144,163	8,644	(10,823)	(18,831)	2,176,611	45,187	154,011	11,166	1,271	(34,629)	2,353,617
Customer acquisition costs	–	298,028	(2,564)	–	161,784	–	–	–	457,248	9,869	222,018	–	300	(42,605)	646,830
Other intangible assets	3,549,070	–	97,144	–	24,805	1,122	(73,742)	(332,303)	3,266,096	87,753	10,126	–	(372,771)	(14,938)	2,976,266
Total cost	**26,958,506**	**298,028**	**(677,228)**	**(347,241)**	**1,075,814**	**73,899**	**(331,823)**	**(419,631)**	**26,630,324**	**629,419**	**416,690**	**13,892**	**(890,825)**	**(201,882)**	**26,597,618**
accumulated depreciation and procurement:															
Concessions, Patents, licenses, trademarks and others	823,497	–	(36,948)	(305,838)	141,299	–	2,215	–	624,225	17,546	241,336	–	3,033	(132)	886,008
Intangibles assets under IFRIC 12 (Notes 3.b and 12)	2,467,907	–	(309,147)	–	260,855	–	5,519	(47,520)	2,377,614	(30,456)	281,630	–	396	(50,557)	2,578,627
Computer software	1,467,064	–	16,599	(11,374)	132,754	–	(10,823)	(17,695)	1,576,525	30,424	162,625	–	384	(34,499)	1,735,459
Customer acquisition costs	–	123,027	(1,073)	–	80,580	–	–	–	202,534	3,653	121,955	–	–	(42,605)	285,537
Other intangible assets	674,161	–	14,218	–	121,648	–	(1,061)	(299,962)	509,004	12,921	103,220	–	(882)	(12,114)	612,149
Total accumulated depreciation	**5,432,629**	**123,027**	**(316,351)**	**(317,212)**	**737,136**	**–**	**(4,150)**	**(365,177)**	**5,289,902**	**34,088**	**910,766**	**–**	**2,931**	**(139,907)**	**6,097,780**
Impairment allowance (Notes 7 and 40)	**377,850**	**–**	**15,012**	**–**	**(52,688)**	**–**	**–**	**–**	**340,174**	**5,919**	**(20,024)**	**–**	**(194,092)**	**–**	**131,977**
Total accumulated depreciation and procurement	**5,810,479**	**123,027**	**(301,339)**	**(317,212)**	**684,448**	**–**	**(4,150)**	**(365,177)**	**5,630,076**	**40,007**	**890,742**	**–**	**(191,161)**	**(139,907)**	**6,229,757**
Total net cost	**21,148,027**	**175,001**	**(375,889)**	**(30,029)**	**391,366**	**73,899**	**(327,673)**	**(54,454)**	**21,000,248**	**589,412**	**(474,052)**	**13,892**	**(699,664)**	**(61,975)**	**20,367,861**

The amounts incurred in due to research and development (expenses and investment) activities in 2019 and 2018 totals Euros 280,395 and 266,547 thousand respectively.

The fully amortised intangible assets in use at 31 December 2019 and 2018 amounted to 1,214,042 and 1,122,173 thousand, respectively.

The IBERDROLA Group maintains at 31 December 2019 and 2018 commitments to acquire intangible assets for Euros 16,184 and 18,942 thousand, respectively.

In addition, at 31 December 2019 and 2018, there were no significant restrictions on the ownership of intangible assets, except for the regulated businesses that may require authorisation of the corresponding regulator for specific transactions.

The allocation of goodwill to the cash-generating units at 31 December 2019 and 2018 is as follows:

Thousands of Euros	31.12.2019	31.12.2018
Electricity and gas generation and supply in the UK	4,503,920	4,256,753
Regulated activities in the UK	881,318	832,954
Renewables in the UK	524,503	495,720
Renewable in the USA	839,829	866,431
Regulated activities in the	1,065,977	1,044,989
Regulated activities in Brazil	151,426	153,038
Electricity generation and retail in the UK	40,636	41,059
Renewable activities in Brazil	119,707	120,976
Other activities	25,602	25,923
Total	**8,152,918**	**7,837,843**

The allocation of indefinite life and in-progress intangible assets at 31 December 2019 and 2018 to the different cash generating units is as follows:

	2019			2018		
Thousands of Euros	Intangible assets with indefinite useful lives	Intangible assets in progress	Total	Intangible assets with indefinite useful lives	Intangible assets in progress	Total
Electricity distribution in Scotland	781,628	–	781,628	738,734	–	738,734
Electricity distribution in Wales and England	752,261	–	752,261	710,979	–	710,979
Electricity transmission in the UK	297,075	–	297,075	280,772	–	280,772
Renewable in the USA	–	41,738	41,738	–	126,756	126,756
Electricity and gas distribution in New York (NYSEG)	1,062,289	–	1,062,289	1,041,374	–	1,041,374
Electricity and gas distribution in New York (RG&E)	957,493	–	957,493	938,641	–	938,641
Electricity transmission and distribution in Maine (CMP)	263,803	–	263,803	258,609	4,908	263,517
Electricity transmission and distribution in Connecticut (UI)	1,106,269	–	1,106,269	1,084,487	–	1,084,487
Gas distribution in Connecticut (CNG)	279,143	–	279,143	273,647	–	273,647
Gas distribution in Connecticut (SCG)	547,989	–	547,989	537,200	–	537,200
Gas distribution in Massachusetts (BGC)	37,374	–	37,374	36,638	–	36,638
Other	–	395,771	395,771	–	387,560	387,560
Total	**6,085,324**	**437,509**	**6,522,833**	**5,901,081**	**519,224**	**6,420,305**

The undefined useful life assets mostly correspond to the acquisition cost of licences to operate in different businesses that make up the main activity of the activities performed by the IBERDROLA Group.

9. INVESTMENT PROPERTY

The changes in 2019 and 2018 in the IBERDROLA Group's investment property were as follows:

Thousands of Euros	Balance at 01.01.2019	Additions and (charges)/ reversals	Transfers	Decreases, disposals or reductions	Balance at 31.12.2019
Investment property	513,072	2,673	1,469	(95,320)	421,894
Impairment allowance	(25,845)	1,071	(118)	4,479	(20,413)
Accumulated depreciation	(58,635)	(7,781)	–	7,221	(59,195)
Total net cost	**428,592**	**(4,037)**	**1,351**	**(83,620)**	**342,286**

Thousands of Euros	Balance at 01.01.2018	Additions/and (charges)/ reversals	Transfers	Decreases, disposals or reductions	Balance at 31.12.2018
Investment property	501,959	11,878	(23)	(742)	513,072
Impairment allowance	(26,805)	960	–	–	(25,845)
Accumulated depreciation	(51,125)	(7,533)	(49)	72	(58,635)
Total net cost	**424,029**	**5,305**	**(72)**	**(670)**	**428,592**

The investment property owned by the IBERDROLA Group relates primarily to properties destined for leasing. The income accrued during fiscal years 2019 and 2018 for this operation are Euros 28,411 and 26,764 thousand, respectively, and were registered under the heading "Revenue" of the Consolidated income statement. The operating expenses directly related to investment properties during fiscal years 2019 and 2018 were not significant.

The fair value of the investment property in use at 31 December 2019 and 2018 amounted to Euros 394,916 and Euros 479,864 thousand, respectively. This fair value (classified in Level 3) is determined via expert independent appraisals made annually in accordance with the Assessment Standards published by the Royal Institution of Chartered Surveyors (RICS) of Great Britain, in their January 2014 edition. The assessments on 31 December 2019 and 2018 have been made by Knight Frank España.

The assets have been valued individually and not as part of a property portfolio.

The methods applied for the calculation of fair value have been the discount of cash flows, the capitalisation of revenue and the comparison method, contrasted, as far as possible, with comparable transactions to reflect the reality of the market and the prices to which they are currently closing the asset operations of similar characteristics to the reference operations.

The discount of cash flows is based on a prediction of the probable net income that real estate investment will generate for a period of time and it considers its residual value at the end of the period. Cash flows are discounted at an internal rate of return that reflects the urban, construction and business risk of the asset.

The key variables and assumptions of the cash flow discount method are:

- Net income that the property will generate for a certain period of time, considering the initial contractual situation, development of renters and expected income, marketing costs, divestment expenses (variable percentage depending on the sale price), etc.

- Discount rate or objective internal return rate adjusted to reflect the risk that the investment entails depending on the localisation, occupation, renter quality, property age, etc.

- Disposal return, which consists of an estimate of the exit (sale) price of the property applying an estimated return for the close of the transaction at that date, considering the criteria of obsolescence, liquidity and market uncertainty.

For property for hire that does not include many variables as extensive and involves leased property for a period of time greater than 10 years and up and one renter, the capitalisation method for income is usually applied. This method consists of the perpetual capitalisation of the current contractual income via a capitalisation rate that inherently includes the risks and uncertainties that could arise in the market.

At 31 December 2019 and 2018, none of the investment properties had been fully depreciated and there were no restrictions on their realisation. Moreover, there were no contractual obligations to acquire, build, develop, repair or maintain investment property.

10. PROPERTY, PLANT AND EQUIPMENT

The changes in 2019 and 2018 in Property, plant and equipment and the appropriate accumulated amortisations and procurement has been as follows:

Thousands of Euros	Balance at 01.01.2018	Translation differences	Modification of the consolidation perimeter (Note 6)	Additions and charges/(reversals)	Transfers	Disposals/ Derecognitions	Write-off	Balance at 31.12.2018	First application of IFRS 16 (Note 2.a.)	Translation differences	Additions	Charges/Reversals	Transfers	Disposals/ Derecognitions	Balance at 31.12.2019
Cost:															
Land and buildings	**2,186,770**	**42,770**	**(59,955)**	**61,919**	**121,624**	**(28,845)**	**(2,289)**	**2,321,994**	**(117,882)**	**29,273**	**102,075**	**–**	**254,661**	**(50,503)**	**2,539,618**
Electric energy technical facilities:															
Hydroelectric power plants	7,301,185	(45,882)	(314,643)	12,006	5,303	–	(1,478)	6,956,491	–	(2,818)	171	–	169,708	–	7,123,552
Thermal power plants	1,220,389	8	–	81	5,269	(73)	–	1,225,674	–	4	930	–	959	–	1,227,567
Combined cycle power plant	8,139,345	122,547	(1,218,052)	11,760	243,107	(75,290)	–	7,223,417	–	77,601	82,434	–	1,206,249	(17,701)	8,572,000
Nuclear power plants	7,622,997	(1)	–	15,977	106,638	(54,040)	–	7,691,571	–	–	35,424	–	135,268	(65,516)	7,796,747
Wind farms and other renewable	23,162,963	379,751	111,256	40,334	1,408,562	(253,536)	(20,713)	24,828,617	(96,687)	498,535	419,278	–	1,918,596	(226,292)	27,342,047
Facilities:															
Gas storage	101,205	2,369	–	11	41,242	(4,072)	(1,223)	139,532	–	5,581	44	–	32,783	–	177,940
Electricity transmission	7,891,912	139,539	–	2,521	411,060	(5,304)	(21,672)	8,418,056	–	318,085	28,885	–	459,464	(21,882)	9,202,608
Electricity distribution	28,788,742	183,229	16,121	88,936	1,181,079	(109,930)	(22,970)	30,125,207	–	582,541	111,474	–	1,320,379	(51,216)	32,088,385
Gas distribution	2,768,888	131,024	–	–	138,576	(6,097)	(3,358)	3,029,033	–	61,687	–	–	231,777	(13,951)	3,308,546
Meters and metering devices	2,050,701	24,581	–	102,068	68,453	(278,054)	(1,243)	1,966,506	–	47,185	102,027	–	49,997	(35,121)	2,130,594
Dispatching centres and other facilities	1,981,267	5,365	(32,358)	15,960	136,040	(17,601)	(2,621)	2,086,052	–	20,678	36,331	–	137,130	(145,552)	2,134,639
Total operating electric energy technical facilities	**91,029,594**	**942,530**	**(1,437,676)**	**289,654**	**3,745,329**	**(803,997)**	**(75,278)**	**93,690,156**	**(96,687)**	**1,609,079**	**816,998**	**–**	**5,662,310**	**(577,231)**	**101,104,625**
Others in use	**1,712,004**	**33,482**	**(4,905)**	**203,381**	**4,017**	**(48,107)**	**(679)**	**1,899,193**	**(48,943)**	**20,815**	**212,963**	**–**	**166,482**	**(54,286)**	**2,196,224**
On-going electric energy technical facilities	**6,479,773**	**40,190**	**(23,006)**	**4,381,212**	**(3,778,551)**	**(4,233)**	**–**	**7,095,385**	**(137)**	**205,569**	**5,521,711**	**–**	**(5,565,413)**	**(20,027)**	**7,237,088**
Prepayments and other PP&E under construction (*)	**357,117**	**4,022**	**(4,185)**	**507,962**	**(76,927)**	**(229,842)**	**(2,803)**	**555,344**	**–**	**6,034**	**589,202**	**–**	**(311,255)**	**(197,282)**	**642,043**
TOTAL COST	**101,765,258**	**1,062,994**	**(1,529,727)**	**5,444,128**	**15,492**	**(1,115,024)**	**(81,049)**	**105,562,072**	**(263,649)**	**1,870,770**	**7,242,949**	**–**	**206,785**	**(899,329)**	**113,719,598**

(*) Prepayment amounts at 31 December 2019 and 2018 amount to Euros 136,971 and 152,724 thousand respectively.

Thousands of Euros	Balance at 01.01.2018	Traslarion differences	Modification of the consolidation perimeter	Additions and charges/ (reversals)	Transfers	Disposals/ Derecognitions	Write-off	Balance at 31.12.2018	First application of IFRS 16 (Note 2.a.)	Translation differences	Additions	Charges/(Reversals)	Transfers	Disposals/ Derecognitions	Balance at 31.12.2019
ACCUMULATED AMORTISATION AND DEPRECIATED															
Buildings	**458,782**	**8,006**	**3,515**	**84,732**	**–**	**(5,185)**	**–**	**549,850**	**(18,560)**	**8,065**	**–**	**61,158**	**(209)**	**(5,348)**	**594,956**
Electric energy technical facilities:															
Hydroelectric power plants	3,977,776	(12,340)	(172,034)	108,089	–	–	–	3,901,491	–	(10,506)	–	105,794	–	–	3,996,779
Thermal power plants	1,062,120	8	–	48,862	–	(73)	–	1,110,917	–	4	–	53,214	–	–	1,164,135
Combined cycle power plant	3,156,180	39,589	(674,419)	223,172	–	(60,160)	–	2,684,362	–	31,191	–	232,419	–	(11,109)	2,936,863
Nuclear power plants	5,725,982	–	–	284,433	–	(52,857)	–	5,957,558	–	–	–	183,245	–	(64,623)	6,076,180
Wind farms and other renewable	7,337,064	125,049	97,141	830,022	–	(101,314)	–	8,287,962	(22,701)	136,745	82,988	851,476	–	(79,177)	9,257,293
Facilities:															
Gas storage	44,441	426	–	3,743	–	(3,822)	–	44,788	–	2,179	–	5,572	13,965	–	66,504
Electricity transmission	1,709,449	37,877	–	141,697	–	(3,447)	–	1,885,576	–	70,028	–	183,556	–	(11,806)	2,127,354
Electricity distribution	9,990,459	75,883	9,867	766,929	–	(96,488)	–	10,746,650	–	174,175	–	774,473	–	(37,932)	11,657,366
Gas distribution	1,123,173	52,834	–	48,162	–	(3,977)	–	1,220,192	–	24,585	–	29,359	–	(9,338)	1,264,798
Meters and metering devices	1,006,790	7,553	–	112,020	–	(265,865)	–	860,498	–	23,049	–	116,728	–	(24,776)	975,499
Dispatching centres and other facilities	762,611	(650)	(32,856)	72,020	–	(13,253)	–	787,872	–	8,834	225	96,058	1,846	(65,251)	829,584
Total operating electric energy technical facilities	**35,896,045**	**326,229**	**(772,301)**	**2,639,149**	**–**	**(601,256)**	**–**	**37,487,866**	**(22,701)**	**460,284**	**83,213**	**2,631,894**	**15,811**	**(304,012)**	**40,352,355**
Others in use	**1,049,602**	**12,304**	**(1,573)**	**118,549**	**(9,722)**	**(43,316)**	**–**	**1,125,844**	**(6,923)**	**20,531**	**35**	**122,696**	**(65)**	**(52,105)**	**1,210,013**
Total accumulated depreciation	**37,404,429**	**346,539**	**(770,359)**	**2,842,430**	**(9,722)**	**(649,757)**	**–**	**39,163,560**	**(48,184)**	**488,880**	**83,248**	**2,815,748**	**15,537**	**(361,465)**	**42,157,324**
Impairment allowance (Note 40)	278,450	4,061	–	13,565	–	(6,884)	–	289,192	–	(275)	–	–	4,977	(20,829)	273,065
Total ACCUMULATED AMORTISATION AND DEPRECIATED	**37,682,879**	**350,600**	**(770,359)**	**2,855,995**	**(9,722)**	**(656,641)**	**–**	**39,452,752**	**(48,184)**	**488,605**	**83,248**	**2,815,748**	**20,514**	**(382,294)**	**42,430,389**
TOTAL NET COST	**64,082,379**	**712,394**	**(759,368)**	**2,588,133**	**25,214**	**(458,383)**	**(81,049)**	**66,109,320**	**(215,465)**	**1,382,165**	**7,159,701**	**(2,815,748)**	**186,271**	**(517,035)**	**71,289,209**

The breakdown by business of the main investments made in property, plant and equipment in 2019 and 2018, not including the capitalisation of personnel expenses (Note 38) and of financial costs (Note 42), is as follows:

Thousands of Euros	31.12.2019	31.12.2018
Liberalised business		
Spain	172,932	127,177
United Kingdom	111,163	112,480
Mexico	324,970	620,012
Brazil	31,958	16,147
Iberdrola Energía Internacional	259	49
Renewable Business		
Spain	767,552	366,609
United Kingdom	947,931	364,493
United States	1,331,897	304,186
Mexico	110,688	340,641
Brazil	70,493	95,633
Iberdrola Energía Internacional	69,092	220,858
Networks business		
Spain	523,673	477,772
United Kingdom	589,304	558,695
United States	1,228,706	1,019,288
Brazil	13,787	17,708
Corporation and other	67,300	63,812
Total	**6,361,705**	**4,705,560**

The fully amortised tangible assets in use at 31 December 2019 and 2018 amounted to 2,502,064 and 2,211,844 thousand, respectively.

The IBERDROLA Group maintains at 31 December 2019 and 2018 commitments to acquire tangible assets for Euros 4,196,211 and 3,308,813 thousand, respectively.

11. RIGHT-OF-USE ASSET

Changes in 2019 in right-of-use assets resulting from contracts in which the IBERDROLA Group is the lessor have been as follows:

Thousands of Euros	Balance at 31.12.2018	Application of IFRS 16	Translation differences	Additions and charges/ (reversals)	Re-evaluation/changes of lease liabilities	Disposals	Balance at 31.12.2019
Cost:							
Land	–	957,378	22,836	229,045	78,840	(1,093)	1,287,006
Buildings	–	282,750	7,715	22,387	(9,248)	(387)	303,217
Equipment	–	68,499	957	2,732	5,429	(15)	77,602
Fleet	–	41,417	1,395	25,020	3,183	(314)	70,701
Other rights of use	–	118,415	1,938	108,060	11,911	(853)	239,471
Total cost	**–**	**1,468,459**	**34,841**	**387,244**	**90,115**	**(2,662)**	**1,977,997**
accumulated depreciation and procurement:							
Land	–	–	(521)	(58,115)	–	1	(58,635)
Buildings	–	(19,307)	(193)	(39,862)	–	–	(59,362)
Equipment	–	(4,745)	(203)	(9,623)	–	–	(14,571)
Fleet	–	(2,178)	(293)	(19,807)	–	101	(22,177)
Other rights of use	–	(22,701)	(858)	(16,998)	–	–	(40,557)
Total accumulated depreciation	**–**	**(48,931)**	**(2,068)**	**(144,405)**	**–**	**102**	**(195,302)**
Impairment allowance	–	–	(14)	(434)	–	–	(448)
Total accumulated depreciation and procurement	**–**	**(48,931)**	**(2,082)**	**(144,839)**	**–**	**102**	**(195,750)**
Total net cost	**–**	**1,419,528**	**32,759**	**242,405**	**90,115**	**(2,560)**	**1,782,247**

IBERDROLA Group is the holder of lease agreement enabling the assignment of use of the land used for the installation of wind farms, solar plants and other renewable facilities, as well as electricity distribution and transmission infrastructures. These are long-term agreements and/or include extension options which may adjust lease term to the useful life of property, plant and equipment installed there. The payment of the rent includes fixed and variable amounts calculated based on parameters such as electricity generation or the sales of the facilities.

Moreover, the Group maintains long-term lease contracts with options to extend on certain office buildings.

Many of lease contracts for land and buildings are related to consumer price indexes or similar indexes.

12. CONCESSION AGREEMENTS

The description of electricity service concession arrangements in Brazil within the scope of IFRIC 12: "Service Concession Arrangements" (Note 3.b) is set out below:

Distribution

Company	Location	Concession date	Maturity date	No. of towns	Tariff cycle	Last review
Elektro Redes, S.A.	Estado do Sao Paulo	27/08/1998	26/08/2028	223	4 years	August-
Elektro Redes, S.A.	Estado do Mato Grosso do Sul	27/08/1998	26/08/2028	5	4 years	August-19
Companhia de Eletricidade do Estado do Bahia, S.A.	Estado da Bahia	08/08/1997	07/08/2027	415	5 years	April-18
Companhia Energética de Pernambuco, S.A.	Estado de Pernambuco	30/03/2000	29/03/2030	184	4 years	April-17
Companhia Energética de Pernambuco, S.A.	Distrito de Fernando de Noronha	30/03/2000	29/03/2030	1	4 years	April-17
Companhia Energética de Pernambuco, S.A.	Estado da Paraíba	30/03/2000	29/03/2030	1	4 years	April-17
Companhia Energetica do Rio Grande do Norte, S.A.	Estado do Rio Grande do Norte	31/12/1997	30/12/2027	167	5 years	April-18

Transmission in operation

Company	Location	Concession date	Maturity date	Tariff cycle	Last review
Afluente Transmissão de Energia Elétrica, S.A.	Estado da Bahia	08/08/1997	08/08/2027	5 years	2015
S.E. Narandiba, S.A. (SE Narandiba)	Estado da Bahia	28/01/2009	28/01/2039	5 years	2019
S.E. Narandiba, S.A. (SE Extremoz)	Estado do Rio Grande do Norte	10/05/2012	10/05/2042	5 years	2017
S.E. Narandiba, S.A. (SE Brumado)	Estado da Bahia	27/08/2012	27/08/2042	5 years	2018
Potiguar Sul Transmissão de Energia, S.A.	Estado da Paraíba do Rio Grande do Norte	01/08/2013	01/08/2043	5 years	2019

Transmission in constructions

Company	Location	Concession date	Maturity date
Neoenergia Guanabara Transmissão de Energía, S.A. (formerly, EKTT 3 Serviços de Transmissão de Energía Elétrica SPE, S.A.)	Estado do Rio de Janeiro	22/03/2019	22/03/2049
Neoenergia Itabapoana Transmissão de Energia, S.A. (formerly, EKTT 4 Serviços de Transmissão de Energia Elétrica SPE, S.A.)	Estado do Rio de Janeiro	22/03/2019	22/03/2049
Neoenergia Lagoa dos Patos Transmissão de Energia, S.A. (formerly, EKTT 5 Serviços de Transmissão de Energia Elétrica SPE, S.A.)	Rio Grande do Sul e Santa Catarina	22/03/2019	22/03/2049
Neoenergia Vale do Itajaí Transmissão de Energia, S.A. (formerly, EKTT 11 Serviços de Transmissão de Energia Elétrica SPE, S.A.)	Paraná e Santa Catarina	22/03/2019	22/03/2049
Neoenergia Jalapão Transmissão de Energia, S.A. (formerly, EKTT 1 Serviços de Transmissão de Energia Elétrica SPE, S.A.)	Estados do Tocantis, Bahia e Piauí	08/03/2018	08/03/2048
Neoenergia Santa Luzia Transmissão de Energia, S.A. (formerly, EKTT 2 Serviços de Transmissão de Energia Elétrica SPE, S.A.)	Estados da Paraíba e Ceará	08/03/2018	08/03/2048
Neoenergia Dourados Transmissão de Energia, S.A. (formerly, EKTT 12 Serviços de Transmissão de Energia Elétrica SPE, S.A.)	Estados do Mato Grosso do Sul e São Paulo	31/07/2017	31/07/2047
Neoenergia Atibaia Transmissão de Energia, S.A. (formerly, EKTT 13 Serviços de Transmissão de Energia Elétrica SPE, S.A.)	Estado de São Paulo	31/07/2017	31/07/2047
Neoenergia Biguaçu Transmissão de Energia, S.A. (formerly, EKTT 14 Serviços de Transmissão de Energia Elétrica SPE, S.A.)	Estado de Santa Catarina	31/07/2017	31/07/2047
Neoenergia Sobral Transmissão de Energia, S.A. (formerly, EKTT 15 Serviços de Transmissão de Energia Elétrica SPE, S.A.)	Estado do Ceará	31/07/2017	31/07/2047

The duration of each concession is 30 years, and they may be extended for up to 30 years upon application by the concession holder and at the discretion of the concession grantor, which is the Agência Nacional de Energia Elétrica (ANEEL). The concession holder may not transfer such assets or use them as collateral without the prior written consent of the regulatory body. At the end of the concession the property is automatically reversed to the concession grantor and the amount of indemnification due to the concession holder is assessed and determined. Appendix II shows in greater detail the Brazilian regulation applicable to the abovementioned concessions.

Income from previous concession agreements include the provision of construction services (Note 36) and operation and maintenance services for facilities built whose ownership falls upon the granting public administration. The provisions of said services constitutes two separate execution obligations incorporating different margins.

Construction services have a length of 3 to 5 years, whereas the provision of operation and maintenance services for facilities starts on the date they are delivered. Said date determines, in general, when the agreed annual payments are collected as part of the concession agreements. The collection of said annual payments is extended during the concession period (normally 30 years), a circumstance that determines the existence of a significant financial component.

13. IMPAIRMENT OF NON-FINANCIAL ASSETS

Methodology of impairment tests

At least yearly, the IBERDROLA Group analyses its assets for indications of impairment. If such indications are found, an impairment test is conducted.

In addition, the IBERDROLA Group conducts a systematic analysis of the impairment of cash-generating units that include goodwill or intangible assets in progress or with indefinite useful life.

The projections used in the impairment tests are based on the best forecast information held by the IBERDROLA Group and include the investment plans for each country prevailing at that time.

a) Assumptions used in liberalised business:

- Facilities' production: the hours of operation used are consistent with those in previous years, and in line with the expected evolution of the energy mix of the countries where the IBERDROLA Group operates.

- Selling prices of electricity and gas: the selling prices used are the ones agreed upon in the signed price purchase agreements. For unsold production, future prices in the market where the IBERDROLA Group operates are used.

- Electricity and gas retail margin: growth forecasts for the number of customers and unit margins based on the knowledge of the markets in which the IBERDROLA Group operates and the company's relative position in each of them.

- Investment: the projections were based on the best available information about the plants that were expected to be put into operation in the next years.

- Operation and maintenance costs: maintenance agreements for the current facilities were used. Other operating costs were projected consistent with the expected growth of each cash-generating unit, assuming its headcount grows at the same pace.

b) Assumptions used in the Networks business:

- Regulated income: approved income was used for years in which it was available, while for subsequent periods regulation set actualization mechanisms of such income, and these were applied in line with the estimated costs of the corresponding cash-generating units.

- Investment: the projections were based on investment plans consistent with the expected demand growth and undertakings in each concession, with the minimums set by each regulator and with the estimate of future income used.

- Operation and maintenance costs: the best available estimation of the performance of the operation and maintenance cost was used, which is in line with the income assumed to be received in each year.

c) Assumptions used in the renewables business:

- Facilities' production: the operation hours of each plant were consistent with their historical output. In this respect, the long-term predictability of wind output was taken into account, which was also covered by regulatory mechanisms that enabled wind farms to produce whenever meteorological and network conditions allowed it.

- Selling prices of electricity: the selling prices used are the ones agreed upon in the signed price purchase agreements. For unsold production, future prices in the market where the IBERDROLA Group operates are used. In any case, the existing support mechanisms have been taken into account.

- Investment: the projections were based on the best information available about the plants that were expected to be put into operation in the next years, taking into account the fixed prices stated in the contracts to buy wind turbines from various suppliers among which is SIEMENS GAMESA (Note 50) as well as the technical and financial capacity of the IBERDROLA Group to successfully fulfil the planned projects.

- Operation and maintenance costs: the prices set in land leases and maintenance agreements for the useful life of the facilities were used.

d) Forecast period and growth nominal rate:

The forecast period of future cash flows and the growth nominal rate (g) used to extrapolate these projections beyond the reporting period are as follows:

	2019		2018	
	No. of years	g	No. of years	g
Electricity and gas generation and supply in the UK	10	2.0%	10	2.0%
Electricity transmission and distribution in the UK	10	2.0%	10	2.5%
Renewables in the UK	Useful life	-	Useful life	-
Electricity and gas transmission and distribution in the US	10	1.0%	10	1.0%
Renewable in the USA	Useful life	-	Useful life	-
Electricity generation and retail in Brazil	Useful life / 10	- 4.0%	Useful life / 15	- 4.5%
Electricity transmission and distribution in Brazil	Concession life	-	Concession life	-
Renewable Energies in Brazil	Useful life	-	Useful life	-

Although IAS 36 "Impairment of assets" recommends the use of projections not exceeding five years for impairment test purposes, IBERDROLA has decided to use the periods included in this table for the following reasons:

- The most appropriate method for assets in the generation business is using their remaining useful lives. This is due to the fact that in the liberalised business there are long-term energy sale contracts in force and long-term estimated prices curves are frequently used in the operating activity of the IBERDROLA Group (contracts, hedges, etc.).

- Energy is a basic first-need good. Therefore, the business of electricity and gas retail is influenced by long-term governmental policies and is based on stable relationship with customers, using in certain cases infrastructures such as smart meters with large recoverability periods.

- The electricity transmission and distribution concessions include longer regulatory periods and the method that the regulator will use to calculate the new tariff at the beginning of the new regulatory period is known.

- The IBERDROLA Group considers its projections to be reliable and that past experience demonstrates its ability to predict cash flows in periods such as those under consideration.

Moreover, the nominal growth rate considered in the electricity and gas transmission and distribution activities in Brazil, the United Kingdom and the United States is consistent with the market and inflation growth forecasts used by the IBERDROLA Group for these markets.

e) Discount rate:

The methodology for calculating the discount rate used by IBERDROLA consisted of adding to the temporary value of money or risk-free rate of each market the specific asset risks or risk premium of the asset or business.

The risk-free rate corresponded to 10-year Treasury bonds issued in the market, with sufficient depth and solvency. In countries with economies or currencies lacking sufficient depth and solvency, a country risk and currency risk was estimated so that the aggregate of all such components were considered to be the finance cost without the risk spread of the asset.

The asset's risk premium corresponded to the specific risks of the asset, the calculation of which took into account the unlevered betas estimated on the basis of comparable companies performing the same main activity.

The discount rates before taxes used for the impairment test for the different cash generating units were:

	Rates 2019	Rates 2018
Electricity and gas generation and supply in the UK	6.75%	7.01%
Electricity transmission and distribution in the UK	4.10%	4.57%
Renewable energies in the UK onshore/offshore	5.35%/5.97%	5.72% / 6.29%
Electricity and gas transmission and distribution in the US	4.86%	5.49%
Renewable Energies in the US onshore/offshore	5.69% / 7.04%	6.29% / 7.49%
Electricity generation and retail in Brazil	12.09%	13.90%
Electricity transmission and distribution in Brazil	10.32%	12.34%
Renewable Energies in Brazil	11.64%	13.61%

Impairments and write-offs recognised in 2019 and 2018

As a consequence of the impairment test carried out in 2019 and 2018 on the renewable facilities in the USA (Note 3.b), the IBERDROLA Group has proceeded to revert part of the provision accounted for in relation their intangible assets from past years. In 2019 and 2018 this reversal has amounted to Euros 20,024 thousand and to Euros 52,668 thousand, respectively (Notes 8 and 40).

Sensitivity analysis

The IBERDROLA Group has performed several sensitivity analyses of the impairment test results carried out in a systematic way including reasonable changes in a series of basic assumptions defined for each cash-generating unit (or cash generating unit groups):

- Electricity and gas generation and retail in the United Kingdom and Brazil:
    - Decrease of 10% in energy produced.
    - Decrease of 10% in margin per kWh.
    - Decrease of 10% in electricity and gas customer growth.
    - Decrease of 10% in electricity and gas retail per kWh.
    - Increase of 10% in operating and maintenance costs.
    - Increase of 10% in investment costs.
- Electricity transmission and distribution in the United Kingdom, the United States and Brazil:
    - Decrease of 10% in rate of return on which regulated remuneration is based.
    - Increase of 10% in operating and maintenance costs.
    - Decrease of 10% in investment (resulting in a subsequent decrease in remuneration).
- Renewable energies in the United Kingdom, the United States and Brazil:
    - Decrease of 5% in produced energy.
    - Decrease of 10% in total price per kWh, solely applicable to production for which there is no long-term sales agreement.
    - Increase of 10% in operating and maintenance costs.
    - Increase of 10% in investment costs.

Moreover, the IBERDROLA Group has performed an additional sensitivity analysis, increasing the applicable discount rate in the United Kingdom and the United States in 50 basic points and in Brazil in 100 basic points.

These sensitivity analyses were carried out for each basic assumption separately would not state out any depreciation whatsoever, except for the following cases:

- Electricity and gas generation and retail in the United Kingdom, whose value is close to its carrying amount, so practically any negative adjustment would imply that the value in use is lower than carrying amount. In the United Kingdom the electricity and gas retail mark is currently undergoing difficult times, affected by the entrance of new agents who compete aggressively in prices and margins, sometimes even under negative conditions. This is leading certain agents to bankruptcy. This market situation is believed to be unsustainable and it would be reasonable to wait till margins closer to historical ones can be achieved. Under these premises, assumptions have been prepared in the business plan (and the impairment test). This risk is to be monitored. In this regard, the potential impairment (before taxes) linked to the impact a change in key assumptions is detailed below:

    - No customer growth in electricity and gas (instead of the expected increase): Euros 271 million.

    - Decrease of margin per electricity and gas customer of 10% compared to expectations in the business plan: Euros 284 million.

    - Increase in discount rate of 50 basis points: Euros 480 million.

- Renewable energies in the United, whose value in use is Euros 678 million more than its carrying amount, in which a decrease of 2.2% in energy production, a lower market price of 4.7% or an increase in 30 basic points on the discount rate would imply that the value in use is lower than carrying amount.

14. FINANCIAL INVESTMENTS

14.a) Equity-accounted investees

Movement for the years 2019 and 2018 in the carrying amounts recognised through global integration of IBERDROLA Group's associates and combines business (Appendix I) is as follows:

		Joint ventures				
Thousands of Euros	**Associated companies**	**Subgroup NEONERGIA**	**Flat Rock Subgroup**	**Vineyard Wind, LLC**	**Other**	**Total**
Balance at 01.01.2018	**652,204**	**710,242**	**124,938**	**8,407**	**295,105**	**1,790,896**
Investment/Addition	3,879	48,997	982	37,067	380	91,305
Change of the consolidation perimeter	4,821	–	–	–	(46,197)	(41,376)
Transfers	19,569	–	22,492	–	(19,569)	22,492
Profit for the year from continuing activities	11,370	11,301	(3,353)	(1,824)	7,482	24,976
Profit for the year from discontinued activities	697	–	–	–	–	697
Other comprehensive income	(2,743)	–	–	–	(9,150)	(11,893)
Dividends	(6,135)	(13,363)	(6,437)	–	(27,120)	(53,055)
Translation differences	(36,034)	(95,785)	6,214	1,920	12,899	(110,786)
Disposal/derecognition	–	–	–	–	(4,460)	(4,460)
Other	1,128	161	(2)	–	(565)	722
Balance at 31.12.2018	**648,756**	**661,553**	**144,834**	**45,570**	**208,805**	**1,709,518**
Investment/Addition	17,516	12,988	269	156,781	120,538	308,092
Profit for the year from continuing activities	(6,660)	6,741	(4,202)	(6,620)	24,739	13,998
Profit for the year from discontinued activities	(6,653)	–	–	–	–	(6,653)
Other comprehensive income	(3,338)	–	–	–	11	(3,327)
Dividends	(7,145)	(9,549)	(8,056)	–	(22,311)	(47,061)
Translation differences	3,558	(6,886)	2,862	1,471	2,940	3,945
Disposal/derecognition	(6,044)	–	–	–	(15,916)	(21,960)
Other	671	903	–	–	(1,299)	275
Balance at 31.12.2019	**640,661**	**665,750**	**135,707**	**197,202**	**317,507**	**1,956,827**

The balance corresponding to the NEOENERGIA Subgroup at 31 December 2019 and 2018 mainly includes the shares in Companhia Hidreletrica Teles Pires, S.A (TELES PIRES), Norte Energia, S.A. (NORTE ENERGÍA) and Energetica Aguas da Pedra, S.A.(EAPSA) held by IBERDROLA Group through NEONERGIA.

Moreover, the IBERDROLA Group, through the company Vineyard Wind, LLC, continues the development of a large scale offshore wind farm in the coasts of Massachusetts, in the United States.

On the other hand, the balance of associate companies at 31 December 2019 includes an amount of Euros 566,351 thousand (Euros 571,414 thousand at 31 December 2018) corresponding to the interest of IBERDROLA Group in SIEMENS GAMESA whose trading price at reporting date amounts to Euros 859,570 thousand (Euros 584,958 thousand at 31 December 2018). As described in Note 51, the interest has been sold at the beginning of 2020.

Main Transactions

In 2019 no significant transactions related to accounted for investments by equity method have taken place. In 2018 the main transactions were:

- In December 2018, the IBERDROLA Group sold its 80% interest in its subsidiary Coyote Ridge Wind, LLC, keeping the remaining 20%, over which exercises significant influence and which is now held as equity-accounted investee (Notes 6 and 41).

- In June 2018, the IBERDROLA Group sold 20% stake in Tirme, S.A., for an amount of Euros 35,100 thousand, which implied a gross capital gain of Euros 30,928 thousand recorded under the heading “Gains on sale of non-current assets” of the Consolidated financial statement for 2018.

Summary of Financial Information

The summarised financial information at 31 December 2019 and 2018 (at 100% and before intercompany eliminations) for the major subgroups accounted for using the equity method is as follows:

Thousands of Euros	NORTE ENERGIA		TELES PIRES		EAPSA		Flat Rock Subgroup		Vineyard Wind, LLC	
	31.12.2019	31.12.2018	31.12.2019	31.12.2018	31.12.2019	31.12.2018	31.12.2019	31.12.2018	31.12.2019	31.12.2018
Segment	Liberalised-Brazil						Renewables – USA			
Percentage ownership	10.00%		50.56%		51.00%		50%		50%	
Current assets	252,391	195,966	35,304	37,327	24,634	16,290	2,496	10,126	28,768	13,859
Non-current assets	9,713,497	9,611,303	1,539,157	1,150,246	303,582	318,000	266,681	318,384	314,499	77,942
Total assets	**9,965,888**	**9,807,269**	**1,574,461**	**1,187,573**	**328,216**	**334,290**	**269,177**	**328,510**	**343,267**	**91,801**
Current liabilities	975,704	832,300	71,553	83,786	21,028	19,786	8,821	8,041	179,576	15,493
Non-current Liabilities	5,880,515	6,003,096	738,742	768,145	87,583	98,018	34,815	30,799	2,083	–
Total liabilities	**6,856,219**	**6,835,396**	**810,295**	**851,931**	**108,611**	**117,804**	**43,636**	**38,840**	**181,659**	**15,493**
Income from ordinary activities	996,818	1,020,144	201,943	192,146	60,394	62,214	12,423	17,994	–	–
amortisation and depreciation	(254,036)	(165,519)	(40,830)	(41,260)	(6,654)	(6,638)	(15,549)	(17,758)	(472)	–
Income from interests	10,274	16,272	(871)	–	935	1,157	63	79	47	–
Expenses from interests	(381,742)	(274,788)	(64,715)	(73,569)	(5,195)	(6,496)	(1,342)	(329)	(34)	–
Tax (expense)/income	37,059	(109,587)	4,890	2,666	(3,169)	(2,669)	–	–	–	–
Profit for the year from continuing operations	84,765	209,159	(24,367)	(93,418)	22,658	19,572	(5,703)	(6,963)	(19,402)	–
Total global profit	**84,765**	**209,159**	**(24,367)**	**(93,418)**	**22,658**	**19,572**	**(5,703)**	**(6,963)**	**(19,402)**	**–**
Other information										
Cash and cash equivalents	42,941	20,601	9,516	6,226	14,155	5,933	1,237	7,613	27,617	13,270
Current financial liabilities (*)	633,174	576,430	47,221	53,779	7,853	15,653	–	–	–	–
Non-current financial liabilities (*)	5,576,987	5,934,007	623,862	708,671	46,690	57,848	–	–	–	–

(*) Excluding trade and other payables

14.b) Other financial assets

The detail of the headings "Other non-current financial assets" and "Other current financial assets" of the IBERDROLA Group's Consolidated statement of financial position is as follows:

Thousands of Euros	31.12.2019	31.12.2018
Non-current (Note 4)		
Collection rights in Brazil (Notes 3.b and 12)	2,596,789	2,196,551
Long-term deposits and guarantees	311,008	281,942
Fixed-income securities	4,073	4,061
Concessional guarantee of the sufficiency tariff in Brazil (Note 12)	–	1,922
Long-term deposits	53,914	52,429
Loans to third parties	9,265	7,241
Assets for pension plans (Note 25)	7,190	7,007
Other investments in equity-accounted investees	19,953	9,195
Other	21,018	144,171
Bad debt provisions	(3,988)	(19,132)
Total	**3,019,222**	**2,685,387**
Current (Note 4)		
Collection rights in Brazil (Notes 3.b and 12)	–	11,606
Short-term deposits and guarantees	794	716
Concessional guarantee of the sufficiency tariff in Brazil (Note 12)	87,284	227,698
Accounts receivable for financing imbalance in revenues in 2019	212,599	–
Accounts receivable for financing imbalance in revenues in 2018	–	25,727
Other investments in equity-accounted investees	6,227	7,542
Debt guarantee deposits (Notes 4 and 20)	112,550	77,840
Other short-term deposits and guarantees	209,344	163,465
Other	87,906	66,603
Bad debt provisions	(24,143)	(9,629)
Total	**692,561**	**571,568**

Collection rights in Brazil

The heading "Collection rights in Brazil" relates to receivables by the Brazilian companies upon termination of their service concession arrangements. The Law N°12.783/13 provides that such indemnification must be determined by the replacement value (*Valor Novo de Reposiçao, VNR*) of the concession assets which have not been depreciated/amortised by the end of the concession period, using the residual value of the Asset regulatory base (*Base de Remuneração Regulatória, BRR*) at the end of the concession agreement.

The methodology established by the regulator enables doing reasonable estimations of receivables following the termination of the concession in so far the Public Administration blocks the value of the Asset Regulatory Base after each ordinary rate revision. Ordinary reviews are conducted every four or five years, depending on the concession. This means that after the regulator has conducted a tariff review the value of the Regulatory Asset Base prior to that date the Brazilian Large Consumers Prices General Index (*Índice Nacional de Preços ao Consumidor Amplo* (IPCAM) is changed. The next tariff review will determine the value of the regulatory asset base only with regard to additions in the interval between two tariff reviews.

To estimate the amount of the financial asset, observable values are used. Specifically, the net replacement value, as calculated by the energy regulator in the course of the latest tariff review. The amount is updated in the intervals between tariff reviews by additions to the underlying fixed assets and currency translation differences or, as the case may be, any changes in the method of calculation of the net realizable value and the IGPM.

Long-term deposits and guarantees

"Non-current deposits and guarantees" essentially corresponds to the portion of guarantees and deposits received from customers at the time of recruitment as security of electricity supply (which are recorded under the heading "Non-Current Liabilities - Other non-current payables" of the Consolidated statement of financial position - Note 31) and have been deposited with the competent Public Authorities in accordance with the current legislation in Spain.

Collection right due to imbalanced financing

Act 24/2013 of the Electricity Sector establishes that, in the case that in a period an imbalance occurs due to an income deficit in the settlements of the electricity sector, its quantity may not exceed 2% of the estimated incomes for the system for this period. Furthermore, the accumulated debt due to imbalances in preceding periods may not exceed 5% of the income estimated for the system. If these limits are exceeded, the entrance tolls will be reviewed at least in a total equivalent to the excess of these limits. This law establishes, furthermore, that the part of the imbalance due to an income deficit that, without exceeding these limits, is not compensated via the increase of tolls and charges, will be financed by those subject to the settlement system proportionally to the remuneration that corresponds to them for the activity they carry out.

The final settlement of the Spanish electricity system for 2018 presented a surplus and it was estimated as such by IBERDROLA Group in said year. In 2019, IBERDROLA Group estimated that the final settlement off the Spanish electricity system for 2018 presented a deficit to be offset by unused gains from the previous years. In any case, the provisional settlements made up to 31 December 2019 and 2018 show income deficit. The IBERDROLA Group's financed deficit at 31 December 2019 and 2018 amounted to Euros 368,746 and 222,841 thousand respectively.

In 2019 and 2018 the amounts of Euros 156,147 and 197,114 thousand respectively correspond to financed deficit and have been subject to a non-recourse factoring contract with credit assignment. Therefore, said amounts have been derecognised in the Consolidated financial statements at 31 December 2019 and 2018.

The IBERDROLA Group's financed deficit at 31 December 2018 has been collected in 2019.

15. TRADE AND OTHER RECEIVABLES

Details of the headings "Non-current trade and other receivables" of the Consolidated statement of financial position are as follows:

Thousands of Euros	31.12.2019	31.12.2018
Non-current		
Receivables in equity-accounted investees	2,077	–
PIS/COFINS Brazil (Note 31)	536,616	–
Other receivables	738,342	515,545
Contract assets:		
Concessions under IFRIC Note 12 (Note 3.u 12)	1,225,695	–
CFE (Note 36)	344,726	303,407
Other	11,163	–
Valuation changes for impairment	(7,649)	(4,375)
Total	**2,850,970**	**814,577**

Thousands of Euros	31.12.2019	31.12.2018
Current		
Customers (Note 5)	6,560,011	5,949,227
PIS/COFINS Brazil (Note 31)	189,283	–
Other receivables	425,077	543,840
Receivables in equity-accounted investees	12,788	6,587
Contract assets:		
Construction contracts	61,424	104,479
CFE (Note 36)	110,967	116,998
Valuation changes for impairment	(685,263)	(622,749)
Total	**6,674,287**	**6,098,382**

In September 2019, the Brazilian federal government issued a favourable decision for COSERN and COELBA regarding the recognition of the credit right related to unduly paid amounts for including the *Operações relativas à Circulação de Mercadorias e Prestação de Serviços de Transporte Interestadual e Intermunicipal e de Comunicação (ICMS)* on the calculation base for *Programas de Integração Social (PIS)* and the *Contribuição para Financiamento da Seguridade Social (COFINS)*.

As a result, the IBERDROLA Group has recognised receivables for the exclusion of the ICMS from the tax base credited to payables under the heading "Other non-current financial liabilities" of the Consolidated statement of financial situation (Note 31) based on the understanding that the tax credit would be transferred unto end customers following legal and regulatory rules in the Brazilian electricity sector, although its payment would not take place in the short-term. Therefore, the decision from the Brazilian federal government has had no impact on IBERDROLA Group's statement of profit for 2019.

The movements in valuation changes resulting from credit losses expected from previous balances are as follows:

Thousands of Euros	2019	2018
Initial balance	**627,124**	**646,403**
First application of IFRS 9 (Note 2.a.)	–	31,389
Charges	410,594	345,723
Bad debt provision	(240,418)	(274,313)
Excess	(113,279)	(92,067)
Translation differences	7,319	(29,991)
Other	1,572	(20)
Final balance	**692,912**	**627,124**

Practically the entire provision corresponds to gas and electricity consumers.

16. MEASUREMENT AND OFFSETTING OF FINANCIAL INSTRUMENTS

With the exception of financial derivative instruments, most of the financial assets and liabilities registered in the Consolidated statements of financial position correspond to the financial instruments classified at amortised cost.

Fair value in “Loans and borrowings and obligations or other securities” in current and non-current liabilities in IBERDROLA Group’s Consolidated balance statement at 31 December 2019 and 2018 amounts to Euros 41,285,124 and Euros 38,422,381 thousand, respectively. The carrying amount is Euros 38.926,290 thousand and Euros 37,326,472 thousand respectively. Said value is classified in Level 2 of the valuation hierarchy. The fair value of the derivative financial instruments does not differ significantly from book value thereof.

The sensitivity of the fair value of the heading “Loans and borrowings and obligations or other securities” of the IBERDROLA Group, after the effect of hedge accounting, changes in the euro-dollar and euro- sterling pound and the euro- Brazilian real exchange rates is as follows:

Thousands of Euros	2019		2018	
Interest rate variation	**Depreciation 5%**	**Appreciation 5%**	**Depreciation 5%**	**Appreciation 5%**
Debt’s fair value variation:				
US dollars	(408,373)	451,360	(326,675)	361,062
Sterling Pounds	(175,513)	193,988	(151,563)	167,517
Brazilian reals	(238,662)	263,785	(224,082)	247,670

The estimated fair value of “Loans and borrowings and obligations or other securities” bearing fixed interest rates, after the effect of hedge accounting at 31 December 2019 and 2018, calculated by discounting future cash flows at market interest rates, amounted to Euros 24,892,771 thousand and Euros 22,752,999 thousand, respectively. The interest rate curve used to make this calculation takes into account the risks associated with the electricity industry and the credit rating of the IBERDROLA Group. The sensitivity of that fair value to interest rate fluctuations is as follows:

Thousands of Euros	31.12.2019		31.12.2018	
Interest rate variation	+0.25%	+(0.25)%	+0.25%	+(0.25)%
Debt’s fair value variation	(391,515)	346,120	(272,305)	300,099

The IBERDROLA Group measures equity instruments and derivative financial instruments at fair value, provided they can be measured reliably, classifying them into three levels:

- Level 1: assets and liabilities quoted in liquid markets.
- Level 2: assets and liabilities whose fair value is determined using valuation techniques that use observable market assumptions.
- Level 3: assets and liabilities whose fair value is determined using valuation techniques that do not use observable market assumptions.

Details of financial instruments measured at fair value by level are as follows:

Thousands of Euros	Value at 31.12.2019	Level 1	Level 2	Level 3
Derivatives financial instruments (financial assets)	1,161,789	12	1,016,106	145,671
Derivative financial instruments (financial Liabilities)	(948,766)	(94)	(830,197)	(118,475)
Total (Note 28)	**213,023**	**(82)**	**185,909**	**27,196**

Thousands of Euros	Value at 31.12.2018	Level 1	Level 2	Level 3
Derivatives financial instruments (financial assets)	1,333,649	4,721	1,221,240	107,688
Derivative financial instruments (financial Liabilities)	(835,534)	(208)	(699,489)	(135,837)
Total (Note 28)	**498,115**	**4,513**	**521,751**	**(28,149)**

The reconciliation between initial and final balances for financial instruments classified as Level 3 of the fair-value hierarchy is as follows:

	Derivative financial instruments	
Thousands of Euros	2019	2018
Initial balance	**(28,149)**	**81,870**
Income and expense recognised in the Consolidated income statement	5,307	6,655
Income and expense recognised in equity	62,898	(17,298)
Purchases	(19,474)	(9,402)
Sales and settlements	4,186	(7,422)
Translation differences	(400)	(597)
Technology	2,828	(81,955)
Final balance	**27,196**	**(28,149)**

The fair value of Level 3-classified financial instruments has been determined by the discounted cash flow method. Projections of these cash flows are based on assumptions not observable in the market, and mainly correspond to purchase and sale price estimates that the Group normally uses, based on its experience in the markets.

None of the possible foreseeable scenarios of the indicated assumptions would result in a material change in the fair value of the financial instruments classified at this level.

In addition, the IBERDROLA Group´s financial assets and liabilities are compensated and presented net on the Consolidated statement of financial position when a legally enforceable right exists to offset the amounts recognised and the Group intends to settle the assets and liabilities net or simultaneously. The breakdown of offset financial assets and liabilities at 31 December 2019 and 2018 is as follows:

	31.12.2019					
				Uncompensated amounts under compensation agreements		
Thousands of Euros	Gross amount	Offset amount (Note 28)	Net amount	Financial instruments	Financial guarantee	Net amount
ASSET DERIVATIVES						
Current						
Commodities	346,909	(242,355)	104,554	(47,107)	(10,356)	47,091
Other	1,505	(33)	1,472	–	(1,157)	315
Non-current						
Commodities	152,887	(14,659)	138,228	(24,238)	(32,908)	81,082
Other	56,258	(2,432)	53,826	–	(51,479)	2,347
Total	**557,559**	**(259,479)**	**298,080**	**(71,345)**	**(95,900)**	**130,835**
OTHER FINANCIAL ASSETS:						
Receivables	216,119	(169,892)	46,227	(11,852)	(9,324)	25,051
LIABILITIES DERIVATIVES						
Current						
Commodities	591,426	(266,264)	325,162	(47,107)	(6,180)	271,875
Other	6,256	(33)	6,223	–	–	6,223
Non-current						
Commodities	70,655	(18,125)	52,530	(24,238)	(5,073)	23,219
Other	1,353	(261)	1,092	–	–	1,092
Total	**669,690**	**(284,683)**	**385,007**	**(71,345)**	**(11,253)**	**302,409**
OTHER FINANCIAL LIABILITIES						
Payables	372,280	(169,892)	202,388	(11,852)	(103,514)	87,022

	31.12.2018					
				Uncompensated amounts under compensation agreements		
Thousands of Euros	Gross amount	Offset amount (Note 28)	Net amount	Financial instruments	Financial guarantee	Net amount
ASSET DERIVATIVES						
Current						
Commodities	544,729	(356,914)	187,815	(59,254)	(6,745)	121,816
Other	5,705	(636)	5,069	(1)	–	5,068
Non-current						
Commodities	143,668	(16,126)	127,542	(11,123)	(29,770)	86,649
Other	58,284	–	58,284	–	(53,490)	4,794
Total	**752,386**	**(373,676)**	**378,710**	**(70,378)**	**(90,005)**	**218,327**
OTHER FINANCIAL ASSETS:						
Receivables	510,806	(380,637)	130,169	(38,454)	(7,841)	83,874
LIABILITIES DERIVATIVES						
Current						
Commodities	495,500	(356,913)	138,587	(59,254)	(9,852)	69,481
Other	2,122	(637)	1,485	(1)	(1)	1,483
Non-current						
Commodities	68,401	(16,126)	52,275	(11,123)	(14,864)	26,288
Other	2	–	2	–	–	2
Total	**566,025**	**(373,676)**	**192,349**	**(70,378)**	**(24,717)**	**97,254**
OTHER FINANCIAL LIABILITIES						
Payables	694,988	(380,637)	314,351	(38,454)	(33,179)	242,718

17. NUCLEAR FUEL

The changes in the heading "Nuclear Fuel" of the Consolidated statement of financial position in 2019 and 2018, as well as the detail thereof at 31 December 2019 and 2018 are as follows:

Thousands of Euros	Fuel loaded into the reactor core	Nuclear fuel in progress	Total
Balance at 01.01.2018	**263,385**	**68,498**	**331,883**
Additions	–	63,198	63,198
Capitalised financing expenses (Notes 3.g and 42)	–	633	633
Transfers	82,082	(82,082)	–
Fuel consumed (Note 3.g)	(123,040)	–	(123,040)
Balance at 31.12.2018	**222,427**	**50,247**	**272,674**
Additions	–	149,801	149,801
Capitalised financing expenses (Notes 3.g and 42)	–	1,252	1,252
Transfers	150,019	(150,019)	–
Fuel consumed (Note 3.g)	(118,226)	–	(118,226)
Balance at 31.12.2019	**254,220**	**51,281**	**305,501**

The IBERDROLA Group's nuclear fuel purchase commitments at 31 December 2019 and 2018 amount to Euros 514,047 thousand and Euros 485,015 thousand, respectively.

18. INVENTORIES

The details of the heading "Inventories" (Note 3.h) of the Consolidated statements of financial position at 31 December 2019 and 2018 are as follows:

Thousands of Euros	31.12.2019	31.12.2018
Energy sources	178,931	215,277
Emission allowances and renewable certificates	455,189	351,575
Real estate inventories	1,214,756	1,177,230
Land and plot	966,066	962,665
Developments in construction	240,606	200,763
Developments completed	8,084	13,802
Other inventories	847,370	581,230
Real estate inventories impairment allowance	(154,653)	(151,481)
Total	**2,541,593**	**2,173,831**

The variations in the impairment allowance in 2019 and 2018 are as follows:

Thousands of Euros	2019	2018
Initial balance	**151,481**	**131,624**
Charges	7,727	2,284
Reversals	(2,061)	(2,622)
Applications and others	(2,494)	20,195
Final balance	**154,653**	**151,481**

The heading "Revenue" in the 2019 and 2018 Consolidated income statements includes Euros 131,499 thousand and Euros 81,274 thousand, respectively, in respect of real estate inventories .

19. CASH AND CASH EQUIVALENTS

The breakdown of this heading in the Consolidated statement of financial position is as follows:

Thousands of Euros	31.12.2019	31.12.2018
Cash	500,235	143,868
Short-term deposits	1,613,044	2,657,289
Total	**2,113,279**	**2,801,157**

Short-term deposits mature within a period of less than three months and bear market interest rates. There are no restrictions on cash withdrawals for significant amounts.

20. EQUITY

Subscribed capital

Changes in 2019 and 2018 in the different items of the share capital of IBERDROLA are as follows:

	Registration in the Mercantile Registry	% Capital	Number of shares	Nominal	Euros
Balance at 01.01.2018			**6,317,515,000**	**0.75**	**4,738,136,250**
Capital increase	31 January 2018	1.913	120,859,000	0.75	90,644,250
Capital reduction	28 June 2018	3.081	(198,374,000)	0.75	(148,780,500)
Capital increase	30 July 2018	2.526	157,629,000	0.75	118,221,750
Balance at 31.12.2018			**6,397,629,000**	**0.75**	**4,798,221,750**
Capital increase	31 January 2019	1.920	122,828,000	0.75	92,121,000
Capital reduction	21 June 2019	4.300	(280,457,000)	0.75	(210,342,750)
Capital increase	30 July 2019	1.956	122,072,000	0.75	91,554,000
Balance at 31.12.2019			**6,362,072,000**	**0.75**	**4,771,554,000**

The capital increases taken place in 2019 and 2018 correspond to the different execution approved by the General Shareholders' Meeting through which the Iberdrola Flexible Remuneration (Iberdrola Flexible Dividend before) system is implemented.

In 2017 IBERDROLA changed the framework of the second Iberdrola flexible remuneration programme, adding a fourth additional option to the traditional three options. As a result, shareholders could choose among:

- receiving their remuneration in free allocation right shares;
- transfer in part or in whole the free allocation rights to the market;
- transferring in part or in whole the free allocation rights to the Company at a fixed guaranteed price by virtue of a purchase undertaking by the Company, or
- receiving their remuneration in cash, collecting an amount for the dividends corresponding to 2017.

In 2018, with the implementation of the first settlement of the Iberdrola flexible remuneration, the option to transfer the free allocation rights to the Company at a fixed price was eliminated. The other three options remained. In 2018, IBERDROLA acquired 699,283,602 free allocation rights for a gross total amount of Euros 97,899 thousand corresponding to the scrip issue of 29 January 2018.

Additionally, on 21 June 2018 and 21 June April 2019, capital reductions through the amortisation of treasury stock were agreed, as approved at the General Shareholders Meeting held on 13 April 2018 and 29 March 2019, respectively.

There were no changes to IBERDROLA's share capital other than those resulting from the transactions described above. There are no claims on IBERDROLA's share capital other than those established by the Spanish Companies Act.

IBERDROLA´s shares are listed for trading on the Spanish electronic trading system (Mercado Continuo Español), and included in the IBEX-35 and European Eurostoxx-50 index.

Major shareholders

Since IBERDROLA's shares are represented by the book-entry system, the exact stakes held by its shareholders are not known. The table below summarises major direct and indirect shareholdings in the share capital of IBERDROLA at 31 December 2019 and 2018, as well as the holdings of financial instruments disclosed by the owners of these stakes in compliance with the Royal Decree 1362/2007 of 19 October. This information is based on filings by the owners of the shares in the official registers of the National Securities Market Commission (hereinafter, Comisión Nacional del Mercado de Valores - CNMV) or the company's annual accounts or press releases, and it is presented in the 2019 IBERDROLA Group´s Annual Corporate Governance Report (Directors' report).

Among direct or indirect shareholders with a significant stake, IBERDROLA treats as a "significant shareholder" any shareholder who exerts a significant influence on the company's financial and operating decisions when they i) attend the Board of Directors or a similar committee or ii) they have the possibility of exercising the proportional representation system. Therefore, the company treats Qatar Investment Authority as significant shareholder, being the only shareholder who satisfied that condition at 31 December 2019 and 2018.

	% of voting rights 2019			Financial instruments 2019	Directors in IBERDROLA 2019
Holder	Direct	Indirect	Total		
Qatar Investment Authority (1)	–	8.694	8.694	–	–

	% of voting rights 2018			Financial instruments 2018	Directors in IBERDROLA 2018
Holder	Direct	Indirect	Total		
Qatar Investment Authority (1)	–	8.646	8.646	–	–

(1) Parent company of Qatar Holding LLC, direct holder of the investment (formerly, the direct holder of the investment was Qatar Holding Luxembourg II, S.A.R.L.).

In addition, the breakdown of other companies having at 31 December 2019 and 2018 direct or indirect voting rights higher than 3% of the share capital are as follows:

	% of voting rights 2019			% of voting rights 2018		
Holder	Direct	Indirect	Total	Direct	Indirect	Total
Norges Bank	3.430	–	3.430	3.332	–	3.332
Blackrock, Inc.	–	5.160	5.160	–	5.131	5.131

Financial management

The IBERDROLA Group's main financial management objectives are to ensure short and long-term financial stability, robust financial liquidity ratios, the optimization of the liquidity position, the financial risk management, and at the same time maintaining a sustainable remuneration policy for its shareholders.

At 31 December 2019, Moody´s, Standard & Poor´s and Fitch's ratings were Baa1, BBB+ and BBB+, respectively.

Leverage ratios at 31 December 2019 and 2018 stand at:

Thousands of Euros	31.12.2019	31.12.2018
Loans and borrowings and obligations or other securities (Note 27)	38,926,290	37,326,472
Equity instruments having the substance of a financial liability (Note 22)	215,533	177,229
Derivative financial liabilities	425,313	486,453
Current (Note 30)	1,767,117	–
Non-current financial lease (Note 31)	16,857	–
Gross debt	**41,351,110**	**37,990,154**
Derivative financial assets	753,895	911,966
CSA Derivatives value guarantee deposits (Notes 4 and 14.b)	112,550	77,840
Cash and cash equivalents (Note 19)	2,113,279	2,801,157
Total treasury assets	*2,979,724*	*3,790,963*
Net debt	**38,371,386**	**34,199,191**
Equity		
Parent company	37,678,307	36,582,199
Non-controlling interests	9,516,358	7,394,355
	47,194,665	**43,976,554**
Leverage	**44.84%**	**43.75%**

For comparison purposes, if in 2019 IFRS 16 Leases had not been applied, leverage in 2019 would have been 43.76%.

Derivative financial instruments detailed in the table above only include the ones relating to financing operations which breakdown is as follows (Note 28):

	2019					
	Derivative assets			Derivative liabilities		
Thousands of Euros	Short term	Non-current	Total	Current	Non-current	Total
Interest rate hedges	31,556	106,630	138,186	12,310	(111,077)	(98,767)
Exchange rate hedges	211,682	338,060	549,742	(106,875)	(146,955)	(253,830)
Total hedging derivatives	**243,238**	**444,690**	**687,928**	**(94,565)**	**(258,032)**	**(352,597)**
Interest rate derivatives	6,399	–	6,399	(11,527)	–	(11,527)
Exchange rate derivatives	–	300	300	(1,652)	(269)	(1,921)
Treasury shares derivatives	–	59,268	59,268	–	(59,268)	(59,268)
Total non-hedging derivatives	**6,399**	**59,568**	**65,967**	**(13,179)**	**(59,537)**	**(72,716)**
Total	**249,637**	**504,258**	**753,895**	**(107,744)**	**(317,569)**	**(425,313)**

	2018					
	Derivative assets			Derivative liabilities		
Thousands of Euros	Short term	Non-current	Total	Current	Non-current	Total
Interest rate hedges	29,462	110,135	139,597	3,905	(109,077)	(105,172)
Exchange rate hedges	346,919	404,239	751,158	(242,663)	(121,484)	(364,147)
Total hedging derivatives	**376,381**	**514,374**	**890,755**	**(238,758)**	**(230,561)**	**(469,319)**
Interest rate derivatives	4,980	–	4,980	(100)	(34)	(134)
Exchange rate derivatives	–	183	183	(377)	(575)	(952)
Treasury shares derivatives	–	16,048	16,048	–	(16,048)	(16,048)
Total non-hedging derivatives	**4,980**	**16,231**	**21,211**	**(477)**	**(16,657)**	**(17,134)**
Total	**381,361**	**530,605**	**911,966**	**(239,235)**	**(247,218)**	**(486,453)**

Powers delegated by the General Shareholders' Meeting

The General Shareholders' Meeting on 8 April 2016 resolved, in respect of items seven and eight on the agenda, to delegate powers to the Board of Directors, with express powers of substitution, for a period of five years, to:

- increase share capital in the terms and to the limits stipulated in Article 297.1 b) of the Spanish Companies Act ("Ley de Sociedades de Capital"), with authorisation to exclude preferential subscription rights, and

- issue bonds or debentures swappable for and/or convertible into shares in the Company or other companies, and warrants on new or existing shares in the Company or other companies, to a maximum amount of Euros 5,000 million. This authorisation includes the delegation of powers to, where applicable: (i) determine the basis and procedures for conversion, swap or exercise; (ii) increase share capital by the amount required to cover applications for conversion; and (iii) exclude shareholders' preferential subscription rights on the issue.

Both authorisations have a joint limit to a maximum nominal amount of 20% of the share capital.

Legal reserve

Under the Spanish Companies Act, 10% of net profit for each year must be transferred to the legal reserve until the balance of this reserve reaches at least 20% of the share capital.

The legal reserve may be used to increase the share capital in an amount equal to the portion of the balance that exceeds 10% of capital after the increase. Otherwise, until the legal reserve exceeds 20% of share capital, it can only be used to offset losses, if no other reserves are available.

Revaluation reserves

The balance of "Revaluation reserves" arose as a result of the revaluation of property, plant and equipment made by IBERDROLA pursuant to the Royal Decree-law 7/1996. This balance can be used, free of tax, to offset recorded losses both prior years' accumulated losses and current year losses or losses which might arise in the future, and to increase share capital. From 1 January 2007, the balance of this reserve can be taken to unrestricted reserves, provided that the monetary surplus has been realised. The surplus will be deemed to have been realised on the portion on which depreciation has been taken for accounting purposes or if the revalued assets have been transferred or derecognised. If the balance of this account was used in any way other than as specified in the Royal Decree-law 7/1996, it would be subject to tax.

At 31 December 2018 the amount in this reserve was Euros 28,000 thousand. In 2019 this reserve has been fully destined to increase share capital on 31 December 2019. As a result, on 31 December 2019 there are no amounts in this reserve.

Share premium

The Spanish Companies Act expressly permits the use of the share premium account balance to increase capital and does not establish any specific restrictions as to its use.

Other restricted reserves

"Other restricted reserves" of the heading "Equity" of the Consolidated statement of financial position primarily includes the restricted reserve set up by IBERDROLA in accordance with article 335.c) of the Spanish Companies Act arising from the capital reductions carried out in prior years through the retirement of treasury shares. The restricted reserves relating to Group companies other than the parent IBERDROLA are included under "prior years' profit and loss" of the same heading.

Non-controlling interests

The variations in this headings in 2019 and 2018 are as follows:

Thousands of Euros	Subgroup AVANGRID	Subgroup NEONERGIA	East Anglia	Other	Perpetual subordinated bonds	Total
Balance at 01.01.2018	**3,060,962**	**2,538,003**	**–**	**72,415**	**1,552,546**	**7,223,926**
Capital increase	9,727	128,954	–	10,571	700,000	849,252
Disposals	–	–	–	–	(525,000)	(525,000)
Profit for the year from non-controlling interests	99,796	165,979	–	19,972	37,569	323,316
Other comprehensive income	(12,627)	4,440	–	255	–	(7,932)
Dividends	(82,295)	(106,713)	–	(8,947)	–	(197,955)
Translation differences	131,673	(325,715)	–	622	–	(193,420)
Other	(19,787)	(3,241)	–	(15,241)	(39,563)	(77,832)
Balance at 31.12.2018	**3,187,449**	**2,401,707**	**–**	**79,647**	**1,725,552**	**7,394,355**
Capital increase	4,565	–	196,320	4,805	800,000	1,005,690
Profit for the year from non-controlling interests	99,839	228,346	3,343	16,623	60,095	408,246
Other comprehensive income	6,225	6,464	(7,726)	563	–	5,526
Dividends	(89,836)	(77,038)	–	(11,904)	–	(178,778)
Translation differences	62,316	(31,687)	58,119	398	–	89,146
Transactions with non-controlling interests (Note 6)	–	72,384	765,293	–	–	837,677
Other	(9,876)	(6,693)	–	8,190	(37,125)	(45,504)
Balance at 31.12.2019	**3,260,682**	**2,593,483**	**1,015,349**	**98,322**	**2,548,522**	**9,516,358**

In March 2018 NEONERGIA resolved to increase share capital in BRL 999,999,963, taking into consideration the percentage of ownership of its shareholders, resulting in a payment of Euros 115,795 thousand under the heading “Equity in non-controlling shares” of the Consolidated financial statement at 31 December 2019.

Moreover, from August 2019 several share capital increases have been executed to complete the construction of the East Anglia project in the amount of Euros 490,800, subscribed by the shareholders in proportion to their interest, resulting in a payment of Euros 196,320 thousand in the heading “Equity in non-controlling shares” of the Consolidated financial statement at 31 December 2019.

The summarised financial information related to subgroups in which IBERDROLA Group does not have a 100% interest refers to amounts consolidated before intercompany eliminations:

	Subgroup AVANGRID		Subgroup NEONERGIA		East Anglia
Thousands of Euros	**31.12.2019**	**31.12.2018**	**31.12.2019**	**31.12.2018**	**31.12.2019**
Current assets	1,399,919	1,271,334	2,859,598	2,595,495	865,203
Non-current assets	35,705,645	32,254,086	10,438,462	9,256,051	2,223,749
Total assets	**37,105,564**	**33,525,420**	**13,298,060**	**11,851,546**	**3,088,952**
Current liabilities	3,291,721	2,754,223	2,112,283	1,794,650	379,155
Non-current liabilities	16,328,719	13,706,546	6,002,417	5,129,099	170,335
Total liabilities	**19,620,440**	**16,460,769**	**8,114,700**	**6,923,749**	**549,490**
Gross operating profit (EBITDA)	1,943,215	1,925,397	1,372,577	1,143,272	6,807
Trade receivables and other assets' valuation adjustments,	(83,757)	(72,393)	(75,156)	(63,731)	(19)
Amortisation, depreciation and provisions	(1,009,654)	(906,613)	(447,527)	(425,225)	(4,375)
Result of equity-accounted investees - net of taxes	1,966	7,519	6,741	11,301	–
Financial result	(245,546)	(201,618)	(303,817)	(268,214)	95
Gains /(losses) from non-current assets	63,868	(34,794)	2,270	893	–
Corporate tax	(130,841)	(186,914)	(99,454)	(60,640)	(1,168)
Non-controlling interests	(1,068)	(2,010)	(228,343)	(165,978)	–
Net profit for the year	**538,183**	**528,574**	**227,291**	**171,678**	**1,340**

Perpetual subordinated bonds

The IBERDROLA Group has carried out the following perpetual subordinated bonds emissions:

Emission date	Thousands of Euros	Coupon	Early amortisation and depreciation option
22/11/2017	1,000,000	1.875% per year from the emission date until 22 May 2023. From the date of the first revision, swap rate to 5 years plus an annual margin of 1.592% during the following five years. Swap rate to 5 years plus a margin of 1.8492% per year during each of the five-year revision periods starting on 22 May 2028, 2033 and 2038 and swap rate to five years plus a margin of 2.5992% per year during the subsequent five-year revision periods.	During the three previous months until (including) 22 May 2023 and from that date each year.
26/03/2018	700,000	Fixed annual rate of 2.625% from the issuance date until 26 March 2024. From the date of the first revision, swap rate to 5 years plus an annual margin of 2.061% during the following five years. Swap rate to 5 years plus a margin of 2.311% per year during each of the five-year revision periods starting on 26 March 2029, 2034 and 2039 and swap rate to five years plus a margin of 3.061% per year during the subsequent five-year revision periods.	During the three previous months until (including) 26 March 2024 and from that date each year.

Emission date	Thousands of Euros	Coupon	Early amortisation and depreciation option
12/02/2019	800,000	Fixed annual rate of 3.25% from the issuance date until 12 February 2025. From the date of the first revision, swap rate to 5 years plus an annual margin of 2.973% during the following five years. Swap rate to 5 years plus a margin of 3.223% per year during each of the five-year revision periods starting on 12 February 2030, 2035 and 2040 and swap rate to five years plus a margin of 3.973% per year during the subsequent five-year revision periods.	During the three previous months until (including) 12 February 2025 and from that date each year.

On 27 February 2013, the IBERDROLA Group's perpetual subordinated bonds issuance was completed and disbursed, in the amount of Euros 525 million. The issue price was set at 99.472% of the face value and obligations will accrue a fix annual interest of 5.75% from the issue date. On 27 February 2018 the IBERDROLA Group exercised its early redemption option on a series of subordinated bonds. Redemption was made at par, as set out in the terms and conditions attaching to the bonds.

These bonds do not have a contractual maturity date. After analysing the issue conditions, the IBERDROLA Group recognised the cash received with a credit to the heading "Perpetual subordinated obligations" under equity in the Consolidated statement of financial position, as it considers that it does not qualify for classification as a financial liability, given that the IBERDROLA Group does not have a commitment to deliver cash, as the circumstances that would require it to do so - namely distribution of dividends and exercising of its right to redeem the bonds - are fully under its control.

The interest accrued on these bonds will not be callable but rather cumulative. However, the IBERDROLA Group will be obliged to settle the interest accrued in the event it distributes dividends. The amount in interests accrued at 31 December 2019 and 2018 whose payment will take place when IBERDROLA distributes dividends amounts to Euros 60,095 and 37,569 thousand, respectively.

Valuation adjustments

The change in this reserve arising from valuation adjustments to derivatives designated as cash flow hedges at 31 December 2019 and 2018 is as follows:

Thousands of Euros	01.01.2018	First application of IFRS 9 (Note 2.a.)	Change in fair value and other	Allocation to the values of hedged assets	Amounts allocated to the income statement	31.12.2018	Change in fair value and other	Allocation to the values of hedged assets	Amounts allocated to the income statement	31.12.2019
Valuation adjustments of equity-accounted investees (net of tax):	**13,417**	**–**	**(11,045)**	**–**	**14**	**2,386**	**(3,341)**	**–**	**14**	**(941)**
Available-for-sale assets	615	(615)	–	–	–	–	–	–	–	–
	615	**(615)**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
Cash flow hedges:										
Interest rate swaps	(358,894)	–	(64,580)	–	63,389	(360,085)	(237,026)	–	75,091	(522,020)
Collars	(4,252)	–	(1,499)	–	–	(5,751)	–	–	–	(5,751)
Commodities derivatives	236,718	–	199,105	–	(207,039)	228,784	(635,352)	–	243,230	(163,338)
Currency forwards	48,193	–	39,424	(1,138)	5,125	91,604	(41,454)	(18,766)	(29,131)	2,253
	(78,235)	**–**	**172,450**	**(1,138)**	**(138,525)**	**(45,448)**	**(913,832)**	**(18,766)**	**289,190**	**(688,856)**
Hedging costs	**–**	**2,069**	**(86,950)**	**–**	**87,991**	**3,110**	**(36,308)**	**–**	**31,017**	**(2,181)**
Tax effect on available-for-sale assets and cash flow hedges	**21,949**	**(346)**	**(17,756)**	**170**	**3,739**	**7,756**	**195,116**	**3,643**	**(58,646)**	**147,869**
Total	**(42,254)**	**1,108**	**56,699**	**(968)**	**(46,781)**	**(32,196)**	**(758,365)**	**(15,123)**	**261,575**	**(544,109)**

Treasury shares

The IBERDROLA Group buys and sells treasury shares in accordance with the prevailing law and the resolutions of the General Shareholders Meeting. Such transactions include purchases and sales of company shares and derivatives thereon.

At 31 December 2019 y 2018 the balances of the different instruments are as follows:

	31.12.2019		31.12.2018	
	No. of shares	Thousands of Euros	No. of shares	Thousands of Euros
Treasury shares held by IBERDROLA	24,376,375	217,865	135,985,344	873,065
Treasury shares held by SCOTTISH POWER	913,719	7,939	1,050,639	8,076
Total return swaps	11,949,623	77,599	11,810,088	77,599
Accumulators (exercised shares)	63,395,734	530,343	209,361	1,378
Accumulators (potential shares)	70,058,270	602,459	7,613,376	50,230
Total	**170,693,721**	**1,436,205**	**156,668,808**	**1,010,348**

(a) Treasury shares

Changes in 2019 and 2018 in the treasury shares of IBERDROLA and SCOTTISHPOWER (Note 3.m) are as follows:

	IBERDROLA		SCOTTISH POWER	
	No. of shares	Thousands of Euros	No. of shares	Thousands of Euros
Balance at 01.01.2018	**75,710,149**	**507,175**	**1,156,863**	**8,417**
Additions	266,442,793	1,672,087	362,108	2,393
Capital reduction	(198,374,000)	(1,245,420)	–	–
Iberdrola flexible remuneration (1)	5,117	–	144,747	–
Iberdrola flexible remuneration (2)	–	(11,044)	–	–
Disposals (3)	(7,798,715)	(49,733)	(613,079)	(2,734)
Balance at 31.12.2018	**135,985,344**	**873,065**	**1,050,639**	**8,076**
Additions	172,369,618	1,402,123	256,592	2,193
Capital reduction	(280,457,000)	(2,015,182)	–	–
Iberdrola flexible remuneration (1)	3,039,564	–	110,714	–
Disposals (3)	(6,561,151)	(42,141)	(504,226)	(2,330)
Balance at 31.12.2019	**24,376,375**	**217,865**	**913,719**	**7,939**

(1) Shares received
(2) Free of charges allocation rights disposed.
(3) Includes awards to employees.

SCOTTISHPOWER's treasury shares correspond to the matching shares held by the trust in the share plan called Share Incentive Plan (Note 21).

During 2019 and 2018, treasury shares held by the IBERDROLA Group were below the legal limit.

IBERDROLA PUBLIC

(b) Derivatives settled by physical delivery

The IBERDROLA Group recognises the transaction directly in equity under the heading "Treasury shares" and records the obligation to purchase said shares under the heading "Loans and borrowings and obligations or other securities" in current and non-current liabilities of the Consolidated statement of financial position.

- Total return swaps

The IBERDROLA Group has swaps on treasury shares with the following features: during the life of the contract IBERDROLA will pay the financial entity the 3-month Euribor plus a spread on the underlying notional and will receive the corresponding dividends with respect to the shares paid out to the financial entity. On the expiration date IBERDROLA will buy the shares at the strike price set out in the contract.

The characteristics of these contracts at 31 December 2019 and 2018 are as follows:

	No. of shares at 31.12.2019	Strike price	Maturity date	Interest rate	2019 thousands of Euros
Total return swap	5,810,088	6.188	24/07/2020	3-month Euribor + 0.30%	35,953
Total return swap	6,139,535	6.783	25/07/2020	3-month Euribor + 0.30%	41,646
Total	**11,949,623**				**77,599**

	No. of shares at 31.12.2018	Strike price	Maturity date	Interest rate	2018 thousands of Euros
Total return swap	5,810,088	6.188	24/07/2019	3-month Euribor + 0.38%	35,953
Total return swap	6,000,000	6.941	25/07/2019	3-month Euribor + 0.30%	41,646
Total	**11,810,088**				**77,599**

- Treasury share accumulators

The IBERDROLA Group holds several purchase accumulators on treasury shares. These accumulators are obligations to buy in the future, with a notional amount of zero on the start date. The number of shares to be accumulated depends on the market price quoted on a range of observation dates throughout the life of the options – in this case, on a daily basis. A strike price is set, and a knockout level above which the structured product is "knocked out" and shares are no longer accumulated.

The accumulation mechanism is as follows:

- when the spot price is below the strike price, two units of the underlying security are accumulated;
- when the spot price is between the strike price and the knockout level, only one unit of the underlying security is accumulated; and
- when the spot price is above the knockout level, no shares are accumulated.

The characteristics of these contracts at 31 December 2019 and 2018 are as follows:

2019	No. of shares	Average Price of the period	Maturity date	Thousands of Euros
Exercised shares	63,395,734	8.3656	07/02/2020 - 11/06/2020	530,343
Potential maximum [1]	70,058,270	8.5994	07/02/2020 - 11/06/2020	602,459

2018	No. of shares	Average Price of the period	Maturity date	Thousands of Euros
Exercised shares	209,361	6.5819	14/02/2019	1,378
Potential maximum [1]	7,613,376	6.5976	14/02/2019	50,230

(1) Maximum number of additional shares that could be accumulated according to the described mechanism until the maturity of the structures (assuming that the cash price during the remaining life of the structure is always below the strike price).

Distribution of dividends with charge to 2019 results

IBERDROLA´s Board of Directors has agreed to propose at the General Shareholders' Meeting, the distribution of a dividend, chargeable to the results of 2019 and the retained earnings from previous years. The gross amount of this dividend will be the same as the following amounts:

(a) Euros 238,559 thousand that were paid out in an interim dividend on 5 February 2020 to the holders of 1,419,991,945 IBERDROLA shares that chose to receive their remuneration in cash within the scope of the second settlement of the Iberdrola flexible remuneration system for 2019 through the collection of an amount of gross Euros 0.168 per share; and

(b) the amount to be determined by multiplying:

(i) the gross amount per share that, as additional dividend payment for 2019, will be distributed by the Company within the scope of the first settlement of the Iberdrola flexible remuneration system for 2020 (the Supplementary dividend; by

(ii) the total number of shares upon which the holders have opted for receiving the Supplementary dividend within the scope of the first settlement execution of the Iberdrola flexible remuneration system.

On the date of authorisation of these Consolidated annual accounts, it is not possible to determine the amount of the Supplementary dividend or, consequently, the amount of the Dividend.

The payment of the Supplementary dividend shall be made together with the execution of the increase in share capital that will be proposed at the General Shareholders' Meeting, to offer the shareholders the possibility of receiving their remuneration in cash (through the payment of the supplementary dividend) or in the free shares of the new issuance of the Company (through the aforementioned increase in share capital).

The payment of the Supplementary dividend is configured as one of the alternatives that the shareholder may choose when receiving their remuneration within the scope of the first settlement of the Iberdrola Flexible Remuneration corresponding to 2020. As a consequence of the aforementioned, it will be understood that these shareholders who choose to receive their remuneration in cash by means of the supplementary dividend with respect to all or part of their shares, expressly, automatically and irrevocably waive the free allocation rights corresponding to these shares and, therefore, the possibility of putting them on the market or receiving fully issued new shares.

21. LONG-TERM COMPENSATION PLANS

21.1. Share-based long-term compensation plans

2014-2016 Strategic Bonus Programme

On 25 April 2017 the board of directors, on the recommendation of the Appointments and Remuneration Committee, decided to pay the 2014-2016 Strategic Bonus on determining that 93.20% of the targets had been met. Accordingly, and as the bases supporting the handover of shares in the first tranche of the payment were confirmed, in the first half of 2019 the third and last payment was carried out through the handover of 2,393,909 shares. These shares included those delivered to executive directors (Note 47) and to senior management (Note 49).

Additionally, following the corporate restructuring in Brazil, the third and last payment of the 2014-2016 Strategic Bonus Programme corresponding to the 14 beneficiaries from the ELEKTRO Group companies was settled in cash in the first half of 2019 in the amount of Euros 1,413 thousand.

2017-2019 Strategic Bonus Programme

The shareholders at their 2017 General Meeting approved the establishment of a Strategic Bonus for executive directors, senior managers and other IBERDROLA employees who, due to their position or responsibility are deemed to have made a decisive contribution to the creation of value (up to a maximum of 300 beneficiaries), tied to the IBERDROLA Group's performance in relation to certain metrics throughout the assessment period, from 2017 to 2019.

The payment period for the scheme will run from 2020 to 2022, and payments will be made in the form of shares on a deferred basis in those three years.

The maximum number of shares to be delivered to the beneficiaries of the 2017-2019 Strategic Bonus will be 14,000,000 shares, equal to 0.22% of the share capital at the time this resolution is adopted. A maximum of 2,500,000 shares will be delivered to the executive directors in compliance with the terms and conditions of the scheme. At 31 December 2019 the number of shares granted is 11,509,809 shares, and the transaction was as follows:

	No. of shares
Balance at 31.12.2016	**–**
Additions	12,535,000
Balance at 31.12.2017	**12,535,000**
Additions	400,000
Cancelled [(1)]	(1,249,584)
Balance at 31.12.2018	**11,685,416**
Additions	80,000
Cancellations	(255,607)
Balance at 31.12.2019	**11,509,809**

(1) Following the corporate restructuring in Brazil, IBERDROLA's board of directors, in the meeting held on 19 December 2017 approved to offer those 17 beneficiaries of the 2017-2019 Strategic Bonus from Elektro Group the possibility of receiving an amount in cash for the early partial settlement thereof. The beneficiaries of the Strategic bonus 2017-2019 from Elektro Group received, in the first half of 2018 the amount proportional to the time elapsed between the commencement of the retribution plan and its early termination in 31 December 2017. The Board of Directors had previously assessed the degree of performance tied to objectives at the time of the early termination. The early termination settlement amounted to Euros 1,527 thousand.

Long-term incentives for AVANGRID shares (2016–2019)

The shareholders of AVANGRID at their 2016 General Meeting approved the establishment of a Strategic Bonus for executive directors and other executive personnel (approximately 80 beneficiaries), tied to the AVANGRID Group's performance in relation to certain metrics throughout the assessment period from 2016 to 2019.

The maximum number of gross shares to be delivered to the group of the Bonus beneficiaries will be 2,500,000 shares, of which 1,202,751 shares were delivered at 31 December 2019.

The payment period for the scheme will run from 2020 to 2022, and payments will be made in the form of shares on a deferred basis in those three years.

Restrictive shares programme AVANGRID

As part of the Avangrid Omnibus Plan, a general plan establishing the governance framework for executive remuneration in cash and in shares, 68,000 restricted shares were assigned to certain executives in 2018. In order for said share assignment to be effective, the eligible executives must remain in the company for two years following the assignment.

In relation to bonuses described above, settlement of which is made in shares, movement in the heading "Other reserves" of the Consolidated statement of financial position is as follows:

Thousands of Euros	2014-2016 IBERDROLA Strategic Bonus Programme	2017-2019 IBERDROLA Strategic Bonus Programme	2016-2019AVANGRID Strategic bonus (*)	AVANGRID Restricted shares (*)	Total
Balance at 01.01.2018	**38,390**	**11,818**	**6,721**	**–**	**56,929**
Charges	8,347	26,718	(3,191)	765	32,639
Effect price charged to equity	748	–	–	–	748
Payments in shares	(21,699)	–	–	–	(21,699)
Payments in cash due to leaving the company	(3,709)	–	–	–	(3,709)
Transfer	(1,247)	(1,581)	2	–	(2,826)
Balance at 31.12.2018	**20,830**	**36,955**	**3,532**	**765**	**62,082**
Charges	790	23,943	1,422	1,534	27,689
Effect price charged to equity	3,708	–	–	–	3,708
Payments in shares	(25,016)	–	–	–	(25,016)
Payments in cash due to leaving the company	(224)	–	–	–	(224)
Transfer	(88)	(66)	(22)	(6)	(182)
Balance at 31.12.2019	**–**	**60,832**	**4,932**	**2,293**	**68,057**

(*) Submitted for 100%. Non-controlling interests represent 18.5%.

SCOTTISH POWER share-based incentive plan

SCOTTISH POWER has two share-based plans for its employees.

- *Sharesave Schemes:* savings plans in which employees decide the amount they want to contribute to the plan (between GBP 5 and GBP 250 on a monthly basis) and this is deducted monthly from their salary. At the end of a three or five-year saving period, as applicable to each plan, employees may use the money saved to buy IBERDROLA shares at a discounted option price set at the beginning of the plan or to receive the amount saved in cash.

  The fair value of the employee's share purchase options is determined at the start of the plan, and is recognised in the Income statement over the plan's vesting period (three or five years) with a credit to equity.

  The heading “Personnel expenses” of the Consolidated income statements for 2019 and 2018 includes Euros 551 thousand and Euros 700 thousand, respectively, which have been credited under the heading “Other reserves” of the Consolidated statement of financial position.

  Additionally, in 2019 and 2018 payments for options have been made in the amount of Euros 1,395 thousand and Euros 3,118 thousand, respectively.

  Changes in the number of share options are as follows:

	No. of shares	Number of shares
Balance at 01.01.2017	**2,616**	**5,531,681**
Exercised	(90)	(125,025)
Cancelled	(117)	(279,308)
Balance at 31.12.2017	**2,409**	**5,127,348**
Exercised	(1,090)	(1,414,705)
Cancelled	(59)	(138,761)
Balance at 31.12.2018	**1,260**	**3,573,882**
Exercised	(140)	(378,572)
Cancelled	(18)	(129,250)
Balance at 31.12.2019	**1,102**	**3,066,060**

- *Share Incentive Plan:* this plan has an option for purchasing shares with tax incentives plus a contribution from the company. The employees decide on the amount they wish to contribute, which is deducted from their monthly salary subject to the maximum contribution allowed by the law in the United Kingdom. The shares purchased with this contribution are called partnership shares. Additionally, SCOTTISH POWER complements the employee´s contribution to a maximum of GBP 50 monthly. The shares purchased with the company´s contribution are called matching shares.

  The contributions, from both the company and the employees, are put into a trust which buys the shares, and they are held in this trust until withdrawn by the employees. All shares are purchased in the market at the monthly market price.

  Partnership shares are owned by the employees who purchased them with their own money, however, shares acquired with company contributions (matching shares) do not vest until three years after the date of purchase. The matching shares acquired by the trust in 2019 and 2018 amount to 2,576,876 and 3,133,397 shares, respectively.

  Company contributions are made in cash on a monthly basis and are charged to the income statement during the three years the employee must remain in the company in order to be entitled to these shares.

  The heading "Personnel expenses" of the Consolidated income statement for 2019 and 2018 amount to Euros 2,302 and 2,223 thousand respectively, which have been credited under the heading "Other reserves" of the Consolidated statement of financial position.

  Additionally, in 2019 and 2018 there have been transfers to shareholders for exercised options in the amount of Euros 2,330 and 2,734 thousand, respectively.

21.2. Cash-based long-term compensation plans

Below is a description of long-term compensation plans to be settled in the form of shares:

2018-2019 Long-term incentive plan NEOENERGIA

The Board of Directors of NEOENERGIA, at the meeting held on 27 September 2017, approved the establishment of a long-term incentive plan for executive directors and senior executives who due to their position or responsibility in the NEOENERGIA Group are deemed to have made a decisive contribution to the creation of value (up to a maximum of 100 beneficiaries), in the maximum amount of BRL 50 million.

This long-term incentive plan is tied to NEOENERGIA Group's performance in relation to certain metrics throughout the assessment period from 2018 to 2019.

The payment period for the scheme will run from 2020 to 2022, and payments will be made in the form of shares on a deferred basis in those three years.

The heading "Personnel expenses" of the Consolidated income statement for 2019 includes Euros 3,946 thousand.

22. EQUITY INSTRUMENTS HAVING THE SUBSTANCE OF A FINANCIAL LIABILITY

In the United States, the IBERDROLA Group has signed several contracts that have brought in third parties as non-controlling interests in some of its wind farms in exchange for cash and other financial assets primarily.

The main characteristics of these contracts are as follows:

- Regardless of the interest acquired by the non-controlling interests, the IBERDROLA Group retains the control and management of the wind farms; accordingly, they are fully consolidated in these Consolidated annual accounts.

- The non-controlling interests have the right to a substantial portion of the profits and tax credits generated by these wind farms up to the return level established at the beginning of the contract.

- The non-controlling interests remain in the equity of the wind farms until they achieve the stipulated returns.

- Once these returns have been obtained, the non-controlling interests must renounce their stake in the wind farms, thus losing their right to the profits and tax credits generated.

- Whether or not the non-controlling interests of the IBERDROLA Group obtain the agreed upon returns depends on the economic performance of the wind farms. Although the IBERDROLA Group is obliged to operate and maintain these facilities in an efficient manner and to take out the appropriate insurance policies, it is not obliged to deliver cash to the non-controlling interests over and above the aforementioned profits and tax credits.

Following an analysis of the economic substance of these agreements, the IBERDROLA Group classifies the consideration received at the outset of the transaction under the headings "Non-current equity instruments having the substance of a financial liability" and "Current equity instruments having the substance of a financial liability" of the Consolidated statement of financial position. Subsequently, this consideration is measured at amortised cost.

At 31 December 2019 and 2018 the amount in this heading accrues an average interest in US Dollar of 7.85% and 7.05% respectively.

Changes in this heading of the Consolidated statements of financial position for 2019 and 2018 are as follows:

Thousands of Euros	2019	2018
Initial balance	**177,229**	**47,281**
Finance cost accrued in the year	20,010	12,026
Payments	(99,786)	(65,658)
Translation differences	3,696	6,876
Additions	114,384	176,704
Final balance	**215,533**	**177,229**

In June 2019 and May 2018, the IBERDROLA Group executed new agreements through its subsidiary companies in the United States Patriot Wind Holdings LLC and El Cabo Wind LLC, respectively.

23. CAPITAL GRANTS

The change in this heading of the Consolidated statements of financial position in 2019 and 2018 is as follows (Note 3.n).:

Thousands of Euros	Capital grants	Investment tax credits	Total
Balance at 01.01.2018	**282,173**	**1,198,938**	**1,481,111**
Additions	6,184	7,856	14,040
Derecognition	(147)	–	(147)
Transfers	2,252	–	2,252
Translation differences	2,864	52,683	55,547
Allocation to income statement (Note 3.o)	(17,121)	(57,516)	(74,637)
Modification of the consolidation perimeter (Note 6)	(238)	–	(238)
Balance at 31.12.2018	**275,967**	**1,201,961**	**1,477,928**
Additions	12,403	–	12,403
Derecognition	(3,079)	(37,004)	(40,083)
Translation differences	1,314	23,759	25,073
Allocation to income statement (Note 3.o)	(16,206)	(60,592)	(76,798)
Balance at 31.12.2019	**270,399**	**1,128,124**	**1,398,523**

24. FACILITIES TRANSFERRED OR FINANCED BY THIRD PARTIES

The change in this heading of the Consolidated statements of financial position in 2019 and 2018 is as follows (Note 3.o).:

Thousands of Euros	Transfer of assets from third parties	Assets financed from third parties	Total
Balance at 01.01.2018	**2,601,786**	**2,161,362**	**4,763,148**
Additions	88,873	170,419	259,292
Derecognition	(9)	(769)	(778)
Transfers	(1,018)	(1,234)	(2,252)
Translation differences	(266)	1,172	906
Allocation to income statement (Note 3.o)	(118,321)	(78,599)	(196,920)
Balance at 31.12.2018	**2,571,045**	**2,252,351**	**4,823,396**
Additions	110,436	184,755	295,191
Derecognition	(99)	(3,114)	(3,213)
Translation differences	4,068	65,028	69,096
Allocation to income statement (Note 3.o)	(121,122)	(75,885)	(197,007)
Balance at 31.12.2019	**2,564,328**	**2,423,135**	**4,987,463**

25. PROVISION FOR PENSIONS AND SIMILAR OBLIGATIONS

The breakdown of this heading of the Consolidated statements of financial position is as follows:

Thousands of Euros	31.12.2019	31.12.2018
Defined benefit plans (Spain)	408,678	372,553
Long-service bonuses and other long-term benefits (Spain)	43,729	40,796
Defined benefit plans (United Kingdom)	765,535	569,204
Defined benefit plans (United States)	1,031,518	1,006,606
Defined benefit plans (Brazil)	189,739	210,432
Defined benefit plans and other long term benefits (Spain and other countries)	74,551	55,542
Restructuring plans	172,202	187,773
Total	**2,685,952**	**2,442,906**

Each year IBERDROLA estimates, based on an independent actuarial report, the payments for pensions and similar benefits that it will have to meet in the following financial year. These are recognised as current liabilities in the Consolidated statement of financial position.

25.a Defined benefit plans and other non-current employee benefits

Spain

IBERDROLA Group's main commitments to providing defined benefits for its employees in Spain, in addition to those provided by Social Security, are as follows:

- Employees subject to IBERDROLA's Collective Labour Agreement who retired before 9 October 1996, are covered by a defined benefit retirement pension scheme, the actuarial value of which was fully externalised at 31 December 2019 and 2018.

  IBERDROLA Group has no liability of any kind for this group and has no claim on any potential excess generated in the assets of this plan over the defined benefits.

- Also, in relation to serving employees and employees who have retired after 1996 and are subjected to IBERDROLA Group's Collective Labour Agreement and members/beneficiaries of the IBERDROLA Pension Plan, risk benefits (e.g. widowhood, permanent disability or orphanage) which guarantee a defined benefit at the time the event giving rise to such benefits occurs, are instrumented through a pluriannual insurance policy. The guaranteed benefit consists of the difference between the present actuarial value of the above mentioned defined benefit at the time of the event and the member's vested rights at the time of the event, if the latter were lower. The premiums on the insurance policy for 2019 and 2018 are recognised under the heading "Personnel expenses" of the Consolidated income statements and for an amount of Euros 14,318 thousand and Euros 10,621 thousand, respectively.

- In addition, IBERDROLA maintains a provision of coverage of certain commitments with its employees other than those indicated above, which are covered by internal funds linked to social security benefits, consisting mainly of free electricity supply, with an annual consumption limit, for retired employees and other long term benefits, primarily consisting of long-service bonus for active employees at 10, 20 and 30 years of service.

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United Kingdom (SCOTTISH POWER)

SCOTTISH POWER employees residing in the United Kingdom, hired before 1 April 2006, are covered by the defined benefit retirement plans *ScottishPower Pension Scheme* (SPPS) and *Manweb Group of Electricity Supply Pension Scheme* (Manweb).

One-off capital sums have been offered to pensioners and deferred beneficiaries, reducing the defined benefit burden.

USA (AVANGRID)

The former employees of SCOTTISH POWER that now form part of the workforce of the IBERDROLA Group in the United States, most of them belonging to the workforce of the Iberdrola Renewables Holding Inc. (hereinafter, ARHI), are members of various post-employment plans (Supplemental Executive Retirement Plan, Iberdrola Renewables Retiree Benefits Plan and Iberdrola Renewables Retirement Plan).

Effective from 30 April 2011, a change affecting all plan participants occurred in the Iberdrola Renewables Retiree Benefits Plan, whereby the benefit receivable at retirement age was set at the amount accrued until 30 April 2011 and the plan became a defined-contribution scheme from that date onwards.

On the other hand, the employees of the AVANGRID NETWORKS Group are affiliated to various defined benefit retirement pension plans (Qualified Pension Plans, Non-Qualified Pension Plans), disability benefit plans (Long Term Disability Plans) and health insurance plans (Postretirement Welfare Plans).

UIL Group´s employees were covered by several defined benefit retirement plans (Qualified Pension Plans, Non-Qualified Pension Plans) and health plans (Postretirement Welfare Plans).

Defined benefit retirement pension plans are not available for new incorporations and when possible those who remain are only recognised for past services.

One-off capital sums have been offered to pensioners and deferred beneficiaries, reducing the defined benefit burden.

Brazil

On 24 August 2017 NEOENERGIA was acquired through the incorporation of ELEKTRO. ELEKTRO, CELPE, COELBA and COSERN employees are covered by several defined benefit retirement plans. COELBA employees are covered by a post-employment health plan too.

Defined benefit retirement plans are not available for new incorporations.

Other commitments with employees

In addition, some IBERDROLA Group companies have provisions to meet certain commitments with their employees, other than those described above, which are met by in-house pension funds.

The most significant information related to plans is as follows:

					United States						Brazil							
	Spain		United Kingdom		ARHI		UIL		AVANGRID NETWORKS		ELEKTRO [1]		NEOENERGIA [2]		Other		Total	
Thousands of Euros	31.12.2019	31.12.2018	31.12.2019	31.12.2018	31.12.2019	31.12.2018	31.12.2019	31.12.2018	31.12.2019	31.12.2018	31.12.2019	31.12.2018	31.12.2019	31.12.2018	31.12.2019	31.12.2018	31.12.2019	31.12.2018
Present value of the obligation	(452,407)	(413,349)	(6,081,053)	(5,463,614)	(63,591)	(61,192)	(1,129,169)	(1,004,348)	(2,531,231)	(2,307,689)	(361,226)	(299,674)	(504,576)	(481,917)	(74,551)	(55,542)	(11,197,804)	(10,087,325)
Fair value of plan assets	–	–	5,315,518	4,894,410	34,610	30,514	714,862	609,765	1,943,001	1,726,344	363,240	330,695	378,856	331,671	–	–	8,750,087	7,923,399
Net asset / (Net provision)	**(452,407)**	**(413,349)**	**(765,535)**	**(569,204)**	**(28,981)**	**(30,678)**	**(414,307)**	**(394,583)**	**(588,230)**	**(581,345)**	**2,014**	**31,021**	**(125,720)**	**(150,246)**	**(74,551)**	**(55,542)**	**(2,447,717)**	**(2,163,926)**
Amounts recognised in the Consolidated statement of financial position:																		
Provision for pensions and similar commitments and similar obligations	(452,407)	(413,349)	(765,535)	(569,204)	(28,981)	(30,678)	(414,307)	(394,583)	(588,230)	(581,345)	–	–	(189,739)	(210,432)	(74,551)	(55,542)	(2,513,750)	(2,255,133)
Assets for pensions and similar commitments and similar obligations (Note 14.b)	–	–	–	–	–	–	–	–	–	–	–	–	7,190	7,007	–	–	7,190	7,007
Net asset / (Net provision)	**(452,407)**	**(413,349)**	**(765,535)**	**(569,204)**	**(28,981)**	**(30,678)**	**(414,307)**	**(394,583)**	**(588,230)**	**(581,345)**	**–**	**–**	**(182,549)**	**(203,425)**	**(74,551)**	**(55,542)**	**(2,506,560)**	**(2,248,126)**

(1) These amounts have not been recognised in the Consolidated statement of financial position at 31 December 2019 and 2018, respectively, since the requirements set forth in the current legislation for their accounting treatment are not met.

(2) At 31 December 2019 and 2018 a surplus of Euros 56,829 thousand and 53,179 thousand, respectively, was not recognised, applying the IFRIC 14: “IAS 19 - The limit on a defined benefit asset, minimum funding requirements and their interaction”.

The changes in provisions for the commitments detailed in the previous section in 2019 and 2018 is as follows:

	Spain			United States			Brazil [1]			
Thousands of Euros	**Electricity tariff**	**Long-service bonus**	**United Kingdom**	**ARHI**	**UIL**	**AVANGRID NETWORKS**	**ELEKTRO**	**NEOENERGIA**	**Other**	**Total**
Balance at 01.01.2018	**402,883**	**42,539**	**6,189,753**	**63,425**	**1,015,714**	**2,389,049**	**303,237**	**542,248**	**58,376**	**11,007,224**
Modification of the consolidation perimeter (Note 6)	**–**	**–**	**(64,774)**	**–**	**–**	**–**	**–**	–	**–**	**(64,774)**
Normal cost (Note 38)	5,741	3,627	69,226	581	13,909	30,204	1,434	626	6,247	**131,595**
Cost for past services (Note 38)	–	–	(7,662)	(153)	190	(2,656)	–	(2,531)	(6,047)	**(18,859)**
Finance cost (Note 43).	6,518	330	154,304	2,433	37,648	84,065	27,128	47,702	2,033	**362,161**
Actuarial gains and losses										
To profit (Note 38)	537	366	–	–	–	–	–	–	–	**903**
To reserves	(26,706)	–	(289,375)	(5,197)	(45,482)	(126,314)	21,197	8,045	450	**(463,382)**
Members contributions	–	–	7,574	–	–	–	925	534	–	**9,033**
Payments	(16,420)	(6,066)	(505,101)	(5,268)	(61,657)	(168,407)	(15,966)	(50,718)	(5,553)	**(835,156)**
Translation differences	–	–	(90,331)	5,371	44,026	101,748	(38,281)	(63,989)	36	**(41,420)**
Balance at 31.12.2018	**372,553**	**40,796**	**5,463,614**	**61,192**	**1,004,348**	**2,307,689**	**299,674**	**481,917**	**55,542**	**10,087,325**
Normal cost (Note 38)	4,515	3,831	57,677	756	13,276	28,206	1,499	(10)	3,386	**113,136**
Cost for past services (Note 38)	–	–	(12,564)	(1,348)	484	(26)	–	–	539	**(12,915)**
Finance cost (Note 43).	5,861	378	152,138	2,428	40,446	88,893	27,928	44,086	1,752	**363,910**
Actuarial gains and losses										
To profit (Note 38)	1,372	2,506	–	–	–	–	–	–	–	**3,878**
To reserves	40,000	–	431,747	3,647	111,960	223,080	53,939	29,356	19,087	**912,816**
Members contributions	–	–	6,718	–	–	–	928	306	–	**7,952**
Payments	(15,623)	(3,782)	(344,705)	(4,319)	(63,141)	(163,650)	(18,017)	(45,348)	(6,822)	**(665,407)**
Translation differences	–	–	326,428	1,235	21,796	47,039	(4,725)	(5,731)	1,067	**387,109**
Balance at 31.12.2019	**408,678**	**43,729**	**6,081,053**	**63,591**	**1,129,169**	**2,531,231**	**361,226**	**504,576**	**74,551**	**11,197,804**

(1) As the surplus was not recognised, the actuarial differences recognised in reserves were adjusted upwards in 2019 and 2018 by Euros 33,030 thousand and 4,120 thousand respectively in the application of the current legislation IFRIC 14: “IAS 19 - The limit on a defined benefit asset, minimum funding requirements and their interaction”. Moreover, in 2019 and 2018, and for the same concept, the finance costs recognised were adjusted upwards by Euros 7,957 and 8,334 thousand, respectively.

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The average length at the end of the year of the liability for the employee benefits described previously is:

	Spain			United States			Brazil	
Years	Electricity tariff	Long-service bonus	United Kingdom	ARHI	UIL	AVANGRID NETWORKS	ELEKTRO	NEOENERGIA
Average length	21	9	19	13	14	11	15	11

The movement in the fair value of the plan assets in 2019 and 2018 is as follows:

		United States			Brazil		
Thousands of Euros	United Kingdom	ARHI	UIL	AVANGRID NETWORKS	ELEKTRO	NEOENERGIA	Total
Fair Value at 01.01.2018	**5,552,232**	**34,622**	**661,511**	**1,853,869**	**343,432**	**348,118**	**8,793,784**
Modification of the consolidation perimeter (Note 6)	(59,348)	–	–	–	–	–	**(59,348)**
Revaluation (Note 43)	140,690	1,254	24,325	65,498	30,922	30,698	**293,387**
Actuarial gains and losses to reserves	(343,877)	(3,070)	(61,367)	(146,210)	13,659	24,529	**(516,336)**
Company contributions	183,149	1,609	19,860	45,018	738	21,972	**272,346**
Members contributions	7,574	–	–	–	925	534	**9,033**
Payments	(505,101)	(5,268)	(61,657)	(168,406)	(15,966)	(50,718)	**(807,116)**
Translation differences	(80,909)	1,367	27,093	76,575	(43,015)	(43,462)	**(62,351)**
Fair Value at 31.12.2018	**4,894,410**	**30,514**	**609,765**	**1,726,344**	**330,695**	**331,671**	**7,923,399**
Revaluation (Note 43)	139,044	1,207	24,870	66,859	30,982	30,595	**293,557**
Actuarial gains and losses to reserves	143,940	3,936	98,386	233,564	22,236	46,140	**548,202**
Company contributions	187,726	2,645	32,373	44,503	763	20,208	**288,218**
Members contributions	6,718	–	–	–	928	306	**7,952**
Payments	(344,705)	(4,319)	(63,141)	(163,650)	(18,017)	(45,348)	**(639,180)**
Translation differences	288,385	627	12,609	35,381	(4,347)	(4,716)	**327,939**
Fair Value at 31.12.2019	**5,315,518**	**34,610**	**714,862**	**1,943,001**	**363,240**	**378,856**	**8,750,087**

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The main assumptions applied in the actuarial reports that determined the provisions needed to meet the abovementioned commitments at 31 December 2019 and 2018 are as follows:

2019	Discount rate	Wage increase	Price kWh (euros)	Inflation	Survivorship table	Health insurance cost Pre-Medicare/Medicare
Spain						
Electricity tariff [1]	0.93%	–	2020: 0.1129174; 2021: 0.118912; 2022: 0.116039; 2023: 0,1115581; […]	–	PERMF 2000P	–
Long-service bonus [1]	0.47%	1.00%	–	–	PERMF 2000P	–
United Kingdom	2.10%	3.07%	–	3.07%	Pre-retirement/Post-retirement Male: 85% AMC00 / 90%S2PMA CMI2018 M (1.25% improvement rate) Women: 85%AFC00 / 100%S2PFA CMI2018 F (1.25% improvement rate)	-
United States						
ARHI	3.10%	n.a.	–	2.00%	Pri-2012 Fully Generational Projection using Scale MP 2019	Based on RX year: 6.75%(pre-65)/7.50% (post-65) (2020); 6.50%/7.25%(2021); [...] : 4,50%/4,50% (2029 onwards)
UIL	3.19%	3.50% - 3.80%	–	2.00%	Pri-2012 Fully Generational Projection using Scale MP 2019	Based on year: 6.75%(pre-65)/5.50% (post-65) (2020); 6.50%/5.25%(2021); [...] : 4,50%/4,50% (2029 onwards)
AVANGRID NETWORKS	2.93%	Based on the age and Union/ Non Union	–	2.00%	Pri-2012 Fully Generational Projection using Scale MP 2019	Based on RX year: 6.75%(pre-65)/7.50% (post-65) (2020); 6.50%/7.25%(2021); [...] : 4.50%/4.50% (2029 onwards)
Brazil						
ELEKTRO	7.81%	6.65%	–	4.00%	AT - 2000 male - 10%	–
NEOENERGIA						
Celpe BD	7.61%	5.04%	–	4.00%	AT-2000 male	–
Coelba BD	7.53%	–	–	4.00%	BR-EMS-sb 2015 Male -15%	–
Coelba Plan As. Médica	7.79%	n.a.	–	4.00%	AT-2000 Basic	–
Cosern BD	7.41%	–	–	4.00%	AT - 2000 (40% male; 60% female) - 10%	–

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2018	Discount rate	Wage increase	CPI increase	Inflation	Survivorship table	Health insurance cost Pre-Medicare/medicare
Spain						
Electricity tariff (1)	1.60%	–	2019 0.12722; 2020 0.13072; 2021 0.12215; 2022 0.12185; […]	–	PERMF 2000P	–
Long-service bonus (1)	0.93%	1.00%	–	–	PERMF 2000P	–
United Kingdom	2.80%	3.76%	–	3.26%	Pre-retirement/Post-retirement Male: 85% AMC00 / 90%S2PMA CMI2017 M (1.25% improvement rate) Female: 85%AFC00 / 100%S2PFA CMI2017 F (1.25% improvement rate)	-
United States						
ARHI	4.09%	n.a.	–	2.00%	RP-2006 fully generational table using Scale MP-2018	Based on RX year: 7%(pre-65)/7.75% (post-65) (2019); 6.75%/7.50%(2020); [...] : 4.50%/4.50% (2029 onwards)
UIL	4.09%	3.50% - 3.80%	–	2.00%	RP-2006 fully generational table using Scale MP-2018	Based on RX year: 7%(pre-65)/7.75% (post-65) (2019); 6.75%/7.50%(2020); [...] : 4.50%/4.50% (2029 onwards)
AVANGRID NETWORKS	3.93%	Based on the age and Union/ Non Union	–	2.00%	RP-2006 fully generational table using Scale MP-2018	Based on RX year: 7%(pre-65)/7.75% (post-65) (2019); 6.75%/7.50%(2020); [...] : 4.50%/4.50% (2029 onwards)
Brazil						
ELEKTRO	9.46%	6.33%	–	4.25%	AT - 2000 male - 10%	-
NEOENERGIA						
Celpe BD	9.36%	5.29%	–	4.25%	AT-2000 male	-
Celpe Mixto	8.94%	5.29%	–	4.25%	AT-2000	-
Coelba BD	9.25%	5.29%	–	4.25%	BR-EMS-sb 2015 Male -15%	-
Coelba mixto	9.10%	5.29%	–	4.25%	AT-2000 Basic	-
Coelba Plan As. Médica	9.46%	n.a.	–	n.a.	AT-2000 Basic	-
Cosern BD	9.20%	5.29%	–	4.25%	AT - 2000 (40% male; 60% female) - 10%	-
Cosern Mixto	9.10%	5.29%	–	4.25%	AT-2000 - 10%	-

(1) In both cases, the retirement age has been established pursuant to the Law 27/2011, of 1 August, on the upgrade, adjustment and modernisation of the Social Security system, providing for a gradual increase in the retirement age in accordance with the law.

The most relevant figures for these commitments over the last years are the following:

Thousands of Euros	2019	2018	2017	2016	2015
Spain					
Present value of the obligation	(452,407)	(413,349)	(445,422)	(553,361)	(501,032)
Net asset / (Net provision)	(452,407)	(413,349)	(445,422)	(553,361)	(501,032)
Experience adjustments arising on plan liabilities	(9,245)	4,914	7,799	4,664	25,355
United Kingdom					
Present value of the obligation	(6,081,053)	(5,463,614)	(6,189,753)	(6,261,592)	(6,272,818)
Fair value of plan assets	5,315,518	4,894,410	5,552,232	5,741,838	5,915,545
Net asset / (Net provision)	(765,535)	(569,204)	(637,521)	(519,754)	(357,273)
Experience adjustments arising on plan liabilities	13,437	81,052	46,097	(17,836)	27,541
Experience adjustments arising on plan assets	143,940	(343,877)	97,442	552,312	(77,098)
ARHI					
Present value of the obligation	(63,591)	(61,192)	(63,425)	(72,785)	(73,133)
Fair value of plan assets	34,610	30,514	34,622	37,722	38,284
Net asset / (Net provision)	(28,981)	(30,678)	(28,803)	(35,063)	(34,849)
Experience adjustments arising on plan liabilities	(1,836)	(507)	(975)	1,626	7,834
Experience adjustments arising on plan assets	(3,936)	(3,070)	3,810	864	(2,695)
UIL					
Present value of the obligation	(1,129,169)	(1,004,348)	(1,015,714)	(1,126,064)	(1,055,586)
Fair value of plan assets	714,862	609,765	661,510	695,330	647,357
Net asset / (Net provision)	(414,307)	(394,583)	(354,204)	(430,734)	(408,229)
Experience adjustments arising on plan liabilities	(7,057)	2,995	27,026	(30,075)	182
Experience adjustments arising on plan assets	(98,386)	(61,367)	67,787	20,218	(10,620)
AVANGRID NETWORKS					
Present value of the obligation	(2,531,231)	(2,307,689)	(2,389,049)	(2,629,032)	(2,595,775)
Fair value of plan assets	1,943,001	1,726,344	1,853,869	1,991,669	1,893,611
Net asset / (Net provision)	(588,230)	(581,345)	(535,180)	(637,363)	(702,164)
Experience adjustments arising on plan liabilities	(21,214)	20,183	(25,591)	37,797	(11,669)
Experience adjustments arising on plan assets	(233,563)	(146,210)	179,082	38,298	(95,019)
ELEKTRO					
Present value of the obligation	(361,226)	(299,674)	(303,237)	(336,323)	(206,387)
Fair value of plan assets	363,240	330,695	343,432	376,175	270,711
Net asset / (Net provision)	2,014	31,021	40,195	39,852	64,324
Experience adjustments arising on plan liabilities	(8,459)	(1,667)	17,615	(15,966)	(5,980)
Experience adjustments arising on plan assets	22,236	13,659	(2,734)	16,502	(10,632)
NEOENERGIA					
Present value of the obligation	(504,576)	(481,917)	(542,248)	–	–
Fair value of plan assets	378,856	331,671	348,118	–	–
Net asset / (Net provision)	(125,720)	(150,246)	(194,130)	–	–
Experience adjustments arising on plan liabilities	(12,630)	13,637	(7,298)	–	–
Experience adjustments arising on plan assets	46,140	(24,529)	(8,293)	–	–

The sensitivity at 31 December 2019 of the present value of the obligation of these commitments to changes in the discount rate:

	Spain			United States			Brazil	
Increase/decrease	Electricity tariff	Long-service bonus	United Kingdom	ARHI	UIL	AVANGRID NETWORKS	ELEKTRO	NEOENERGIA
Increase/decrease (basic points)								
10	(6,953)	(337)	(107,036)	(636)	(14,775)	(27,668)	(4,759)	(4,677)
(10)	7,144	418	114,930	648	15,073	28,194	5,345	5,103
Inflation (basic points)								
10	–	–	102,784	–	–	–	–	–
(10)	–	–	(100,200)	–	–	–	–	–
Wage increase (basic points)								
10	–	417	–	–	1,942	2,619	–	–
(10)	–	(375)	–	–	(1,926)	(2,591)	–	–
Survivorship table (years)								
1	–	–	234,582	–	–	–	–	–
Health insurance cost (basic points)								
25	–	–	–	10	1,336	1,275	–	–
(25)	–	–	–	(9)	(1,277)	(1,227)	–	–
Price increase kWh (basic points)								
10	8,308	–	–	–	–	–	–	–
(10)	(7,776)	–	–	–	–	–	–	–

Category of assets

The main categories of plan assets, as a percentage of total plan assets at year end, are shown in the table below:

2019	Equity securities	Fixed income securities	Cash and cash equivalents	Other
United Kingdom	16%	32%	7%	45%
AVANGRID NETWORKS				
Retirement plan	22%	63%	2%	13%
Retiree Benefits Plan	52%	37%	2%	9%
UIL				
Qualified Pension Plans	33%	52%	1%	14%
Postretirement Welfare Plans	10%	4%	65%	21%
ARHI				
Qualified Pension Plans	42%	42%	1%	15%
Postretirement Welfare Plans	46%	48%	6%	–
ELEKTRO	–	96%	–	4%
NEOENERGÍA	1%	97%	0%	2%

2018	Equity securities	Fixed income securities	Cash and cash equivalents	Other
United Kingdom	17%	40%	5%	38%
AVANGRID NETWORKS				
Retirement plan	33%	42%	1%	24%
Retiree Benefits Plan	48%	48%	4%	–
UIL				
Qualified Pension Plans	51%	43%	–	6%
Postretirement Welfare Plans	61%	24%	14%	1%
ARHI				
Qualified Pension Plans	36%	41%	3%	20%
Postretirement Welfare Plans	49%	44%	3%	4%
ELEKTRO	12%	84%	–	4%
NEOENERGÍA	2%	95%	–	3%

The assets associated with these plans include neither financial instruments issued by the IBERDROLA Group nor tangible nor intangible assets.

Moreover, the breakdown of assets of the plans measured at fair value by level is as follows:

Thousands of Euros	Value at 31.12.2019	Level 1	Level 2	Level 3
United Kingdom	5,315,518	549,852	3,414,092	1,351,574
AVANGRID	2,692,473	393,217	1,859,269	439,987
ELEKTRO	363,240	197,018	133,398	32,824
NEOENERGIA	378,856	5	359,461	19,390
Total	**8,750,087**	**1,140,092**	**5,766,220**	**1,843,775**

Thousands of Euros	Value at 31.12.2018	Level 1	Level 2	Level 3
United Kingdom	4,894,410	711,123	3,027,800	1,155,487
AVANGRID	2,366,623	245,852	1,554,323	566,448
ELEKTRO	330,695	195,700	108,487	26,508
NEOENERGIA	331,671	3	311,015	20,653
Total	**7,923,399**	**1,152,678**	**5,001,625**	**1,769,096**

The strategic distribution of pension plans investments is supported by periodic specific Asset Liability Management studies for each of the plans. This guarantees the match with the funding policy and the expected time to fully finance the commitment in accordance with flows resulting therefrom. Those studies provide the level of sensitivity to the different expected return rates of asses and discount of obligations. On the other hand, it is guaranteed that the financing of plans is adequate while recovering regulated cash flows. Moreover, there are prudential investment rules applicable to pensions within the scope of the Group.

Regarding the management of assets at global level, they have been progressively switched to passive management. Provisions for death and permanent disability have been covered with pension plans through insurance policies and managing entities and investment assets have been qualified through independent third parties, resulting in investments with lower liquidity. Additionally, in the United Kingdom, the longevity risk has been covered with swaps and work is underway to partially cover inflation risk.

25.b) Defined contribution plans

The active employees of IBERDROLA and employees who have retired after 9 October 1996, are members of the IBERDROLA pension plan with joint promoters, are covered by an occupational, defined-contribution retirement pension system independent of the Social Security system.

In accordance with this system and IBERDROLA Group's effective Collective Labour Agreement, the periodic contribution to be made is calculated as a percentage of the annual pensionable salary of each employee, except for employees joining the Company after 9 October 1996, who are subject from 1 January 2019 to a contributory system where the Company pays 62,5% and the employee 37,5% (before this date, the Company paid 60% and the employee 40%). For the ones hired after 20 July 2015 the company pays 1/3 and the employee 2/3, until the date in which the employee takes part in the Base Salary Rating (SBC). At this moment the same criteria will be applied to those employees as the ones who were hired since 9 October 1996. The respective subsidiaries finance these contributions for all their active employees under 65.

IBERDROLA's contributions in 2019 and 2018 were Euros 18,820 thousand and Euros 19,006 thousand, respectively, and are recognised under the heading "Personnel expenses" of the Consolidated income statement.

Additionally, the contribution made on behalf of employees not covered by the Collective Bargaining Agreement in 2019 and 2018, recognised under the heading "Personnel expenses" of the Consolidated income statement is shown below.

Defined contribution plans	2019	2018
SCOTTISH POWER	14,067	12,825
AVANGRID	35,389	31,258
NEOENERGIA	5,892	5,883
Other	876	646
Total	**56,224**	**50,612**

25.c) Restructuring plans

Given the interest shown by some of the employees in requesting early retirement, IBERDROLA Group has offered these employees the mutually agreed termination of the employment relationship. To do so, IBERDROLA has carried out a process of individual termination contracts in Spain. At 31 December 2019, the existing provisions in this regard correspond to the following restructuring plans:

Thousands of Euros	31.12.2019		31.12.2018	
	Provisions	No. of contracts	Provisions	No. of contracts
2012 restructuring plan	288	4	981	19
2014 restructuring plan	21,258	159	35,738	238
2015 restructuring plan	6,790	51	10,649	69
2016 restructuring plan	4,774	43	8,238	61
2017 restructuring plan	85,020	386	112,824	409
2019 restructuring plan	38,045	141	–	–
Total	**156,175**	**784**	**168,430**	**796**

In addition, the following provisions at 31 December 2019 and 2018 are kept to face these commitments abroad and for the subsidiary company Iberdrola Ingeniería y Construcción, S.A.U.(IIC):

Thousands of Euros	31.12.2019	31.12.2018
SCOTTISH POWER	6,151	5,265
IIC	9,876	14,078
Total	**16,027**	**19,343**

The discount to present value of the provisions is charged under the heading “Finance cost” heading of the Consolidated income statement.

The movement in provisions for the commitments detailed in the previous section in 2019 and 2018 is as follows:

Thousands of Euros	2019	2018
Initial balance	**187,773**	**266,027**
Charge	48,061	8,200
Financial Cost	798	505
Actuarial gain and losses and other	(2,308)	(5,799)
Payments and translation differences(*)	(62,122)	(81,160)
Final balance	**172,202**	**187,773**

(*) Payments made during 2019 and 2018 amount to Euros 62,335 thousand and Euros 79,771 thousand, respectively.

The main assumptions applied in the actuarial reports that determined the provisions needed to meet the abovementioned commitments relating to the restructuring plans at 31 December 2019 and 2018 are as follows:

	2019		2018	
	Discount rate	Inflation	Discount rate	Inflation
Restructuring plans	0.24% / 0.26%	1.00% / 0.70%	0.33% / 0.42%	1.00% / 0.70%

26. OTHER PROVISIONS

The movement and breakdown of the heading "Other provisions" in the liabilities of the Consolidated statement of financial positionin 2019 and 2018 is as follows:

Thousands of Euros	Provisions for litigation, indemnity payments and similar costs Restated (Note 2.d)	Provision for CO2 emissions	Provision for facility closure costs (Notes 3.r and 5)	Other provisions	Total
Balance at 01.01.2018	**805,805**	**415,906**	**1,715,698**	**449,941**	**3,387,350**
Charge or reversals for the year with a debit/credit to "Property, Plant and Equipment" (Note 3.d)	14,359	–	72,334	–	86,693
Charge for discount to present value (Note 43)	39,695	–	28,381	(19)	68,057
Charge for the year to the income statement	105,794	593,574	416	12,487	712,271
Reversal due to excess	(81,654)	(2)	(15,400)	(11,151)	(108,207)
Modification of the consolidation perimeter (Note 6)	(532)	(30,489)	(5,565)	–	(36,586)
Translation differences	(33,667)	(5,922)	13,027	15,969	(10,593)
Transfers	(88)	–	(5,027)	(21,745)	(26,860)
Payments made and other	(87,440)	–	(6,090)	(30,069)	(123,599)
Emission allowances and Green certificates	–	(543,530)	–	–	(543,530)
Balance at 31.12.2018	**762,272**	**429,537**	**1,797,774**	**415,413**	**3,404,996**
First application of IFRS 16 (Note 2.a.)	(5,843)	–	15,929	–	10,086
Charge or reversals for the year with a debit/credit to "Property, Plant and Equipment" (Note 3.d)	22,259	–	391,255	9,587	423,101
Charge for discount to present value (Note 43)	48,829	–	35,256	542	84,627
Charge for the year to the income statement	185,814	617,846	8,644	29,190	841,494
Reversal due to excess	(68,764)	–	(9,667)	(6,334)	(84,765)
Translation differences	(103)	20,482	25,867	7,368	53,614
Transfers	22,745	–	6	(7,527)	15,224
Payments made and other	(176,707)	–	(2,415)	(43,007)	(222,129)
Emission allowances and Green certificates	–	(562,038)	–	–	(562,038)
Balance at 31.12.2019	**790,502**	**505,827**	**2,262,649**	**405,232**	**3,964,210**

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In addition, the IBERDROLA Group has provisions for responsibilities arising from litigation in progress and from indemnity payments, obligations, collateral and other similar guarantees, and those aimed at covering environmental risks. These last ones have been determined on the basis of a case-by-case analysis of the polluted assets status and the cost that will have to be incurred in cleaning them.

The IBERDROLA Group also maintains provisions to meet a series of costs needed for dismantling work at its nuclear and thermal power plants, its wind farms, and at other facilities.

The cost arising from dismantling obligations is recalculated on a regular basis to incorporate to the estimate of future costs the experience of the reasonableness of provisions of dismantling events, or to include new statutory or regulatory requirements.

The detail of provision for plants closure costs is as follows:

Thousands of Euros	31.12.2019	31.12.2018
Thermal power plants	57,031	60,848
Nuclear power plants	657,010	612,174
Wind-powered farms and other alternative stations	1,255,964	945,344
Combined cycle power plant	206,884	146,194
Other facilities	64,047	33,214
Right-of-use asset	21,713	–
Total	**2,262,649**	**1,797,774**

The amount related to nuclear plants covers the costs in which the plant operator will incur from the end of its useful life until ENRESA (Note 3.x) takes control of them.

The discount rates (minimum and maximum range) before taxes of the main countries in which the IBERDROLA Group operates used in the present value of the operating provisions are as follows:

		Discount rate 2019		Discount rate 2018	
Country	**Currency**	**5 years**	**30 years**	**5 years**	**30 years**
Spain	Euro	(0.05)%	1.46%	0.33%	2.61%
United Kingdom	Sterling Pounds	0.61%	1.33%	0.90%	1.82%
United States	US dollar	1.71%	2.36%	2.51%	3.01%

The estimated dates on which the IBERDROLA Group considers that it will have to meet the payments relating to the provisions included in this heading of the Consolidated statement of financial position at 31 December 2019 are as follows:

Thousands of Euros	
2020	635,387
2021	144,617
2022	93,681
2023 onwards	3,090,525
Total	**3,964,210**

27. LOANS AND BORROWINGS AND OBLIGATIONS OR OTHER SECURITIES

The detail of bank borrowings outstanding at 31 December 2019 and 2018, once considered foreign exchange hedges, and the repayment schedule are as follows:

		Loans and borrowings and obligations or other securities at 31 December 2019 maturing in						
		Current	Non-current					
Thousands of Euros	Balance at 31.12.2019 (*)	2020	2021	2022	2023	2024	2025 and following	Total non-current
Euros								
Obligations and bonds	13,125,691	1,962,070	1,077,786	2,011,141	1,234,800	1,924,436	4,915,458	11,163,621
Promissory notes	2,215,726	2,215,726	–	–	–	–	–	–
Loans	2,813,548	319,437	696,475	595,356	344,208	6,582	851,490	2,494,111
Other financing transactions	3,246,422	1,855,416	36,770	42,397	40,892	238,826	1,032,121	1,391,006
Unpaid accrued interest	207,849	207,745	–	–	–	–	104	104
	21,609,236	**6,560,394**	**1,811,031**	**2,648,894**	**1,619,900**	**2,169,844**	**6,799,173**	**15,048,842**
Foreign currency								
US dollars	8,496,555	1,191,250	724,966	330,608	757,386	808,101	4,684,244	7,305,305
Sterling Pounds	3,638,927	98,150	399,063	46,435	505,400	401,034	2,188,845	3,540,777
Brazilian reals	4,948,405	770,269	572,829	843,266	776,929	791,968	1,193,144	4,178,136
Other	41,936	3,422	3,785	4,058	4,351	4,551	21,769	38,514
Unpaid accrued interest	191,231	176,902	7,355	6,974	–	–	–	14,329
	17,317,054	**2,239,993**	**1,707,998**	**1,231,341**	**2,044,066**	**2,005,654**	**8,088,002**	**15,077,061**
Total	**38,926,290**	**8,800,387**	**3,519,029**	**3,880,235**	**3,663,966**	**4,175,498**	**14,887,175**	**30,125,903**

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Thousands of Euros	Balance at 31.12.2018 (*)	Loans and borrowings and obligations or other securities at 31 December 2018 maturing in						
		Current	Non-current					
		2019	2020	2021	2022	2023	2024 and following	Total non-current
Euros								
Financial leases under IAS 17 (Note 2.a)	60,760	2,111	2,106	2,107	2,108	2,109	50,219	58,649
Obligations and bonds	14,335,659	1,507,876	1,839,117	1,107,522	1,994,717	1,128,814	6,757,613	12,827,783
Promissory notes	1,942,316	1,942,316	–	–	–	–	–	–
Loans	4,526,554	958,900	285,700	1,670,966	945,533	343,964	321,491	3,567,654
Other financing transactions	1,434,316	219,061	566,433	32,471	28,097	30,678	557,576	1,215,255
Unpaid accrued interest	232,599	232,546	–	–	–	–	53	53
	22,532,204	**4,862,810**	**2,693,356**	**2,813,066**	**2,970,455**	**1,505,565**	**7,686,952**	**17,669,394**
Foreign currency								
US dollars	6,794,968	868,763	501,323	286,952	317,097	611,221	4,209,612	5,926,205
Sterling Pounds	3,139,385	96,589	44,813	376,158	43,474	485,860	2,092,491	3,042,796
Brazilian reals	4,640,747	575,203	1,009,109	738,281	800,592	729,450	788,112	4,065,544
Other	43,932	4,239	3,316	3,553	3,809	4,083	24,932	39,693
Unpaid accrued interest	175,236	167,158	1,928	1,787	1,712	1,594	1,057	8,078
	14,794,268	**1,711,952**	**1,560,489**	**1,406,731**	**1,166,684**	**1,832,208**	**7,116,204**	**13,082,316**
Total	**37,326,472**	**6,574,762**	**4,253,845**	**4,219,797**	**4,137,139**	**3,337,773**	**14,803,156**	**30,751,710**

(*) At 31 December 2019, the balance includes Euros 537,971 thousand from draw downs on credit lines and credit facilities, and Euros 2,719,562 thousand from issues of domestic promissory notes (USCP) and the Euro Commercial Paper (ECP).

(*) At 31 December 2018, the balance includes Euros 527,380 thousand from draw downs on credit lines and credit facilities, and Euros 2,460,110 thousand from issues of domestic promissory notes (USCP) and the Euro Commercial Paper (ECP).

The average balance under the Euro Commercial Paper (ECP) programme amounts to Euros 2,257,987 and 1,900,889 thousand, respectively, in 2019 and 2018.

The breakdown of maturities applicable to future commitments of unaccrued interest payments at 31 December 2019 after considering the effect of exchange rate hedges and interest rate hedges, considering interest rates in force will kept till they mature is as follows:

Thousands of Euros	2020	2021	2022	2023	2024	2025 and	Total
Euros	269,917	233,577	203,658	170,399	126,028	197,320	1,200,899
US dollars	347,282	308,072	302,504	280,484	265,550	2,116,533	3,620,425
Sterling Pounds	178,404	171,311	168,414	156,747	126,316	364,121	1,165,313
Brazilian reals	251,296	221,022	199,088	144,674	102,300	208,226	1,126,606
Other	4,051	3,675	3,348	2,986	2,592	5,571	22,223
Total	**1,050,950**	**937,657**	**877,012**	**755,290**	**622,786**	**2,891,771**	**7,135,466**

Significant transactions carried out by IBERDROLA during 2019 are as follows:

2019						
Lessor	**Transaction**	**Amount (millions)**	**Currency**	**Interest rate**	**Extension**	**Maturity**
Main new financing transactions						
Iberdrola Financiación, S.A.U.	Bilateral loan	200	EUR	-	-	Mar-26
	Bilateral loan	125	EUR	-	-	Oct-26
	Bilateral loan	75	EUR	-	-	Mar-26
	Sustainable syndicated loan	1,500	EUR	-	option 1+1	Mar-24
	EIB loan	150	EUR	-	-	Dec-34
	Bilateral green loan (1)	145	EUR	-	-	Upon drawing
	EIB loan (1)	440	EUR	-	-	Upon drawing
	Green ICO loan	400	EUR	-	-	May-31
	Green ICO loan	140	EUR	-	-	Jul-28
Iberdrola Finanzas, S.A.U.	Private bond	50	EUR	1.782%	-	Oct-30
	Private bond	100	EUR	Euribor3m +0.65%	-	Dec-23
Avangrid Inc.	Bilateral loan	500	USD	-	-	June-21
	Public green bond	750	USD	3.80%	-	June-29
New York State Electric & Gas Corp.	Green bond	300	USD	3.30%	-	Sept-49
Rochester Gas & Electric Corp.	Mortgage-backed bond	150	USD	3.10%	-	June-27
SP Transmission	Public bond	350	GBP	2.00%		Nov-31
Iberdrola Generación Mexico	Bilateral loan (1)	500	USD	-	option 1+1	Dec-24
CELPE	Bonds	300	BRL	109.50% CDI	-	Apr-24
	Bonds	200	BRL	111.00% CDI	-	Apr-26
COELBA	Loan 4131(4)	34	EUR	-	-	May-24
	Loan 4131(4)	89	USD	-	-	June-24
	Loan 4131(4)	84	USD	-	-	Jul-22
	Bonds	309	BRL	108.00% CDI	-	Apr-24
	Bonds	391	BRL	110.25% CDI	-	Apr-26
COSERN	Bonds	282	BRL	107.25% CDI	-	Apr-24
	Infrastructures bond	180	BRL	IPCA+4.254%	-	Apr-26
	Infrastructures bond	38	BRL	IPCA+4.499%	-	Apr-29
Elektro Redes, S.A.	Loan 4131(4)	45	EUR	-	-	May-24
Neoenergia, S.A.	Infrastructures green bond	803	BRL	IPCA+4.07%	-	June-29
	Infrastructures green bond	492	BRL	IPCA+4.22%		June-33
	EIB loan (1)	250	EUR	-	-	Upon drawing
Termopernambuco, S.A.	Bonds	500	BRL	111.50% CDI	-	Apr-24
Itapebi	Loan 4131(4)	25	USD	-	-	May-24
Chafarif 3 Energia Renovavel	BNB loan (1)	93	BRL	-	-	June-43
Chafarif 6 Energia Renovavel	BNB loan (1)	80	BRL	-	-	June-43
Chafarif 7 Energia Renovavel	BNB loan (1)	93	BRL	-	-	June-43
Força Eolica do Brasil, S.A.	BEI loan (1)	1,324	BRL	-	-	Dec-45
Neoenergia Dourados Transmissão de Energía, S.A.	Loan 4131	200	BRL	-	-	Sep-20

2019						
Lessor	**Transaction**	**Amount (millions)**	**Currency**	**Interest rate**	**Extension**	**Maturity**
	BNDES Loan [1]	375	BRL	-	-	Dec-43
Main transactions for extending existing financing						
Iberdrola S.A.	Sustainable syndicated loan [3]	2,979	EUR	-		Feb-24
	Sustainable syndicated loan [3]	2,321	EUR	-		Feb-24
Avangrid Inc.	Sustainable syndicated loan [3]	2,500	USD	-	Option+1 year	June-24

[1] Financing executed in 2019 that is expected to be drawn in the period 2020/2021.

[2] The lenders are subsidiary companies of Forza Eólica: Chafariz 1 Energía Renovavel S.A., Chafariz 2 Energía Renovavel S.A., Canoas 2 Energía Renovavel S.A., Canoas 4 Energía Renovavel S.A., Lagoa 3 Energía Renovavel S.A. and Lagoa 4 Energía Renovavel S.A.

[3] Transactions whose maturity has been extended for an additional year.

[4] Currency swap contracts to the company's operating currency (BRL)

The most significant financial transactions performed by the IBERDROLA Group during the year 2018 have been the following:

2018						
Lessor	**Transaction**	**Million**	**Currency**	**Interest rate**	**Extension**	**Maturity**
Main new financing transactions						
Iberdrola, S.A. [2]	Sustainable syndicated loan	2,979	EUR	-	option 1+1	Feb-23
	Sustainable syndicated loan	2,321	EUR	-	option 1+1	Feb-23
Iberdrola Financiación, S.A.U.	Bilateral loan	100	EUR	-	-	Nov-25
	Bilateral loan	200	EUR	-	-	Dec-25
	EIB loan	500	EUR	-	-	Upon drawing
Iberdrola Finanzas, S.A.U.	Increase private issuance	200	EUR	1.621%	-	Nov-29
	Private bond	200	EUR	Euribor3m +0.35%	-	Feb-20
	Private bond	800	NOK [1]	3.010%	-	May-28
	Private bond	30	EUR	1.128%	-	June-25
	Green bonds	750	EUR	1.250%	-	Oct-26
	Green bonds	50	USD [1]	3.724%	-	dec-25
	Private bond	75	EUR	1.621%	-	Nov-29
Avangrid Inc [3]	Sustainable syndicated loan	2,500	USD	-	option 1+1	June-23
Berkshire Gas [5]	Private bond	20	USD	4.07%	-	Jan-29
Connecticut Natural Gas [5]	Private bond	50	USD	4.52%	-	Jan-49
Southern Connecticut Gas [5]	Mortgage-backed bond	75	USD	4.42%	-	Jan-49
Central Maine Power	Mortgage-backed bond	60	USD	3.95%	-	Dec-28
	Mortgage-backed bond	80	USD [5]	3.87%	-	June-26
	Mortgage-backed bond	80	USD [5]	4.05%	-	Jan-30
	Mortgage-backed bond	80	USD [5]	4.20%	-	June-34
New York State Electric & Gas Corp.	Tax exemption bond	174	USD	3.00%	-	jun-23/Oct-29

2018						
Lessor	**Transaction**	**Million**	**Currency**	**Interest rate**	**Extension**	**Maturity**
Rochester Gas & Electric Corp.	Tax exemption bond	152	USD	3.00%	-	June-25
United Illuminating	Tax exemption bond	64.5	USD	2.80%	-	Oct-23
	Private bond	100	USD	4.07%	-	Oct-28
	Private bond	50	USD [5]	4.52%	-	Jan-49
	Private bond	50	USD	3.96%	-	Dec-25
CELPE	Loan 4131	46	USD [1]	Libor3m +1.50%	-	Jan-21
	Bonds	500	BRL	119.6% CDI	-	Feb-23
	Loan 4131	80	EUR [1]	1.679%	-	Jul-22
	Infrastructures bond	600	BRL	IPCA+6.0352%	-	Jul-25
	BEI loan	643	BRL	TLP+1.86%	-	Dec-28
	BEI loan	574	BRL	IPCA+3.30%	-	Nov-30
COELBA	Bonds	900	BRL	117% CDI [4]	-	Oct-22
	Infrastructures bond	300	BRL	IPCA+6.22%	-	Apr-23
	Infrastructures bond	800	BRL	IPCA+6.22%	-	Jul-25
	BEI loan	1,043	BRL	TLP+1.69%	-	Dec-25
	BEI loan	800	BRL	IPCA+3.30%	-	Nov-30
COSERN	Infrastructures bond	130	BRL	IPCA+5.970%	-	Jul-23
	Loan 4131	95	USD [1]	3.689%	-	Nov-23
ELEKTRO	Bonds	1,000	BRL	113.0% CDI [4]	-	May-21/May-23/May-25
	Infrastructures bond	300	BRL	IPCA+5.9%	-	May-25
	Loan 4131	100	USD [1]	3.6937%	-	May-22
	BEI loan	785	BRL	TLP+1.76%	-	Dec-26
Iberdrola México S.A. de CV	Bilateral green loan	400	USD	-	option 1+1	May-23
Termopernambuco, S.A.	Bonds	300	BRL	117.4% CDI	-	Aug-23
	Loan 4131	57	USD [1]	4.145%	-	Oct-22
Pier [5]	Project financing	177	USD	-	-	Aug-33
Ceu Azul	BEI loan	600	BRL	TJLP+1.78%	-	June-35
Sobral III	BEI loan	50	BRL	IPCA+2.57%	-	Dec-38
Main transactions for extending existing financing						
Iberdrola S.A.	Sustainable syndicated loan	500	EUR	-	+1 year	June-23
	Bilateral loan	350	EUR	-	+1 year	Jul-22
Iberdrola Financiación, S.A.U.	Bilateral green loan	500	EUR	-	+6 months	Aug-19
	Syndicated loan	900	EUR	-	+1 year	Mar-21
	Bilateral loan	75	EUR	-	+1 year	Mar-21
	Bilateral loan	600	EUR	-	+1 year	July-21

[1] Currency swap contracts to the company's operating currency

[1] Reconfiguration of Euros 4.4 billion, already existing, and new Euros 900 million, totalling Euros 5.3 billion, with the option of extension for 1+1 years.

[3] Reconfiguration of $1.5 billion, already existing, and new $1 Billion, totalling $2.5 billion, with the option of extension for 1+1 years.

[4] Average cost of different obligations stated in reference to the CDI at the date of the issuance.

[5] Financing signed in 2018 and drawn in 2019.

Certain Group investment projects, mainly related to renewable energies, have been financed specifically through loans that include covenants such as the compliance with certain financial ratios or the obligation to pledge in benefit of creditors the shares of the project-companies (Note 46). The fair value of real property investments in operation fully amortised intangible assets at 31 December 2019 and 2018 amounted to Euros 561 and 483 million, respectively. Moreover, the establishment of a reserved deposit for the fulfilment of the obligations under the loan agreements is required, being the default ratios and/or the security deposit not reaching the agreed amount, the reason to preclude the dividends in the year in which they had not been fulfilled.

Regarding clauses in relation to credit ratings covenants, the IBERDROLA Group has arranged funding with the EIB and the ICO at 31 December 2019 and 2018 amounting to Euros 2,647 million and Euros 1,265 million, respectively, which may have to be renegotiated in the event of a rating downgrade, probably equalling the price to that of other IEB transactions and with the ICO that does not include said clauses.

Also, at 31 December 2019 and 2018, the IBERDROLA Group has arranged loans and credits amounting to Euros 1,038 and 2,002 million, respectively, the cost of which would be revised as a result of the decline in its credit rating. However, in both cases, the increase in cost would not be significant.

In addition, at 31 December 2019 there are bonds issued, borrowings and other agreements between bank entities and the IBERDROLA Group whose maturity dates could be impacted or may require additional guarantees to those already existing should there be a control change to be implemented in the manner and times set. The most significant changes are those described in the following paragraphs:

- Bond issues in the amount of Euros 12,897,516 thousand in the European market and USD 150,000 thousand (equivalent to Euros 134,943 thousand) in the US market.

- EIB and ICO loans jointly total Euros 2,647,379 thousand.

- Borrowings amounting to Euros 1,157,075 thousand and USD 400,000 thousand (equivalent to Euros 358,648 thousand).

- Lastly, BRL 9,447,425 (equivalent to Euros 2,089,223 thousand) from issuances and BRL 11,265,735 thousand (equivalent to Euros 2,491,328 thousand) from borrowings to the Brazilian subsidiary NEOENERGY and its subsidiaries.

At 31 December 2019 and 2018, the IBERDROLA Group was fully up to date on all its financial debt payments and there had been no circumstances affecting the change of control or adverse changes in the credit quality, and consequently it had not been necessary to meet the early maturity of the debt or modify the cost related to the loans of which it is the holder.

The average cost of debt of the IBERDROLA Group in 2019 and 2018 was 2.92% and 2.97%, respectively.

28. DERIVATIVE FINANCIAL INSTRUMENTS

The breakdown of balances at 31 December 2019 and 2018 including valuation of derivative financial instruments at those dates is as follows:

	2019				2018			
	Assets		Liabilities		Assets		Liabilities	
Thousands of Euros	Short-term	Long-term	Short-term	Long-term	Short-term	Long-term	Short-term	Long-term
INTEREST RATE HEDGES	**31,556**	**106,630**	**12,310**	**(111,077)**	**29,462**	**110,135**	**3,905**	**(109,077)**
Cash flow hedges	**45**	**16,689**	**(14,119)**	**(108,476)**	**(86)**	**689**	**(25,958)**	**(108,381)**
Exchange rate swaps	45	16,689	(14,119)	(108,476)	(86)	689	(25,958)	(108,381)
Fair value hedges	**31,511**	**89,941**	**26,429**	**(2,601)**	**29,548**	**109,446**	**29,863**	**(696)**
Exchange rate swaps	31,411	89,941	27,292	(2,601)	29,002	103,959	30,211	–
Currency forwards	100	–	(863)	–	9	–	(1,041)	–
Other	–	–	–	–	537	5,487	693	(696)
EXCHANGE RATE HEDGES	**211,682**	**338,060**	**(106,875)**	**(146,955)**	**346,919**	**404,239**	**(242,663)**	**(121,484)**
Cash flow hedges	**67,349**	**130,559**	**(100,229)**	**(113,435)**	**93,454**	**139,873**	**(81,072)**	**(49,215)**
Exchange rate swaps	19,192	113,526	(23,690)	(110,518)	(3,487)	117,178	(13,100)	(45,398)
Currency forwards	47,792	17,033	(76,539)	(2,917)	96,704	22,352	(67,972)	(3,812)
Collar	365	–	–	–	237	343	–	(5)
Fair value hedges	**108,072**	**207,501**	**4,345**	**(26,158)**	**162,739**	**263,062**	**(18,185)**	**(73,464)**
Exchange rate swaps	108,072	207,501	4,345	(26,158)	162,739	263,062	(18,185)	(73,464)
Net investments hedges	**36,261**	**–**	**(10,991)**	**(7,362)**	**90,726**	**1,304**	**(143,406)**	**1,195**
Exchange rate swaps	–	–	(2,579)	(7,362)	(1,295)	1,304	(1,399)	1,195
Currency forwards	36,261	–	(8,412)	–	92,021	–	(142,007)	–
COMMODITIES HEDGES	**118,182**	**144,435**	**(359,434)**	**(126,432)**	**173,244**	**123,957**	**(166,029)**	**(132,670)**
Cash flow hedges	**118,182**	**144,435**	**(359,434)**	**(126,432)**	**173,244**	**123,957**	**(166,029)**	**(132,670)**
Futures	118,182	144,435	(359,434)	(126,432)	173,244	120,685	(166,029)	(132,670)
Other	–	–	–	–	–	3,272	–	–
NO HEDGE DERIVATIVES	**286,327**	**184,396**	**(289,843)**	**(105,143)**	**414,178**	**105,191**	**(401,144)**	**(40,048)**
Treasury shares derivatives	**12**	**59,268**	**–**	**(59,268)**	**–**	**16,048**	**–**	**(16,048)**
Treasury shares derivatives	12	59,268	–	(59,268)	–	16,048	–	(16,048)
Exchange rate derivatives	**6,399**	**–**	**(11,527)**	**–**	**4,980**	**–**	**(100)**	**(34)**
Currency forwards	6,399	–	(11,527)	–	4,980	–	(100)	(34)
Derivatives on commodities	**279,916**	**124,828**	**(276,664)**	**(45,606)**	**409,198**	**88,960**	**(400,667)**	**(23,391)**
Futures	278,970	90,775	(275,262)	(37,919)	409,188	88,960	(400,657)	(23,391)
Other	946	34,053	(1,402)	(7,687)	10	–	(10)	–
Interest rate derivatives	**–**	**300**	**(1,652)**	**(269)**	**–**	**183**	**(377)**	**(575)**
Exchange rate swaps	–	300	(1,652)	(269)	–	183	1,275	–
Other	–	–	–	–	–	–	(1,652)	(575)
NETTED OPERATIONS (Note 16)	**(242,388)**	**(17,091)**	**266,297**	**18,386**	**(357,550)**	**(16,126)**	**357,550**	**16,126**
Total	**405,359**	**756,430**	**(477,545)**	**(471,221)**	**606,253**	**727,396**	**(448,381)**	**(387,153)**

The maturity schedule of the notional underlying of derivative instruments contracted by the IBERDROLA Group and outstanding at 31 December 2019, is as follows:

Thousands of Euros	2020	2021	2022	2023	2024 and following	Total
INTEREST RATE HEDGES	**1,908,635**	**719,025**	**941,950**	**269,658**	**5,688,549**	**9,527,817**
Cash flow hedges	**265,956**	**89,608**	**6,077**	**266,940**	**4,940,546**	**5,569,127**
Exchange rate swaps	265,956	89,608	6,077	266,940	4,940,546	5,569,127
Fair value hedges	**1,642,679**	**629,417**	**935,873**	**2,718**	**748,003**	**3,958,690**
Exchange rate swaps	1,584,234	629,417	935,873	2,718	748,003	3,900,245
Currency forwards	58,445	–	–	–	–	58,445
EXCHANGE RATE HEDGES	**6,122,212**	**1,340,220**	**888,095**	**342,226**	**1,750,368**	**10,443,121**
Cash flow hedges	**4,814,969**	**380,536**	**629,074**	**120,595**	**1,551,172**	**7,496,346**
Exchange rate swaps	749,392	188,145	579,960	107,747	1,534,668	3,159,912
Currency forwards	4,063,460	192,391	49,114	12,848	16,504	4,334,317
Collar	2,117	–	–	–	–	2,117
Fair value hedges	**763,728**	**959,684**	**259,021**	**54,872**	**199,196**	**2,236,501**
Exchange rate swaps	763,728	959,684	259,021	54,872	199,196	2,236,501
Net investments hedges	**543,515**	**–**	**–**	**166,759**	**–**	**710,274**
Exchange rate swaps	–	–	–	166,759	–	166,759
Currency forwards	543,515	–	–	–	–	543,515
COMMODITIES HEDGES	**2,043,612**	**621,859**	**204,083**	**155,972**	**552,778**	**3,578,304**
Cash flow hedges	**2,043,612**	**621,859**	**204,083**	**155,972**	**552,778**	**3,578,304**
Futures	2,043,612	621,859	204,083	155,972	552,778	3,578,304
NO HEDGE DERIVATIVES	**3,334,246**	**1,272,416**	**1,677,199**	**651,887**	**7,057,165**	**13,992,913**
Treasury shares derivatives	**35**	**–**	**1,000,000**	**–**	**–**	**1,000,035**
Treasury shares derivatives	35	–	1,000,000	–	–	1,000,035
Interest rate derivatives	**358,906**	**–**	**–**	**–**	**–**	**358,906**
Currency forwards	358,906	–	–	–	–	358,906
Derivatives commodity price	**2,975,305**	**1,197,416**	**677,199**	**651,887**	**7,057,165**	**12,558,972**
Futures	2,293,102	470,041	66,303	37,958	2,434	2,869,838
Other	682,203	727,375	610,896	613,929	7,054,731	9,689,134
Interest rate derivatives	**–**	**75,000**	**–**	**–**	**–**	**75,000**
Exchange rate swaps	–	75,000	–	–	–	75,000
Total	**13,408,705**	**3,953,520**	**3,711,327**	**1,419,743**	**15,048,860**	**37,542,155**

The information presented in the table above includes notional amounts of derivative financial instruments arranged in absolute terms (without offsetting assets and liabilities or purchase and sale positions) and, therefore, do not constitute the risk assumed by the IBERDROLA Group since this amount only records the basis on which the calculations to settle the derivative are made.

The heading “Finance expense” of the 2019 and 2018 Consolidated income statements includes Euros 198,568 thousand and Euros 161,174 thousand, respectively, in connection with derivatives linked to financial indices that fail to meet the conditions to qualify as hedging instruments or, having met the conditions, but as explained in Notes 3.l and 43 are partially ineffective. The heading “Finance income” of the Consolidated income statement for the same years also includes Euros 78,228 thousand and Euros 114,736 thousand, respectively, for the abovementioned items (Note 42).

The nominal value of the liabilities for which foreign exchange hedges (Note 4) have been arranged is as follows:

	2019				
Hedge rate	**Thousands of US dollars**	**Thousands of Japanese Yens**	**Thousands of Norwegian Kroner**	**Thousands of Sterling Pound**	**Thousands of Euros**
Cash flow	1,360,896	–	2,250,000	–	158,487
Fair value	1,604,263	3,000,000	–	700,000	–

	2018				
Hedge rate	**Thousands of US dollars**	**Thousands of Japanese Yens**	**Thousands of Norwegian Kroner**	**Thousands of Sterling Pound**	**Thousands of Euros**
Cash flow	1,227,533	–	2,250,000	–	79,250
Fair value	2,995,082	13,000,000	–	700,000	173

The nominal value of the most significant liabilities for which interest rate hedges (Note 4) have been arranged is as follows:

	2019		
Hedge rate	**Thousands of Euros**	**Thousands of Sterling Pound**	**Thousands of Brazilian reals**
Cash flow	1,842,701	225,000	–
Fair value	3,641,000	–	1,136,127

	2018		
Hedge rate	**Thousands of Euros**	**Thousand Sterling Pound**	**Thousand Brazilian reals**
Cash flow	2,610,258	225,000	–
Fair value	3,808,844	–	784,959

Additionally, at 31 December 2019, the IBERDROLA Group has arranged derivatives to cover the interest rate risk of the future financing for a nominal amount of Euros 4,551,000 thousand, which help to mitigate the interest rate risk (Euros 4,642,000 thousand at 31 December 2018).

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29. STATEMENT OF CASH FLOWS

The 2019 and 2018 transactions of the liabilities classified as financing activities in the Cash flow statement excluded from the equity, equity qualifying as financial liabilities (Note 22) and leases (Note 30), is the following:

			Cash flow		Other non-cash changes						
Thousands of Euros	Balance at 01.01.2019	First application of IFRS 16 (Note 2.a.)	Issues and disposals (1)	Redemptions/charge instalments paid	Interest paid	Accrual of interest	Foreign currency exchange (2)	Change in fair value and others	Accrual of transactions costs	Potential treasury shares accumulated	Balance at 31.12.2019
Financial leases under IAS 17	142,308	(142,308)	–	–	–	–	–	–	–	–	–
Obligations, bonds and promissory notes	27,309,611	–	5,580,429	(5,023,856)	4,461	(6,051)	352,153	(22,686)	95,926	–	28,289,987
Loans and other financing transactions	9,337,511	–	9,726,392	(10,108,272)	–	–	81,685	(2,845)	(7,648)	–	9,026,823
Unpaid accrued interest	407,835	–	–	–	(1,111,797)	1,098,659	4,382	–	–	–	399,079
Derivatives on the company's own shares with a physical settlement (Note 20)	129,207	–	–	(106,917)	–	–	–	–	–	1,188,111	1,210,401
Total (Note 27)	**37,326,472**	**(142,308)**	**15,306,821**	**(15,239,045)**	**(1,107,336)**	**1,092,608**	**438,220**	**(25,531)**	**88,278**	**1,188,111**	**38,926,290**
Derivative financial instruments associated with financing	(436,941)	–	(5,317)	179,018	65,687	(79,260)	(59,381)	52,956	–	–	(283,238)
Total	**36,889,531**	**(142,308)**	**15,301,504**	**(15,060,027)**	**(1,041,649)**	**1,013,348**	**378,839**	**27,425**	**88,278**	**1,188,111**	**38,643,052**

Thousands of Euros	Balance at 01.01.2018	First application of IFRS 9 (Note 2.a.)	Cash flow		Other non-cash changes					Potential treasury shares accumulated, transfers and other	Balance at 31.12.2018
			Issues and disposals (1)	Redemptions/charge instalments paid	Interest paid	Accrual of interest	Foreign currency exchange (2)	Change in fair value and others	Accrual of transactions costs		
Financial leases under IAS 17	127,430	–	–	(4,924)	(5,536)	2,310	2,946	–	–	20,082	142,308
Obligations, bonds and promissory notes	26,252,859	(150,674)	4,998,038	(3,979,452)	–	–	101,856	(19,380)	95,353	11,011	27,309,611
Loans and other financing transactions	9,818,844	(5,760)	8,078,830	(8,593,582)	–	–	7,329	(27,015)	1,189	57,676	9,337,511
Unpaid accrued interest	409,160	–	–	–	(1,188,823)	1,189,802	(2,343)	–	–	39	407,835
Derivatives on the company's own shares with a physical settlement (Note 20)	82,205	–	–	(732,293)	–	–	–	–	–	779,295	129,207
Total Bank borrowings and other financial liabilities - Loans and others (Note 27)	**36,690,498**	**(156,434)**	**13,076,868**	**(13,310,251)**	**(1,194,359)**	**1,192,112**	**109,788**	**(46,395)**	**96,542**	**868,103**	**37,326,472**
Derivative financial instruments associated with financing	(557,688)	–	71,531	150,295	121,547	(111,255)	(294,749)	182,975	–	403	(436,941)
Total	**36,132,810**	**(156,434)**	**13,148,399**	**(13,159,956)**	**(1,072,812)**	**1,080,857**	**(184,961)**	**136,580**	**96,542**	**868,506**	**36,889,531**

(1) Net emissions of expenses.

(2) Includes translation differences

30. LEASES

Lessee

Changes in lease liabilities in 2019 are as follows:

Thousands of Euros	2019
Balance at 31.12.2018	**–**
First application of IFRS 16 (Note 2.a)	1,387,820
Translation differences	34,514
New lease contracts	387,011
Financial update (Note 43)	62,316
Payments made from principal	(155,890)
Interest paid	(33,101)
Re-evaluation/changes of lease liabilities	89,267
Disposals	(5,343)
Other	523
Balance at 31.12.2019	**1,767,117**

The breakdown of lease liabilities at 31 December 2019 is as follows:

Thousands of Euros	31.12.2019
2020	153,237
2021	160,087
2022	144,253
2023	177,344
2024	122,967
From 2025 onwards	1,884,493
Total	**2,642,381**
Financial Cost	875,264
Present value of the payments	1,767,117
Total	**2,642,381**

Additionally, the IBERDROLA Group is potentially exposed to future cash outlfows that are not reflected in the measurement of lease liabilities mainly due to payment commitments related to variable leases. In 2019, the IBERDROLA Group accrued an amount of Euros 34,669 thousand for variable lease recognised under the heading “External Services” of the Consolidated income statement. Said amount corresponds mainly to lease rents depending on output and operating income from wind farms located in leased lands.

Expenses in 2019 related to short-term leases excluded from the scope of IFRS 16 amounts to Euros 14,210 thousand and have been recognised under the heading “External services” of the Consolidated income statement.

In addition, income from subleasing rights of use of assets in the year have rose to Euros 8,459 thousand and have been recognised in the Consolidated income statement.

On the other hand, the heading “External services” of the Consolidated income statement for 2018 includes Euros 148,607 thousand corresponding to operating leases in application of IFRS 17 (Note 3.f.). Moreover, the breakdown by maturities of undeducted minimum payments for financial and operating leases under IAS 17 at 31 December 2018 was as follows:

Thousands of Euros	Operating leases	Financial lease	Total
2019	126,656	31,061	157,717
2020	129,403	13,400	142,803
2021	124,231	10,480	134,711
2022	116,221	6,496	122,717
2023	104,473	48,048	152,521
From 2024 onwards	1,498,675	69,319	1,567,994
Total	**2,099,659**	**178,804**	**2,278,463**
Financial Cost	637,505	36,501	674,006
Present value of the payments	1,462,154	142,303	1,604,457
Total	**2,099,659**	**178,804**	**2,278,463**

The previous amount for the present value of minimum payments for operating leases under IAS 17 defers the effect of the first adjustments due to IFRS 16: “Leases” as indicated in Note 2.a.

Operating lessor

On the other hand, the IBERDROLA Group acts as lessor in certain operating leases consisting basically on the rental of investment property (Note 9) and the property, plant and equipment. The breakdown by type is as follows:

Thousands of Euros	31.12.2019
Buildings	220,196
Land	112,916
Other	16,769
Total	**349,881**

The headings “Net turnover” and “Other operating income” of the Consolidated income statement for 2019 include Euros 30,207 and 23,103 thousand, respectively.

The estimate of non-deducted future minimum payments for contracts in force at 31 December 2019 is as follows:

Thousands of Euros	31.12.2019
2020	32,004
2021	28,026
2022	24,287
2023	22,550
2024	20,527
From 2025 onwards	76,189
Total	**203,583**

31. OTHER FINANCIAL LIABILITIES

The detail of the headings "Other non-current financial assets" and "Other current financial assets" of the Consolidated statement of financial position is as follows:

Thousands of Euros	31.12.2019	31.12.2018
Non-current		
Long term deposits and guarantees (Note 14.b.)	156,604	166,772
Concessional guarantee of the sufficiency tariff in Brazil (Note 12)	69,315	41,394
Financial lease suppliers	16,857	19,335
PIS/COFINS Brazil (Note 15)	724,516	–
Other	267,627	271,817
Total	**1,234,919**	**499,318**
Current		
Short-term deposits and guarantees	189,214	147,927
Loans with equity-accounted investees	357,554	93,681
Financial lease suppliers	874,255	573,820
Staff pending remuneration	253,956	232,291
Other	308,107	272,674
Total	**1,983,086**	**1,320,393**

32. OTHER LIABILITIES

The detail of the headings "Other non-current financial liabilities" and "Other current financial liabilities" of the Consolidated statement of financial position is as follows:

Thousands of Euros	31.12.2019	31.12.2018
Non-current		
Contract liabilities		
CFE (Note 36)	92,365	95,279
All others	314,982	279,409
Total	**407,347**	**374,688**
Current		
Contract liabilities	187,100	169,519
Other liabilities	486,527	338,016
Total	**673,627**	**507,535**

33. DEFERRED TAXES AND CORPORATE INCOME TAX

Income tax

Due to the multinational nature of the IBERDROLA Group, it is subject to the regulations in force in other tax jurisdictions.

Taxes in Spain

Iberdrola S.A. is the parent company of two tax consolidation groups in Spain: the 2/86 group in the so-called common tax system territory, and the 02415BSC group, in Biscay tax system territory, although Iberdrola, S.A., is currently integrated in the former.

The 2/86 group is formed by 77 companies, whereas the 02415BSC group is formed by 20 companies.

The other entities that are fiscal residents in Spain and which are not incorporated into these two groups pay corporate income tax on an individual basis.

Companies taxed under the common tax system are subject to a 25% rate in 2019, while in the fiscally autonomous foral regions of Biscay, Gipuzkoa, Álava and Navarra it is 24%.

Taxations in other countries

Other Group companies whose fiscal residence is outside Spain are taxed based on their resident jurisdiction. In the United States, company taxation is based on a consolidated fiscal system, with the existence of a federal tax group, with a tax group also operating in other countries, as well as a tax group in some States. In the United Kingdom the group relief mechanism is used. In other tax jurisdiction, Group companies are subject to taxes under the individual tax regime.

Nominal tax rates applicable in the main jurisdictions in which the IBERDROLA Group operates are as follows (OCDE figures, including central and federal Governments):

Country	2019	2018
Australia	30.0	30.0
Brazil	34.0	34.0
Bulgaria	10.0	10.0
Canada	26.6	26.7
Cyprus	12.5	12.5
France	32.0	34.4
Germany	29.8	29.8
Greece	24.0	29.0
Hungary	9.0	9.0
Ireland	12.5	12.5
Italy	27.9	27.9
Luxembourg	24.9	26.0
Mexico	30.0	30.0
Netherlands	25.0	25.0
Portugal	31.5	31.5
Qatar	10.0	10.0
Romania	16.0	16.0
South Africa	28.0	28.0
Spain	25-24	25-26
United Kingdom	19.0	19.0
United States	26.1	26.1

Income tax expense

Income tax expense for 2019 y 2018 is as follows:

Thousands of Euros	31.12.2019	31.12.2018
Profit for the year from continuing activities before tax	**4,793,927**	**4,348,034**
Profit for the year from discontinued operations before tax	**(56,428)**	**(64,660)**
Consolidated profit before tax	**4,737,499**	**4,283,374**
Non-deductible expenses and non-computable income:		
- from individual companies	(11,247)	(40,425)
- from consolidation adjustments	(240,920)	(140,079)
Profit of equity-accounted investees	(7,345)	(55,904)
Adjusted accounting profit	**4,477,987**	**4,046,966**
Gross tax calculated at the tax rate in force in each country	**1,090,000**	**987,888**
Tax credits deductions due to reinvestment of extraordinary profits and other tax credits	(97,947)	(84,118)
Adjustment of prior years' income tax expense	117	(22,865)
Net movement in provisions for litigation, compensation payments, similar costs and other provisions	(7,873)	12,400
Adjustment of deferred tax assets and liabilities	42,574	38,022
Taxes related to non-distributed earnings and other withholdings paid abroad (a)	(108,066)	15,519
Other	4,137	(841)
Accrued income tax in the Consolidated statement of profit (Income) / Expense	**914,016**	**959,499**
Accrued income tax from discontinued operations (Income) / Expense	**8,926**	**(13,494)**
Accrued income tax (Income) / Expense	**922,942**	**946,005**

a) Includes the amount resulting from the reversal of deferred tax liabilities from previous years in the amount of Euros 123 million related to undistributed earnings from Avangrid Inc. subgroup, following the amendment of the Double Taxation Treaty between Spain and the United States which became effective on 27 November 2019.

The breakdown between current and deferred Income Tax is as follows:

Thousands of Euros	31.12.2019	31.12.2018
Current taxes	710,315	663,372
Deferred taxes	212,627	282,633
Expense/(income) from continuing and discontinued activities	**922,942**	**946,005**

Deferred taxes

The detail of the headings "Deferred tax assets" and "Deferred tax liabilities" of the Consolidated statement of financial position is as follows:

Thousands of Euros	Balance at 01.01.2018	First application of IFRS 9 and IFRS 15 (Note 2.a.)	Modification of the consolidation perimeter	Translation differences	Credit (charge) to the income statement	Credit (charge) to Unrealised gains/(losses) reserve	Credit (charge) to "Other reserves"	Other changes	Balance at 31.12.2018	Translation differences	Credit (charge) to the income statement	Credit (charge) to Unrealised gains/(losses) reserve	Credit (charge) to "Other reserves"	Other changes	Balance at 31.12.2019
Deferred tax assets:															
Measurement of financial instruments derivatives	303,612	121	(1,356)	1,308	(49)	(30,468)	–	–	273,168	29,712	–	70,151	–	–	373,031
Balance sheet revaluation 16/2012	1,440,023	–	–	–	(106,560)	–	–	–	1,333,463	–	(79,775)	–	–	–	1,253,688
Pensions and similar commitments	514,944	–	–	(2,453)	68,974	–	8,605	–	590,070	11,889	(1,598)	–	51,551	–	651,912
Allocation of non-deductible negative goodwill arising on consolidation	65,025	–	–	–	(1,143)	–	–	–	63,882	–	(1,575)	–	–	–	62,307
Provision for facility closure costs	74,437	–	–	1,269	7,926	–	–	–	83,632	761	21,787	–	–	–	106,180
Tax credits for losses and deductions	1,669,001	–	926	41,971	181,752	–	–	58,449	1,952,099	30,703	(17,460)	–	–	51,143	2,016,485
Other deferred tax assets	1,315,331	82,267	(756)	15,625	(120,977)	–	–	(101,805)	1,189,685	(66,732)	(315)	–	–	108,287	1,230,925
Total	**5,382,373**	**82,388**	**(1,186)**	**57,720**	**29,923**	**(30,468)**	**8,605**	**(43,356)**	**5,485,999**	**6,333**	**(78,936)**	**70,151**	**51,551**	**159,430**	**5,694,528**

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Thousands of Euros	Balance at 01.01.2018	First application of IFRS 9 and IFRS 15 (Note 2.a.)	Modification of the consolidation perimeter	Translation differences	Credit (charge) to the income statement	Credit (charge) to Unrealised gains/(losses) reserve	Balance at 31.12.2018	Translation differences	Credit (charge) to the income statement	Credit (charge) to Unrealised gains/(losses) reserve	Other changes	Balance at 31.12.2019
Deferred tax liabilities:												
Available-for-sale assets	306	–	–	–	(154)	–	152	–	25	–	–	177
Measurement of financial instruments Derivatives	344,248	–	(1,357)	1,449	(38,424)	(19,207)	286,709	9,679	4,876	(68,434)	–	232,830
Accelerated depreciation	4,388,915	10,468	(49,772)	139,698	29,608	–	4,518,917	115,906	291,286	–	39,953	4,966,062
Overprice in business combinations	3,265,743	–	(163)	21,119	3,708	–	3,290,407	64,190	120,059	–	–	3,474,656
Other deferred tax liabilities	559,207	52,623	(956)	17,690	317,818	–	946,382	12,407	(282,555)	–	8,927	685,161
Total	**8,558,419**	**63,091**	**(52,248)**	**179,956**	**312,556**	**(19,207)**	**9,042,567**	**202,182**	**133,691**	**(68,434)**	**48,880**	**9,358,886**

Administrative actions

Undergoing tax inspections at reporting date in 2019 depend on the tax law applicable in each country, but no material impacts arising therefrom not included in these financial statements are expected.

In Spain, there are no general tax inspections in place. However, during this period several partial assessments have been completed which have resulted in agreed tax investigation reports and contested tax investigation reports. In the case of agreed tax investigation report, the Group has had to settle no material amounts, whereas in the case of contested tax investigation reports, the balance was zero.

In those countries where the Group has significant presence, the main ongoing inspections are as follows:

- In the United States the most relevant ongoing inspection is related to Income Tax in the State of New York. Additionally, giving its nature of large contributor, both at federal level and state level, AVANGRID Group has around 28 ongoing tax inspection over other tax figures.

- In the United Kingdom, ScottishPower has been assigned by the HRMC the condition of low risk. The only relevant matter under discussion affects the deductibility of certain payments made as required by the electric regulator (OFGEM).

- Last, Brazil is known for being a jurisdiction with a high risk of litigation and there are multiple on-going investigation actions, which follows the tax and administrative structure of the country and the usual procedure of tax authorities. However, NEONERGIA's directors do not expect any relevant impacts arising from them and, overall, these procedures are rarely settled in favour of tax administrations.

Tax litigation

Among its principles, IBERDROLA includes the promotion of relationships with the tax authorities, based on the respect for the law, loyalty, trust, professionalism, collaboration, reciprocation and good faith, notwithstanding legitimate controversies that may arise due to the interpretation of tax rules. Therefore, when those controversies arise, IBERDROLA carries out its actions before the authorities based on a cooperative relationship, in accordance with the principles of transparency and mutual trust.

All IBERDROLA actions have been analyses by its internal and external advisors, both for this year and for preceding years, and they have determined that these actions have been carried out in accordance with the Law and are based on the reasonable interpretation of tax law. The occurrence of contingent liabilities has also been subject to analysis. IBERDROLA's overall criteria applied has been to recognise provisions for tax litigation when there is a risk of potential unfavourable decision for Iberdrola is probable whereas no recognition is required when the risk is possible or remote.

IBERDROLA Group's directors and their tax consultants consider that the current inspection process will not give rise to additional liabilities of significance for the IBERDROLA Group to those already recognised at 31 December 2019.

Tax litigation in Spain

In Spain, at present, the Group is awaiting the decision by the Central Administrative Economic Court for the complaints lodged as a result of disagreement signed as part of the general verification process for 2008-2011.

The main controversies arise from the settlement agreements resulting from contested tax investigation reports related to the quantification of goodwill, subject to tax amortisation and depreciation, for the acquisition of SCOTTISH POWER, the elimination of the exemption applicable to SCOTTISH POWER's dividends received for the Tax Agency considers that this exemption is incompatible with valuation adjustments for net investment hedges, differences in tax consolidation criteria and the possible existence of circumstances established in Article 15.1 of Spain's General Tax Law in a debtor-swap operation in a number of bond issues.

At present, IBERDROLA is awaiting the decision by the Central Administrative Economic Court for the complaints lodged as a result of disagreement signed as part of the general verification process for 2012-2014. The discrepancy with the Administration focuses on the applicability, not the criteria of temporary imputation established in many Supreme Court's orders, regarding income received from the Group, resulting from payments made based on rules contrary to the Law.

Tax litigation in other countries

As a general rule, no significant tax litigation is currently undergoing in the other jurisdictions where the Group operates but in Brazil, where there is a large number of litigation and administrative and judicial proceedings in place. The Group considers it is probable the final rulings will be favourable.

Update of the financial goodwill (section 12.5 of the revised Corporate income tax Act).

No significant changes have taken place during this period. From the perspective of the Spanish authorities, an aid retrieval procedure was initiated by virtue of the General Tax Act, recovering from the IBERDROLA Group the amount Euros of 665 million (Euros 576 million as tax base and Euros 89 million as late-payment interests) by virtue of Section 12.5. IBERDROLA paid the required amount by (i) using Euros 363 million of the 2016 income tax rebate, and (ii) paying Euros 302 million in February 2018. For this, the Administration, in this case, understood that IBERDROLA was affected by the Third Decision of the European Commission.

The amount paid has been recognised under the heading "Current tax assets" of the Consolidated statements of financial position at 31 December 2019 and 2018. The assets show the amount recoverable from the Administration for corporate income tax insofar as in the view of IBERDROLA the payments made are higher than the current tax whose recoverability is considered to be probable, subject to the final outcome of the appeals submitted against the three European Commission decisions.

Moreover, the application of the incentive provided in section 12.5 of the TRLIS resulted in a taxable temporary difference and subsequently deferred tax liabilities were recognised. Therefore, in the event the outcome is contrary to the Company's interests (a circumstance which is not considered to be probable in accordance with the information currently available), the impact on equity would by substantially mitigated.

34. TAX RECEIVABLES AND PAYABLES

The breakdown of the headings “Income tax receivables/payables” and “Other tax receivables/payables” on the asset and liability sides, respectively, of the Consolidated statement of financial position is as follows:

Thousands of Euros	31.12.2019	31.12.2018
Public Administrations Receivables		
Public Treasury, Corporate income tax receivables	318,082	252,907
Public Treasury, VAT refundable	192,506	229,975
Tax withholdings and prepayments	3,192	158,319
Public Treasury, other receivables	311,333	115,150
Total	**825,113**	**756,351**
Public Administrations Payables		
Public Treasury, Corporate income tax payables	242,626	349,314
Public Treasury, VAT payable	141,063	105,942
Public Treasury, withholdings payable	52,641	69,980
Public Treasury, other payables	797,465	837,010
Social Security Agencies, payables	29,476	26,517
Total	**1,263,271**	**1,388,763**

35. INFORMATION ON AVERAGE PAYMENT PERIOD TO SUPPLIERS. THIRD ADDITIONAL PROVISION. "REPORTING REQUIREMENT" OF LAW 15/2010, OF 5 JULY

The breakdown of the required information for 2019 and 2018 is the following:

	Number of days	
	2019	2018
Average payment period to suppliers	13	15
Ratio of transactions settled	13	14
Outstanding payment transactions ratio	31	26

Thousands of Euros	2019	2018
Total payments made	12,881,683	13,413,355
Total payments due	241,190	301,766

The information in the table above has been prepared in accordance with Law 15/2010 of 5 July, amending Law 3/2004 of 29 December, establishing measures to combat late payments in commercial operations and in accordance with the Resolution of 29 January 2016, from the Instituto de Contabilidad y Auditoría de Cuentas, on the information to be included in the notes to the annual accounts in relation to deferred payments to suppliers in commercial transactions operations. The specifications with which such information has been prepared are the following:

- Ratio of paid operations: amount in days of the ratio between the sum of the amount of each of the operations paid and the number of pay days, and in the denominator, the total amount of payments made during the year.

- Ratio of outstanding payment operations: amount in days of the ratio between the sum of the amount of the outstanding payment transaction and the number of unpaid days, and the total amount of outstanding payments.

- Suppliers: trade payables included in current liabilities in the Consolidated statement of financial position generated from debts of goods or services with suppliers.

- Property, plant and equipment and other finance lease suppliers are not considered in the information scope.

- Taxes, levies, indemnifications and some other headings are not considered in the information scope since they are not commercial transactions.

- The table below shows information corresponding to Spanish companies included in the consolidated group once the credits and debits between the subsidiary companies are eliminated.

36. REVENUE

The breakdown of this heading of the Consolidated income statement is as follows:

Year 2019	Liberalised							Renewables								Networks					Other business, Corporation and adjustments	Total
Thousands of Euros	Spain	United Kingdom	Mexico	Brazil	IEI	Eliminations	Total	Spain	United Kingdom	United States	Mexico	Brazil	IEI	Total	Spain	United Kingdom	United States	Brazil	Total		
In regulated markets																						
Electricity	1,355,178	–	1,425,334	–	–	–	**2,780,512**	684,085	–	–	–	–	–	**684,085**	2,030,138	1,372,634	2,943,212	5,185,519	**11,531,503**	(682,853)	**14,313,247**
Gas	–	–	–	–	–	–	**–**	–	–	–	–	–	–	**–**	–	–	1,305,953	–	**1,305,953**	–	**1,305,953**
In liberalised markets																						
Electricity	8,983,907	3,200,400	936,696	558,764	1,098,073	(588,988)	**14,188,852**	643,671	403,166	896,300	86,932	208,388	346,059	**2,584,516**	–	–	20,753	–	**20,753**	(1,475,971)	**15,318,150**
Gas	1,783,734	1,282,446	–	–	36,640	(64,187)	**3,038,633**	–	–	–	–	–	–	**–**	–	–	–	–	**–**	4,654	**3,043,287**
Other	548,565	36,205	–	–	15,628	(1,233)	**599,165**	–	323,720	151,895	328	–	–	**475,943**	76,398	–	1,871	–	**78,269**	(212,199)	**941,178**
Income from lease contracts	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**13,836**	**–**	**–**	**954,023**	**967,859**	**–**	**967,859**
Income for lease contracts	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**1,796**	**–**	**–**	**–**	**1,796**	**28,411**	**30,207**
Commodities derivatives	**129,458**	**7,427**	**(35,032)**	**33,329**	**8**	**(16,159)**	**119,031**	**–**	**–**	**15,448**	**29,083**	**6,801**	**38,409**	**89,741**	**–**	**–**	**–**	**303,789**	**303,789**	**5,466**	**518,027**
Total	**12,800,842**	**4,526,478**	**2,326,998**	**592,093**	**1,150,349**	**(670,567)**	**20,726,193**	**1,327,756**	**726,886**	**1,063,643**	**116,343**	**215,189**	**384,468**	**3,834,285**	**2,122,168**	**1,372,634**	**4,271,789**	**6,443,331**	**14,209,922**	**(2,332,492)**	**36,437,908**

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Year 2018 Restated (Note 2.d)	Liberalised							Renewables							Networks					Other business, Corporation and adjustments	Total
Thousands of Euros	Spain	United Kingdom	Mexico	Brazil	IEI	Eliminations	Total	Spain	United Kingdom	United States	Mexico	Brazil	IEI	Total	Spain	United Kingdom	United States	Brazil	Total		
In regulated markets																					
Electricity	1,458,487	–	1,491,876	–	–	–	**2,950,363**	691,452	–	–	–	–	–	**691,452**	2,021,992	1,275,548	3,022,356	4,982,531	**11,302,427**	(291,607)	**14,652,635**
Gas	–	–	–	–	–	–	**–**	–	–	–	–	–	–	**–**	–	–	1,234,545	–	**1,234,545**	–	**1,234,545**
In liberalised markets																					
Electricity	8,918,178	3,490,913	778,324	740,754	1,015,487	(556,478)	**14,387,178**	1,004,662	366,590	878,313	92,976	221,520	258,692	**2,822,753**	–	–	15,978	–	**15,978**	(2,340,670)	**14,885,239**
Gas	1,646,648	1,510,850	–	–	7,888	(135,952)	**3,029,434**	–	–	–	–	–	–	**–**	–	–	–	–	**–**	30,723	**3,060,157**
Other	548,551	20,288	–	–	4,774	90	**573,703**	–	330,883	177,313	415	–	–	**508,611**	36,320	–	1,898	–	**38,218**	(241,994)	**878,538**
Income from lease contracts	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**66,732**	**–**	**–**	**34,634**	**101,366**	**–**	**101,366**
Income for lease contracts	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**490**	**–**	**–**	**–**	**490**	**26,764**	**27,254**
Commodities derivatives	**17,583**	**624**	**(23,951)**	**52,135**	**(457)**	**5,565**	**51,499**	**–**	**–**	**(28,701)**	**(2,396)**	**22,281**	**30,993**	**22,177**	**–**	**–**	**–**	**168,214**	**168,214**	**(5,751)**	**236,139**
Total	**12,589,447**	**5,022,675**	**2,246,249**	**792,889**	**1,027,692**	**(686,775)**	**20,992,177**	**1,696,114**	**697,473**	**1,026,925**	**90,995**	**243,801**	**289,685**	**4,044,993**	**2,125,534**	**1,275,548**	**4,274,777**	**5,185,379**	**12,861,238**	**(2,822,535)**	**35,075,873**

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Below are described the main activities for which IBERDROLA generates ordinary income from customer contracts:

- Electricity and gas transmission and distribution

IBERDROLA Group's performance obligation is to make transmission and distribution facilities available to customers. This performance obligation is recognised in a linear manner over time, since the customer receives and consumer simultaneously the benefits from IBERDROLA Group's performance insofar the transmission or distribution network is available.

In the countries where IBERDROLA Group operates, the retribution for transmission and distribution activities is basically determined by the regulated margin recognised by the corresponding regulator. In the case of some regulated activities carried out by the IBERDROLA Group, any discrepancies between costs estimated when setting the annual tariff and costs actually incurred are recognised as income or expense for the year in which they arise only if its proceed or payment is certain, regardless of future sales (Note 14.b).

- Gas and electricity sales

The amount of electricity and gas sales is recognised as income at the time the energy is delivered to the customer based on the amounts supplied and include an estimated of unbilled supplied energy (Note 5).

By countries:

- In Spain, income includes the amount of both sales in the gas regulated market at Tariff of Last Resort (TLR) and of electricity at Voluntary Price for the Small Consumer (VPSC) as well as the sales in the liberalised market.

- In the US and Brazil income from electricity and gas supply to end customers are based in tariffs rates subject to the corresponding state regulatory authorities, which determine the prices and other terms of service through the fixing of rates.

- In the United Kingdom, gas and electricity are traded in the liberalised market.

- Moreover, in Mexico electricity energy is supplied at liberalized conditions for consumers with a demand of 1 MW or upper.

IBERDROLA Group's retail companies act as principal. Moreover, purchase and sale of energy between the Group's generation and retail companies are left out of the consolidation process.

- Assignment of electricity generation capacity

The electricity generation capacity assignment is an obligation independent from electricity supply whose income is recognised through the term of the contract.

IBERDROLA Group maintains electricity generation capacity assignment agreements for some of its plants that set predetermined collection schedules for assigning energy supply capacity. Among others, IBERDROLA Group keeps electricity generation capacity assignment agreements in Mexico for its combined cycle power plant with the Federal Electricity Commission (CFE – Comisión Federal de la Energía). The term of these agreements is 25 years from the date on which each combined cycle plant enters into commercial operation.

- Verification, connection and assignment of use of metering equipment

The registration of customers, income for connecting to the receiving electricity and gas grid, as well as income from the verification of installations, are recognised at the time the actions take place since the customer benefits from the service provided and there is no associated future fulfillment obligation. On the other hand, income for the right of use of meters is recognised as income throughout the period of use.

- Sale of renewables obligation certificates

In the sale of renewables obligation certificates from the Renewables business associated to supplied energy (joint sale of energy and green certificates), income for the sale is recognised at the time the energy is delivered. When the sale of said certificates takes place separately from the energy produced, the income is recognised at the time the certificate is delivered to the customer.

- Construction contracts

Income from transmission and distribution concession agreements for electric energy IBERDROLA Group has executed in Brazil include two compliance obligations: (1) construction services and (2) following operation and maintenance of built facilities. The assignment of the consideration for each compliance obligation is done from the estimate of the independent sale price at the beginning of the contract, using IBERDROLA Group's experience in the provision of similar services, of biding terms and conditions, as well as any other internal or external information available.

Income from construction projects whose income is recognised through the length of the construction, since the control of the asset is transferred to the customer on an on-going basis.

The income related to construction contracts are registered in an amount equivalent to the costs incurred to date as a proportion of the total estimated construction costs required until the termination of the contract. When the income from a contract cannot be reliably estimated, all such income is recognised to the extent that costs are incurred, provided that such costs are recoverable. Profit on the contract is only recognized when it is certain, based on budgeted costs and income.

Changes to construction work and any claims are included within contract revenue if amendments to the contract are legally demanded.

- Real property sales

As to real property sales, the IBERDROLA Group follows the principle of recognising income at the time when legal title is transferred to the purchaser, which usually matches the date of public execution of the respective contracts.

37. SUPPLIES

The breakdown of this heading of the Consolidated income statement is as follows:

Thousands of Euros	31.12.2019	31.12.2018
Liberalised business	**16,038,570**	**16,824,304**
Spain	9,870,023	10,193,985
United Kingdom	3,842,035	4,159,851
Mexico	1,392,096	1,489,687
Brazil	499,929	658,960
IEI	1,105,036	1,008,463
Eliminations	(670,549)	(686,642)
Renewables business	**388,659**	**434,058**
Spain	76,828	116,342
United Kingdom	49,327	53,753
United States	211,593	191,828
Mexico	3,254	3,108
Brazil	41,469	65,606
IEI	6,188	3,421
Networks business	**6,079,332**	**5,219,469**
Spain	5,287	15,991
United Kingdom	61,967	53,101
United States	1,396,394	1,494,913
IEI	4,615,684	3,655,464
Other business, Corporation and adjustments	**(2,332,032)**	**(2,837,095)**
Total	**20,174,529**	**19,640,736**

38. PERSONNEL EXPENSES

The breakdown of this heading of the Consolidated income statement is as follows:

Thousands of Euros	31.12.2019	31.12.2018
Wages and salaries	2,065,632	1,973,562
Company social security costs	313,022	292,731
Additional provisions for pensions and similar obligations and defined contributions to the external pension plan (Notes 3.p and 25)	239,267	195,706
Remuneration stipulated in by-law 48.1 (Note 47)	17,000	17,000
Token payments Art. 48.4	9,381	5,588
Other social expenses	196,869	194,138
	2,841,171	**2,678,725**
Capitalised personnel expenses		
Intangible assets (Note 8)	(13,892)	(73,899)
Property, plant and equipment (Note 3.d)	(611,474)	(581,672)
Nuclear fuel and inventories	(69,748)	(3,148)
	(695,114)	**(658,719)**
Total	**2,146,057**	**2,020,006**

The average number of the IBERDROLA Group employees in 2019 and 2018 has increased to 34,306 and 33,415 employees, of which 7,932 and 7,729 are women, respectively.

The average number of employees in the consolidated group corresponds to all the employees in those consolidated companies that have been integrated using the global integration method, as well as the employees of the joint ventures determined based on the participation share in those ones.

39. TAXES

The breakdown of this heading of the Consolidated income statement is as follows:

Thousands of Euros	31.12.2019	31.12.2018
Liberalised business	**807,692**	**802,050**
Spain	687,233	693,187
United Kingdom	116,772	106,971
Brazil	32	44
Mexico	3,036	1,526
IEI	619	322
Renewable Business	**341,414**	**468,006**
Spain	269,159	396,418
United Kingdom	23,144	23,624
United States	42,396	43,650
Mexico	734	357
Brazil	855	539
IEI	5,126	3,418
Networks business	**684,387**	**647,683**
Spain	89,877	90,106
United Kingdom	108,895	105,368
United States	482,017	448,421
Brazil	3,598	3,788
Other business, Corporation and adjustments	**(4,520)**	**13,264**
Total	**1,828,973**	**1,931,003**

Law 15/2012 was published on 28 December 2012, regarding tax measures to ensure sustainability of the energy sector. Not only did it introduce the green cent measures, recognised under the heading “Taxes” of the Consolidated income statement, but also introduced the following tax figures registered under the heading “Taxes” of the Consolidated income statement of 2019 and 2018:

- A tax on the value of electricity output, entailing payment of 7% of the total amount to be received by the taxpayer for the production of electricity and incorporation thereof in the Spanish electricity system, measured at power station busbars, during the tax period. This tax gave rise to an expense of Euros 160,667 thousand and Euros 194,038 thousand in 2019 and 2018 respectively.

- A tax on spent nuclear fuel, whose cost has amounted to Euros 127,492 thousand and Euros 131,509 thousand in 2019 and 2018, respectively.

- A royalty on the use of inland water affecting production of electricity that is levied on the economic value of hydroelectric power produced, with a rate of 22%. The corresponding expense in 2019 and 2018, amounting to Euros 84,516 thousand and Euros 165,135 thousand, respectively.

- A green cent tax levied against energy products used in electricity production, entailing a cost for the IBERDROLA Group of Euros 1,892 thousand and Euros 35,575 thousand in 2019 and 2018, respectively. This payment was recognised under the heading "Supplies" of the Consolidated income statement.

Additionally, the heading “Taxes” of the 2019 and 2018 Consolidated income statement includes Euros 169,436 thousand and Euros 168,310 thousands, respectively, as the best estimate available of the accrued expenses originated by Royal Decree-Law 6/2009 (Note 3.x).

40. AMORTISATION, DEPRECIATION AND PROVISIONS

The breakdown of this heading of the Consolidated income statement is as follows:

Thousands of Euros	31.12.2019	31.12.2018
Depreciation allowances		
Intangible assets (Note 8)	912,443	737,136
Investment in real property (Note 9)	7,781	7,533
Property, plant and equipment (Note 10)	2,815,091	2,842,430
Assets for pension plans (Note 11)	139,098	–
Allowances for impairments and write-offs of non-financial assets:		
Reversal of impairment of intangible assets in Renewables in USA (Notes 8 and 13)	(20,024)	(52,688)
Charge Reversal of impairment in PPE (Note 10)	–	13,565
Other write-off property, plant and equipment (Note 10)	–	81,049
Changes in provisions	75,044	26,849
Total	**3,929,433**	**3,655,874**

41. GAINS AND LOSSES ON DISPOSAL OF NON-CURRENT ASSETS

The breakdown of this heading “Gains on disposal of non-current assets” of the Consolidated income statement is as follows:

Thousands of Euros	31.12.2019	31.12.2018
Gain on the disposal of intangible assets and PPE	152,561	10,419
Gain on the disposal of equity investments	53,654	38,049
Total	**206,215**	**48,468**

The breakdown of this heading “Losses due to disposal of non-current assets” of the Consolidated income statement is as follows:

Thousands of Euros	31.12.2019	31.12.2018
Loss on the disposal of intangible assets and PPE	3,416	2,331
Loss on the disposal of equity investments	–	37,286
Total	**3,416**	**39,617**

Year 2019

- Surplus recognised under the heading "Gains on disposal of non-current assets" of the Consolidated income statement for 2019 mainly corresponds to the long-term assignment to Lyntia Networks of the right to use the exceeding capacity of the optic fibre network resulting in a credit of Euros 113,816 thousand (Note 6) and the sale of 50% of the interest in the companies Dry Lake II, LLC. and Cooper Crossing, LLC (subsidiary of Avangrid Arizona Renewables, LLC), whose sale price amounted to approximately Euros 100 million, resulting in a gross surplus of Euros 53,654 thousand.

Year 2018

- Gross losses recognised under the heading "Losses on disposal of non-current assets" of the Consolidated income statement for 2018 correspond mainly to the sale of the gas business in the United States in the amount of Euros 13,881 thousand and the 80% stake in Coyote Ridge Wind LLC to WEC Infrastructure, for an amount of Euros 23,116 thousand (Notes 6 and 14.a).

- The Gross surplus recognised under the heading "Gains on disposal of non-current assets" of the Consolidated income statement for 2018 corresponds to the sale of Iberdrola Energía Solar de Puertollano, S.A. for Euros 12,470 thousand and of Scottish Power Generation Limited for Euros 25,579 thousand (Note 6).

42. FINANCE INCOME

The breakdown of this heading "Financial Income" of the Consolidated income statement is as follows:

Thousands of Euros	31.12.2019	31.12.2018
Income from equity investments	804	2,284
Financial income related to assets at amortised cost:		
Other financial interests and income	131,373	194,261
Other interest and finance income due to credits to associated companies	185	58
Non-hedge derivatives and inefficiencies (Note 28)	78,228	114,736
Exchange losses in foreign currency for financing activities	327,293	191,789
Other Exchange losses in foreign currency	102,737	143,360
Capitalised finance costs	222,990	193,423
Total	**863,610**	**839,911**

The average capitalisation rates used in 2019 and 2018 for external financing of property, plant and equipment was 4.64% and 3.68%, respectively (Note 3.d).

43. FINANCIAL COSTS

The breakdown of this heading "Financial expense" of the Consolidated income statement is as follows:

Thousands of Euros	31.12.2019	31.12.2018
finance cost related to liabilities at amortised cost:		
finance cost and financing expenses	1,210,511	1,234,475
Other finance cost and similar expenses	86,968	94,503
Capitalised financing expenses (Notes 2.a and 30)	57,023	–
Equity instruments having the substance of a financial liability (Note 22)	20,010	12,026
Non-hedge derivatives and inefficiencies (Note 28)	198,568	161,174
Valuation adjustments of financial assets	1,771	2,798
Exchange losses in foreign currency for financing activities	330,197	198,604
Other Exchange losses in foreign currency	94,974	146,415
Financial update of other provisions (Note 26)	84,627	68,057
Financial update of provisions for pensions and similar commitments (Note 25)	79,052	77,953
Total	**2,163,701**	**1,996,005**

44. CONTINGENT ASSETS AND LIABILITIES

The IBERDROLA Group companies are involved in legal and out-of-court disputes arising as part of the ordinary course of their business (disputes with suppliers, clients, administrative or tax authorities, individuals, environmental activists or employees). The IBERDROLA Group's legal advisors believe that outcome of these disputes will not have a material impact on its equity-financial position.

In relation to said disputes, the IBERDROLA Group's main contingent assets and liabilities not recognised in these Consolidated financial statements as the established criteria in accounting regulations is not met, are as follows:

Contingent liabilities

- On 16 June 2014, the CNMC initiated penalty proceedings against IBERDROLA GENERACIÓN ESPAÑA for purported fraudulent manipulation aimed at altering energy prices at the hydroelectric generation plants of the Duero, Tagus and Sil in December 2013. On 30 November 2015 the Company was notified of the Euros 25 million penalty. IBERDROLA GENERACIÓN ESPAÑA lodged an appeal for a judicial review with the Judicial Review Chamber of the National High Court, was given leave to proceed, and enforcement of the penalty was stayed. The procedure is currently on hold pending separate rulings.

- Complaints lodged in 2016 by the Group before the Central Economic-Administrative Court for contested tax investigation reports correspond to the years 2008-2011. The main controversies arise from the elimination of the exemption applicable to dividends received for the Tax Agency considers that this exemption is incompatible with valuation adjustments for net investment hedges, differences in tax consolidation criteria and the possible existence of circumstances established in Article 15.1 of Spain's General Tax Law in a debtor-swap operation in a number of bond issues.

- IBERDROLA INGENIERÍA's subsidiary company in the United States (Iberdrola Energy Projects - IEP) maintains an arbitration against one of its clients before the *International Centre for Dispute Resolution (ICDR)* de la *American Arbitration Association* (AAA) due to the undue termination of a contract and other claims. In turn, said client is claiming certain amounts resulting from delay penalties and other damages to IEP. Currently the proceeding is at the stages of documentation presentation and drafting of testimonies. The hearing will take place in August/September 2020.

  In February 2019 the client executed the guarantee for 100% of its value (USD 141 million). The amount paid has been recognised under the heading "Trade and other non-current assets" of the Consolidated statement of financial position at 31 December 2019 because it is considerable probable to recover the amount from the counterparty in case the outcome is favourable or to offset it with the amount to be paid, in the event of an unfavourable outcome.

- In 2018, two arbitrations were initiated by two contractors (one in charge of the electrical part of the project and the other of the assembling of equipment) of the Salem Harbor project before the ICDR of the American Arbitration Association (AAA) against IEP claiming damages resulting from unpaid works, interferences and delays. For both IEP arbitrations counter-claims have been filed and hearings have been held in 2019. In one of the them, the conclusions writ was filed on 7 February 2020 and in the other the award is expected for March 2020.

- IBERDROLA INGENIERÍA's partner in the supply of certain electrical services for the combined cycle project in Lichterfelde in Berlin filed a claim, updated in May, for extension costs and direct costs incurred in due to delays and interferences attributable to IBERDROLA INGENIERÍA. Said claim has been rejected by IBERDROLA INGENIERÍA due to lack of grounds by virtue of the joint venture agreement and of evidence.

- Various labour, civil and tax claims are ongoing against several companies of the NEOENERGIA Group in Brazil as a result of daily operations. The IBERDROLA Group considers that the risk of potential losses at such companies has been assessed in line with the opinions of the authorities and the external tax advisers, and the relevant provisions have been made based on the likelihood of loss as per the available evidence, the position of courts and the most recent case law precedent.

  Labour complaints were filed by former NEOENERGIA Group companies or by former subcontractor as regards additional working hours, equitable salaries and other employment rights. Civil cases refer to commercial and damages actions initiated to claim material or moral damages, arbitrations related to engineering contracts and environmental actions.

  Among the tax claims are infraction notices due to the following:

  - not deducting amortised and depreciated goodwill expense (agio) in the calculation basis of income tax (both in corporate income tax- IRPJ and social contribution tax -CSL) applicable to the subsidiary companies Celpe, Coelba, Cosern, Itapebi and Termopernambuco.

  - failure to make income tax withholdings on interest payment on treasury capital between Group companies, and

  - questioning tax credits related to consumption tax (ICMS) in Celpe and Elektro.

  - the tax authorities considering that payments for subsidiary company revenue, social benefits, health insurance and life insurance should be recognised as social security expenses, and

- offsetting by Neoenergia of balances in its favour due to wrongly applying PIS/COFINS to finance income, under a favourable resolution, which has been contested.

Furthermore, it should be noted that there is favourable and final administrative ruling regarding the infraction notice against Elektro initiated by the Receita Federal do Brasil regarding income tax for capital gains resulting from the acquisition of Elektro Redes. There is also a favourable ruling by a first instance court on tax deductibility of goodwill applicable to Celpe (2007 and 2008).

As regards regulatory actions, the distribution companies Coelba, Celpe, Cosern and Elektro are involved in similar proceedings, among which the following should be highlighted: (I) procedure to calculate individual and collective technical service continuity indicators; (ii) trade matters; (iii) financial compensations and recovery of global indicators; (iv) matters related to collections and legality of rate items or guides, and (v) matters related to the legality of administrative actions imposed by ANEEL. Among said actions, the following stand out:

- Elektro's Energy Social Tariff (low rent), which the Consumers Association intends on increasing in number of eligible customers from 2002 to 2010, imposing on ANEEL and Elektro the obligation to restore tariff differences, which should be born, eventually, by the sector fund, the CDE;

- The free or onerous use of rights of war areas in roads for the electricity grid, whose appropriateness is being discussed in a leading case in the Supreme Court (STF).

- Several matters regarding over or under subscription of energy, under administrative discussion; and

- The possibility of ANEEL including for the rate tax income resulting from favourable outcome from court disputes regarding the exclusion of the ICMS tax from the federal contributions calculation base PIS and COFINS. Matter under discussion from the administrative perspective.

- Complaint of the Public Utilities Commission: In 2002, the California Public Utilities Commission and the California Electricity Oversight Board (CPUC and CEOB, respectively) submitted a claim to the Federal Energy Regulatory Commission (FERC) against a number of electricity producers, including Avangrid Renewables, LLC (subsidiary of Avangrid, Inc.) alleging that these companies had manipulated the market and that the prices set in energy purchase contracts were "unfair and unreasonable", and demanded modifications to the contracts.

  FERC dismissed the claim and, following a review by the Californian courts, the Supreme Court ordered FERC to review the case, which had remained dormant since 2008. In April 2016, following the reopening of the 2014 case, an initial ruling was issued that dismissed any market manipulation by Avangrid Renewables, but the initial ruling did conclude that price of the energy purchase contracts imposed an excessive burden on customers in the amount of USD 259 million. FERC recommended filing the case without sanction. Following these proceedings, FERC is expected to issue a final ruling in 2020 and its decision may be appealed in the courts. The IBERDROLA Group expects that the case will eventually be shelved without any penalty.

- PNE Energy Supply LLC vs. Eversource Energy and Avangrid, Inc.: Class Action Regarding LDC Gas Transportation Service on Algonquin Gas Transmission (AGT), presented on 10 August 2018. Plaintiff filed a civil antitrust action, on behalf of itself and those similarly situated, against the Company and Eversource alleging that their respective gas subsidiaries illegally manipulated the supply of pipeline

capacity in the “secondary capacity market” in order to artificially inflate New England natural gas and electricity prices. On 7 June 2019, the Court dismissed the complaint. Said decision has been appealed by the claimants before the Court of Appeal of the First Circuit in the USA and is pending of settlement. The Company cannot predict the outcome of this matter.

- On 1 May 2018, ARHI closed the transaction for the sale of the gas storage business to Amphora Gas Storage USA, LLC. On 30 October 2019, ARHI received a compensation complaint from Amphora Gas Storage USA, LLC in for the amount of approximately USD 20 million for, among others, certain infractions related to land occupation, health and safety requirements, and the situation and sufficiency of assets, and a complaint from a third party due to intellectual property rights infringement. In accordance with the terms and conditions of the purchase agreement, the total aggregate amount for which AHRI could be liable to compensation (due to matters different to the fundamental statements, tax matters and fraud complaint) could not exceed 15% of purchase price. This represents approximately USD 10 million. The company cannot foresee the outcome of this matter.

Additionally, as part of the ordinary business of the IBERDROLA Group, the following contingent liabilities have arisen:

- US gas companies own, or have owned, the land where they operated the gas manufacturing plants. Said land was polluted as a result of these activities. In some cases, the soil has been cleaned. In some other cases, the soil has been assessed and identified, but has not been cleaned yet. Last, in some cases, the extent of the pollution has not been determined yet. For the last group, at 31 December 2019 no provisions had been recognised because the reasonable cost of the regulators intervention and approval cannot be estimated. In the past, gas companies have received approval to recover expenses associated to cleaning from customers through rates and expects to recover cleaning expenses for the remaining soil.

<u>Contingent assets</u>

- AVANGRID initiated legal proceedings against the former owners of certain sites in order to recover the costs of environmental restoration work it was forced to pay.

The IBERDROLA Group's appeals on regulatory issues were submitted in opposition to general dispositions of an indefinite amount, affecting the regulatory and remuneration framework of the companies. Therefore, they concern regulatory dispositions that were in force at the time of appeal.

IBERDROLA Group's assets are not at risk with respect to the appeals submitted against general energy stipulations because the economic effects of the stipulations challenged apply when they come into force. An estimate of the appeals submitted by third parties has a limited economic scope, as this would force amendments to the regulatory framework and possible refunds.

As regards legal proceedings instigated by third parties that may affect the remuneration and equity of the IBERDROLA Group, no significant appeals have been lodged.

The contingent assets and liabilities at 31 December 2018 are described in the IBERDROLA Group’s 2018 Consolidated annual accounts.

45. INTERESTS IN JOINT VENTURES

The detail (at 100%) of the most significant economic aggregates in 2019 and 2018 relating to the main joint ventures involving the IBERDROLA Group is as follows:

Thousands of Euros	Joint property of nuclear and thermal plants					A.I.E. Almaraz-Trillo	A.I.E. Ascó-Valdellós	West of Duddon Sands	Wikinger OSS	Torre Iberdrola
Year 2019	**Almaraz**	**Trillo**	**Vandellós**	**Ascó**	**Aceca**					
Segment	Liberalised							Renewables		Other businesses
Intangible assets.	–	–	–	–	–	5,044	–	1,546,755	–	14
Property, plant and equipment										
Technical installations	650,795	925,580	942,015	587,575	–	–	–	–	141,593	–
Other fixed assets	330	3,911	13,087	–	1,811	2,138	–	–	–	165,844
Non-current financial assets	22,533	11,291	43,090	9,864	2,430	2,056	180,060	7,594	–	13,625
Current assets	586,220	367,510	354,639	325,279	64	56,910	136,286	–	–	1,314
Total assets	**1,259,878**	**1,308,292**	**1,352,831**	**922,718**	**4,305**	**66,148**	**316,346**	**1,554,349**	**141,593**	**180,797**
Non-Current liabilities	**388,406**	**483,984**	**556,240**	**267,297**	**–**	**45,766**	**197,521**	**–**	**–**	**1,646**
Current liabilities	**1,252,784**	**908,801**	**846,103**	**775,921**	**4,775**	**20,382**	**99,592**	**30,904**	**–**	**1,377**
Income	**789,523**	**379,132**	**360,649**	**359,442**	**–**	**174,535**	**306,219**	**1,487**	**–**	**14,970**
Expenses	**773,418**	**373,539**	**356,670**	**296,830**	**470**	**174,535**	**255,255**	**30,469**	**–**	**10,928**

Thousands of Euros	Joint property of nuclear and thermal plants					A.I.E. Almaraz-Trillo	A.I.E. Ascó-Valdellós	West of Duddon Sands	Wikinger OSS	Torre Iberdrola
Year 2018	**Almaraz**	**Trillo**	**Vandellós**	**Ascó**	**Aceca**					
Segment	Liberalised							Renewables		Other businesses
Intangible assets.	–	–	–	–	–	5,290	–	–	–	21
Property, plant and equipment										
Technical installations	692,494	952,610	948,438	594,792	–	–	–	1,456,429	147,727	–
Other fixed assets	340	4,133	14,271	–	1,811	2,029	–	–	–	184,896
Non-current financial assets	22,533	11,291	43,090	9,864	2,430	1,919	144,532	–	–	–
Current assets	707,494	382,790	369,356	376,302	739	50,923	139,181	9,946	–	2,184
Total assets	**1,422,861**	**1,350,824**	**1,375,155**	**980,958**	**4,980**	**60,161**	**283,713**	**1,466,375**	**147,727**	**187,101**
Non-Current liabilities	**365,529**	**463,666**	**515,544**	**245,947**	**–**	**39,799**	**156,007**	**–**	**–**	**1,515**
Current liabilities	**893,204**	**856,820**	**960,220**	**613,141**	**5,746**	**20,362**	**108,473**	**39,096**	**–**	**1,699**
Income	**908,702**	**444,292**	**304,278**	**484,922**	**7**	**163,076**	**323,508**	**1,372**	**–**	**13,602**
Expenses	**744,267**	**413,950**	**402,382**	**363,052**	**772**	**163,076**	**302,518**	**30,132**	**–**	**11,032**

46. GUARANTEE COMMITMENTS TO THIRD PARTIES AND OTHER CONTINGENT LIABILITIES

IBERDROLA and its subsidiaries are required to provide the bank or corporate guarantees associated with the normal management of the Group's activities.

In this regard, the IBERDROLA Group guarantees the obligations undertaken in energy purchase agreements and grid access transactions in different energy markets and against the operators of different electricity systems (MEFF, OMEL, OMI Clear, National Grid, CFE, REE and EDP Distribución).

With regard to generation from renewable sources, the IBERDROLA Group has provided guarantees to third parties to cover the construction, bringing into service and dismantling of facilities, in addition to its responsibilities in long-term energy sales.

In 2016, the signing of nonconformity has taken place regarding the corporate Income Tax for the years 2008 to 2011 and regarding the Value Added Tax, for years 2010 and 2011. IBERDROLA has filed the corresponding claims to the Economic Administrative Court against the liquidation agreements, which confirm the acts of nonconformity, requesting the automatic suspension of the execution of the settlements by means of the necessary bank guarantees (Note 33).

In addition, at 31 December 2019 and 2018, there were outstanding obligations resulting from bond issues in the United States amounting to Euros 1,962,701 and 1,787,818 thousand that were secured by the items in the property, plant and equipment of the subgroup AVANGRID.

IBERDROLA considers that any additional liability at 31 December 2019 and 2018, arising from the guarantees provided at that date, if any, would not be significant.

Moreover, the IBERDROLA Group in compliance with the contractual obligations associated with loans received from banks, had fully or partially pledged some of its subsidiaries shares at 31 December 2019 and 2018. The detail, by company, of the shares pledged is as follows:

Thousands of Euros	2019			2018		
	Carrying amount	Percentage of ownership of IBERDROLA Group	Carrying amount by percentage of IBERDROLA Group's ownership (thousands of euros	Carrying amount	Percentage of ownership IBERDROLA Group	Carrying amount by percentage of IBERDROLA Group's ownership (thousands of euros
Renewables business - Spain						
Eólica 2000, S.L.	6,150	51.00%	3,137	5,764	51.00%	2,940
Eólica de Campollano, S.A. (1)	27,485	25.00%	6,871	27,031	25.00%	6,758
Molinos de La Rioja, S.A. (1)	–	–	–	14,887	42.37%	6,308
Molinos del Cidacos, S.A.	–	–	–	37,336	31.78%	11,865
Renewables business - Brazil						
Arizona 1 Energia Renovável, S.A.	9,881	51.04%	5,043	10,993	52.45%	5,766
Caetité 1 Energia Renovável, S.A.	16,208	51.04%	8,273	16,499	52.45%	8,654
Caetité 2 Energia Renovável, S.A.	19,221	51.04%	9,811	18,895	52.45%	9,910
Caetité 3 Energia Renovável, S.A.	15,776	51.04%	8,052	16,083	52.45%	8,436
Calango 1 Energia Renovável, S.A.	11,964	51.04%	6,106	13,166	52.45%	6,906
Calango 2 Energia Renovável, S.A.	10,490	51.04%	5,354	11,192	52.45%	5,870
Calango 3 Energia Renovável, S.A.	10,685	51.04%	5,454	11,884	52.45%	6,233
Calango 4 Energia Renovável, S.A.	9,517	51.04%	4,858	10,891	52.45%	5,712
Calango 5 Energia Renovável, S.A.	10,293	51.04%	5,253	11,419	52.45%	5,989
Calango 6 Energia Renovável, S.A.	51,416	51.04%	26,243	51,491	52.45%	27,007
Canoas Energia Renovável, S.A.	43,291	51.04%	22,096	43,767	52.45%	22,956
Canoas 2 Energía Renovável, S.A.	2,242	51.04%	1,144	–	–	–
Canoas 3 Energía Renovável, S.A.	1,019	51.04%	520	–	–	–
Canoas 4 Energía Renovável, S.A.	2,109	51.04%	1,076	–	–	–
Chafariz 1 Energía Renovável, S.A.	2,660	51.04%	1,358	–	–	–
Chafariz 2 Energía Renovável, S.A.	2,241	51.04%	1,144	–	–	–
Chafariz 4 Energía Renovável, S.A.	2,086	51.04%	1,065	–	–	–
Chafariz 5 Energía Renovável, S.A.	2,197	51.04%	1,121	–	–	–
Ventos de Arapuá 1 Energía Renovável, S.A.	1,906	51.04%	973	–	–	–
Ventos de Arapuá 2 Energía Renovável, S.A.	2,352	51.04%	1,200	–	–	–
Ventos de Arapuá 3 Energía Renovável, S.A.	975	51.04%	498	–	–	–
Força Eolica Participaçoes, S.A.	54,728	51.04%	27,933	58,563	52.45%	30,716
Lagoa I, S.A.	52,921	51.04%	27,011	52,827	52.45%	27,708
Lagoa II, S.A.	43,130	51.04%	22,013	42,521	52.45%	22,302
Lagoa 3 Energía Renovável, S.A.	1,816	51.04%	927	–	–	–
Lagoa 4 Energía Renovável, S.A.	1,537	51.04%	785	–	–	–
Mel 2 Energia Renovável, S.A.	7,563	51.04%	3,860	7,310	52.45%	3,834
Santana 1, Energia Renovável, S.A.	37,703	51.04%	19,244	40,791	52.45%	21,395
Santana 2, Energia Renovável, S.A.	29,675	51.04%	15,146	32,365	52.45%	16,975
Liberalised - Brazil						
Baguari Geraçao de Energia Elétrica, S.A.	33,915	50.99%	17,293	37,571	52.45%	19,706
Belo Monte Participações, S.A.	310,905	51.04%	158,684	306,082	52.45%	160,540
Companhia Hidrelétrica Teles Pires, S.A. (1)	425,008	26.03%	110,642	424,280	26.75%	113,504
Energética Aguas da Pedra, S.A. (1)	105,014	26.03%	27,336	97,405	26.75%	26,055
Energética Corumba III (1)	38,283	12.76%	4,885	37,391	13.11%	4,903
Geraçao CIII, S.A.	57,568	51.03%	29,380	57,589	52.45%	30,205
Norte Energia, S.A. (1)	3,101,854	5.10%	158,319	2,971,872	5.25%	155,875
Teles Pires Participaçoes, S.A.(1)	337,189	25.81%	87,014	326,387	26.52%	86,554
Geraçao Ceu Azul, S.A.	271,054	51.04%	138,346	255,988	52.45%	134,266
Liberalised - Mexico						
Parque Industrial de Energías Renovables II Quecholac Felipe Angeles, S.A. de C.V.	17,210	51.00%	8,777	15,556	51.00%	7,934
Parque Industrial de Energia Renovable SA de CV	66,526	51.00%	33,929	62,647	51.00%	31,950
Parque Industrial de Energías Renovables IV , S.A. de C.V.	427	51.00%	218	403	51.00%	206
Networks - Brazil						
Potiguar Sul Transmissão de Energia, S.A.	58,944	51.04%	30,085	55,282	52.45%	28,995
Neoenergia Jalapão Transmissão de Energía, S.A.	30,702	51.04%	15,670	–	–	–
Neoenergia Dourados Transmissão de Energía, S.A.	47,332	51.04%	24,158	–	–	–
Total	**5,393,168**	**–**	**1,088,305**	**5,184,128**	**–**	**1,064,933**

(1) Companies recognised as equity-accounted investee.

47. REMUNERATION OF THE BOARD OF DIRECTORS

47.1 2019 by-law stipulated remuneration

Section 48 of IBERDROLA's by-laws provides that the Company shall assign on an annual basis, as an expense, an amount equal to a maximum of 2% of the profit obtained in the year by the consolidated group for the following purposes:

On the proposal of the Appointments and Remuneration Committee, the Board of Directors has decided to propose to shareholders at their General Meeting to assign by-law stipulated remuneration of Euros 17,000 thousand in 2019 and the same amount as in the previous four years, this is in 2015, 2016, 2017 and 2018.

These amounts have been registered under the heading "Personnel expenses" of the Consolidated income statement (Note 38).

a) Fixed remuneration and attendance premium

The fixed annual remuneration and attendance premium received by board and committee members depends on the duties assigned to them in the Board of Directors and its commissions in 2019 and 2018. The details are as follows:

	Fixed remuneration		Attendance fees	
Thousands of Euros	2019	2018	2019	2018
Chairman of the board	567	567	4	4
Vice-chair of the board and committee chairs	440	440	4	4
Committee members	253	253	2	2
Board members	165	165	2	2

b) Remuneration of the executive directors for their executive duties

The Board of Directors has resolved to maintain the fixed remuneration for the chairman and chief executive officer in 2019 at Euros 2,250 thousand. It also decided to maintain the limit of variable annual remuneration, which may not exceed Euros 3,250 thousand and which will be paid as far as been agreed in 2020.

The board of directors decided on a fix remuneration in 2019 of Euros 1,000 thousand for the member of the board and Business CEO and set a limit of variable annual remuneration of Euros 1,000 thousand, to be paid, as may be agreed, in 2020.

c) Board member remunerations paid and accrued

The detailed fixed remuneration accrued by the members of the Board of Directors, individually, during 2019 and 2018, respectively, is detailed as follows:

Thousands of Euros	Salaries	Fixed remuneration (1)	Remuneration for sitting on Committees (1)	Attendance fees	Short-term variable remuneration (10)	Remuneration in kind	Total 2019	Total 2018
Chairman of the board								
José Ignacio Sánchez Galán	2,250	567	–	92	3,250	72	6,231	6,062
Vice-chair of the board and committee chairs								
Inés Macho Stadler (2)	–	165	275	76	–	3	519	511
Samantha Barber	–	165	275	82	–	2	524	516
María Helena Antolín Raybaud	–	165	275	52	–	7	499	486
Xabier Sagredo Ormaza (3)	–	165	249	58	–	2	474	295
Juan Manuel González Serna (4)	–	165	275	44	–	2	486	387
Committee members								
Iñigo Víctor de Oriol Ibarra	–	165	88	52	–	5	310	296
Georgina Kessel Martínez (5)	–	165	114	46	–	1	326	505
Denise Mary Holt	–	165	88	40	–	1	294	294
José Walfredo Fernández	–	165	88	40	–	1	294	294
Manuel Moreu Munaiz	–	165	88	60	–	2	315	317
Francisco Martínez Córcoles	1,000	165	–	16	1,000	34	2,215	1,918
Anthony Luzzatto Gardner (6)	–	165	88	30	–	1	284	198
Sara de la Rica Goiricelaya (7)	–	126	67	24	–	1	218	–
Ceased members								
Braulio Medel Cámara (8)	–	–	–	–	–	–	–	89
Angel Jesús Acebes Paniagua (9)	–	39	21	12	–	1	73	314
Total	**3,250**	**2,712**	**1,991**	**724**	**4,250**	**135**	**13,062**	**12,482**

(1) Remuneration accrued in 2019. These amounts are not satisfied until the approval of 2019 by-law stipulated remuneration by the General Shareholders Meeting 2020.

(2) Appointed Vice-chairperson of the Board of Directors on 21 June 2018.

(3) On 19 February 2019 the Board of Directors approved his appointment as a chairman of the Audit and Risk Supervision Committee.

(4) On 21 June 2018 the Board of Directors approved the appointment as a member of the Audit and Risk Supervision Committee.

(5) On 19 February 2019, the appointment as chairwoman of the Audit and Risk Supervision Committee expired.

(6) Appointed member on 13 April 2018. On that same date, the Board of Directors approved the appointment as a member of the Audit and Risk Supervision Committee. On 24 April 2019 the appointment was approved as a member of the Audit and Risk Supervision Committee replacing Sara de la Rica Goiricelaya.

(7) Appointed member on 29 March 2019. On that same date, the Board of Directors approved the appointment as a member of the Audit and Risk Supervision Committee. On 24 April 2019 the appointment was approved as a member of the Audit and Risk Supervision Committee replacing Anthony Luzzatto Gardner.

(8) Ceased as vice-chairman of Boards of Directors at their meeting on 13 April 2018.

(9) Ceased as member of the board on 28 March 2019.

(10) Amount relates to variable remuneration received in the year 2019, based on attainment of targets and personal performance in 2018.

Currently, all members of the Board of Directors of IBERDROLA, except for Francisco Martínez Córcoles, assume responsibility for any of the five committees of the board.

d) Civil Liability Insurance

The premium paid to cover directors' Civil Liability Insurance amounts to Euros 94 thousand and Euros 72 thousand in 2019 and 2018, respectively.

e) Others

The expenses of the Board of Directors related to external services and other items during 2019 and 2018 amounted to Euros 1,932 thousand and Euros 2,131 thousand, respectively.

In 2019 and 2018 rebates were received amounting to Euros 88 thousand and Euros 106 thousand, respectively, with respect to the adjustment of the pension insurance policies relating to former Members of the Board of Directors.

The undistributed by-law stipulated remuneration for 2019 amounting to Euros 2,000 thousand can be externalized to cover the obligations incurred by the Company to ensure them, in the event they should be materialized.

47.2 Remuneration through the delivery of Company shares

At their General Meeting held on 28 March 2014 the shareholders approved the *2014-2016 Strategic Bonus* as a long-term incentive tied to the performance of the Company in accordance to certain parameters (Note 21).

In the first half of 2019 the third and last annual settlement was made. The Chairman and CEO received 510,596 IBERDROLA shares. The member-Business CEO was granted 120,932 shares corresponding to his performance prior to his appointment as board member.

47.3 Remuneration for sitting on other committees

In 2019 senior executives who have held the position of directors in companies that are not wholly owned, directly or indirectly, by IBERDROLA have received Euros 302 thousand.

47.4 Law 11/2018: Non-financial information and diversity

Below the average remuneration received by members per type and genre in 2019 and 2018 is detailed as follows:

	2019		2018	
Thousands of Euros	**Men**	**Women**	**Men**	**Women**
Executive	4,374	–	4,121	–
Independent and other external	358	413	313	462

Additionally, executive members received 631,528 and 631,527 company shares in 2019 and 2018, respectively (Note 47.2).

47.5 Compensation clauses

Compensation clauses for Senior management are described in paragraph C.1.39 of the Annual Corporate Governance Report included in the Directors' Report.

48. INFORMATION REGARDING COMPLIANCE WITH ARTICLE 229 OF THE SPANISH COMPANIES ACT

As established in section 229 of the Spanish Companies Act (Ley de Sociedades de Capital) introduced by the Royal Decree-Law 1/2010 of 2 July 2010 and in the Law 31/2014, of 3 December 2014, modifying the Spanish Companies Act for the improvement of corporate governance, the conflictsof-interest situations incurred by the directors are noted below.

The president and CEO and the member-Business CEO were absent during the deliberation of all the agreements related to his system of remuneration and assurance.

Finally, Mr. Sagredo Ormaza was absent during the deliberation of that agreements involving Kutxabank, S.A.

49. REMUNERATION TO SENIOR MANAGEMENT

Senior executives are those who answer directly to the Company's Board of Directors, chairman and chief executive officer and, in all cases, the Internal audit director, apart from any other director recognised as senior manager.

At 31 December 2019, the Company had 9 senior managers.

The personnel costs relating to senior executives amounting to Euros 12,851 thousand and Euros 12,006 thousand in 2019 and 2018, respectively, are recognised under the heading “Personnel expenses” of the Consolidated income statements of the mentioned years.

The remuneration and other compensation received by senior executives in 2019 and 2018 are detailed below:

Thousands of Euros	2019	2018 (1)
Remuneration in cash	4,893	5,125
Variable remuneration	5,233	4,436
Remuneration in kind and payments on account not charged	348	228
Social Security	138	124
Promoter contribution pension plan	1,094	1,079
Risk policy (death and permanent disability)	1,145	1,014
Total	**12,851**	**12,006**

Number of shares	2019	2018 (1)
Share-based payment plan, strategic bonus	418,340	418,340
Taxes charged and settlements (thousands of Euros)	2,386	1,872

(1) To facilitate comparison, the information regarding members who are considered senior managers from 1 January 2019 (4 additional members) has been included.

In the first half of 2019 the third of three annual payments corresponding to the 2014-2016 Strategic Bonus has been made (Note 21), once it has been confirmed the remuneration grounds have been met. Senior management members have received 418,340 shares in the third payment.

A maximum of 1,600,000 net shares to be settled in three years, Euros 6,005 thousand, are to be delivered to senior executives under the 2017-2019 Strategic Bonus (Note 21), tied to their success in achievement of objectives.

In 2019 and 2018 senior managers who have held the position of directors in companies that are not wholly owned, directly or indirectly, by IBERDROLA have received Euros 1,089 and 970 thousand, respectively.

Compensation clauses for Senior management are described in paragraph C.1.39 of the Annual Corporate Governance Report included in the Directors' Report.

On the other hand, during 2019 and 2018 there were no other transactions with executives outside the normal course of the business.

The amount of the fixed and variable remuneration of executives not included in the senior management of IBERDROLA (147 people) rose to Euros 48,537 thousand in 2019. This amount reached Euros 43,624 thousand in 2018 (146 people) [(2)]. These amounts do not include shares delivered as part of the 2014-2016 Strategic bonus.

(2) To facilitate comparison, the information regarding members who are considered senior executives from 1 January 2019 (4 additional members) has been excluded.

50. RELATED PARTY TRANSACTIONS AND BALANCES

The transactions detailed below are specific to the ordinary business activity and have been carried out on an arm's-length basis:

Transactions carried out by IBERDROLA with significant shareholders (Note 20)

The most noteworthy transactions in 2019 and 2018 are as follows:

	Major shareholders	
	2019	2018
Thousands of Euros	Qatar Investment Authority	Qatar Investment Authority
Other transactions		
Dividends and other distributed profit [(1)]	2,766	2,766

(1) Amounts recognised as dividends and other benefits distributed in the first half of 2019 and 2018 correspond to the Iberdrola flexible remuneration system and the the General Shareholders' Meeting attendance fee received if applicable.

Transactions carried out with significant shareholders (Note 20)

The most noteworthy transactions in 2019 and 2018 are as follows:

	Major shareholders	
	2019	2018
Thousands of Euros	Qatar Investment Authority	Qatar Investment Authority
(Expenses)/ income		
Finance income [1]	248	344
Total income	**248**	**344**

(1) Corresponds to income from cash placed in Qatar National Bank by Scottish Power, Ltd. At 31 December there were no pending amounts.

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Other investments in equity-accounted investees

The breakdown of transactions with equity-accounted investees which are related parties that were not eliminated in consolidation (Note 2.b) is as follows:

	2019						2018					
Thousands of Euros	Asset acquisition	Trade payables	Trade receivables	Sales and services provided	Supplies	Received services	Asset acquisition	Trade payables	Trade receivables	Sales and services provided	Supplies	Received services
SIEMENS-GAMESA (Note 51) (1)	698,463	324,100	2,388	1,201	1,995	42,978	218,602	83,510	765	1,376	1,702	37,602
Norte Energia, S.A. (2)	–	38,013	48	483	179,977	–	–	21,854	–	–	188,769	–
Companhia Hidrelétrica Teles Pires, S.A. (2)	–	7,666	13	1,944	81,768	–	–	7,300	1,189	14,575	84,571	–
Energetica Aguas da Pedra, S.A. (2)	–	1,732	3,074	1,948	14,699	–	–	1,683	2,683	1,906	14,474	–
Morecambe Wind, Ltd.	–	825	688	518	14,291	–	–	1,207	–	2,022	13,469	–
NGET/SPT Upgrades Ltd. (3)	36,686	–	502	587	–	29	85,033	874	2,839	1,731	–	741
Vineyard Wind, LLC	–	–	83	11,714	–	–	–	–	–	2,608	–	–
Cogeneración Gequisa, S.A. (4)	–	–	1	10,703	–	–	–	1,709	1	6,607	–	–
Fudepor, S.L. (4)	–	–	2	3,154	–	–	–	–	38	4,233	–	–
Intermalta Energía, S.A. (4)	–	–	297	1,271	–	–	–	–	3	7,143	–	–
East Anglia Offshore Wind, Ltd.	–	67	3,001	89	–	–	4,418	3,905	706	–	–	–
Other companies	211	78,633	31,039	6,127	4,756	1,610	1,762	76,902	15,100	6,128	4,195	2,121
Total	**735,360**	**451,036**	**41,136**	**39,739**	**297,486**	**44,617**	**309,815**	**198,944**	**23,324**	**48,329**	**307,180**	**40,464**

(1) In 2019 the asset acquisitions correspond mainly to the purchase from SIEMENS-GAMESA of repair equipment, wind turbines and towers for the wind farms Roaring Brook (USA), Pradillo, Cavar, Chimiche II (Spain). Additional to the purchases detailed in the table above, in the year the following companies have been acquired: Sistemas Energéticos Loma del Viento, S.A., Sistemas Energéticos Serra de Lourenza, S.A. and Sistemas Energéticos Jaralón, S.A., in the amount of Euros 44,920 thousand, owners of the wind farms Puylobo, Casetonas and Ballestas (Spain).

On 21 December 2011, IBERDROLA and Gamesa Eólica, S.L.U (Company belonging to GAMESA Group) entered into a framework agreement to supply and maintain wind farms, whereby IBERDROLA undertakes to acquire from GAMESA a minimum amount of megawatts equal to 50% of the total fleet of onshore wind turbines acquired by the Group for its renewables business unit during the term of the framework agreement. This commitment will remain in effect from 1 January 2013 until 31 December 2022 or until the number of megawatts acquired by IBERDROLA from GAMESA under the framework agreement reaches 3,800 MW, whichever occurs first.

Additionally, on 22 May 2019, IBERDROLA and Siemens Gamesa Renewable Energy Eólica, S.L. (formerly, Gamesa Eólica S.L.U.) entered into a framework agreement to supply and maintain wind farms, whereby IBERDROLA undertakes to acquire from SGRE 200 MW of the total fleet of onshore wind turbines to be purchased by Iberdrola in Spain during the term of the framework agreement. This commitment will remain in effect from the execution date until 31 December 2022 or until the number of those 200 MW are acquired, whichever occurs first.

(2) Supplies correspond mainly to purchases of electric energy.

(3) The acquisition of assets corresponds mainly to investments made by Scottish Power Transmission Limited for the construction of a submarine interconnection in the Irish Sea to increase the power transmission capacity between England and Scotland. For such purpose, Scottish Power Transmission Limited is working with the British operator National Grid in relation to the joint venture NGET/SPT Upgrades, Ltd.

(4) Sales and services provided correspond mainly to sale of has to cogeneration companies.

Transactions with directors and senior executives

	Major shareholders			
	2019		2018	
Thousands of Euros	Directors	Executives	Directors	Executives
Other transactions				
Dividends and other distributed profit [1]	298	158	482	11

(1) Amounts recognised as dividends and other benefits distributed in the first half of 2019 and 2018 correspond to the Iberdrola flexible remuneration system and he General Shareholders' Meeting attendance fee received if applicable.

51. SUBSEQUENT EVENTS TO 31 DECEMBER 2019

The main events following the closing of the year have been:

Iberdrola flexible remuneration

On 7 January 2020, the facts in relation to the implementation of the second paid-up capital increase (Iberdrola flexible remuneration) approved by the shareholders at their General Meeting held on 29 March 2019, under item 9 of the agenda, were as follows:

- The maximum number of shares to be issued under the capital increase is 117,816,148.
- The number of free allocation rights required to receive one new share is 54.
- The maximum par value of the capital increase amounts to Euros 88,362,111
- Gross dividend amount per share was Euros 0.168.

At the end of the trading period for free allocation rights:

- During the period established for this purpose, the holders of 1,419,991,945 shares of the Company decided to receive interim dividends. Thus, the gross total of distributed interim dividends was Euros 238,559 thousand. As a result, these shareholders have expressly forgone 1,419,991,945 free allocation rights and therefore 26,296,147 new shares.
- Furthermore, the final number of new ordinary shares with a par value of Euros 0.75 to be issued will be 91,520,000, giving a nominal capital increase from this implementation of Euros 68,640 thousand. This will add 1.440% to IBERDROLA's pre-issue share capital.
- As a result of this share capital increase, IBERDROLA's share capital amounts to Euros 4,840,194,000, represented by 6,453,592,000 ordinary shares of Euros 0.75 par value each, fully subscribed and paid.
- Subject to compliance with on legal requirements (and verification of compliance by the Spanish National Security Market Commission), the new shares have been admitted for trading on the continuous market of the Madrid, Barcelona, Bilbao and Valencia stock exchanges on 6 February 2020. The ordinary trading of new shares started on 7 February 2020.

Banking market and bond issue in the Euromarket

Significant financing transactions carried out by IBERDROLA Group after 31 December 2019 are as follows:

Lessor	Transaction	Amount (millions)	Currency	Maturity
Main new financing transactions				
CELPE	Loan 4131[1]	62	USD	Jan-25
COELBA	Loan 4131[1]	62	USD	Feb-25
Neoenergia Jalapão Transmissão de Energía, S.A.	BNDES loan [2]	778	BRL	Dec-43
Main transactions for extending existing financing				
Iberdrola, S.A. [3]	Sustainable syndicated loan	2,979	EUR	Feb-25
Iberdrola, S.A. [3]	Sustainable syndicated loan	2,321	EUR	Feb-25

(1) Currency swap contracts to the company's operating currency (BRL).
(2) Financing executed in 2020 undrawn
(3) 2nd option to extend novated syndicated loans for 1 additional year in January 2018 in the amount of Euros 5,300 million.

Other significant transactions

On 4 February 2020, Iberdrola Participaciones, S.A. (IBERDROLA PARTICIPACIONES), company wholly-owned by Iberdrola, S.A., e IBERDROLA have executed with Siemens Aktiengesellschaft (SIEMENS) an agreement for the sale of IBERDROLA PARTICIPACIONES full investment in Siemens Gamesa Renewable Energy, S.A. (SIEMENS GAMESA), representing 8.07% of its share capital.

The transaction price arose to Euros 1,100 million, equivalent to Euros 20 per share in SIEMENS GAMESA and is not subject to future adjustments. The purchase was finalised on 5 February 2020. The impact of this disinvestment in IBERDROLA Group's Consolidated annual accounts for 2020 implies a gross surplus of Euros 485 million.

52. FEES FOR SERVICES PROVIDED BY AUDITORS

The fees resulted from the services provided in 2019 and 2018 by the statutory auditor are detailed in the chart below:

Year 2019	TO IBERDROLA	To the rest of the Group companies	Total
Auditing services	3,028	20,026	**23,054**
Other provided services related to auditing	1,359	1,835	**3,194**
Limited revision interim information services	1,199	80	**1,279**
Comfort letters debt issue services	145	816	**961**
Agreed procedure reports services (*)	15	939	**954**
Total	**4,387**	**21,861**	**26,248**

Year 2018	TO IBERDROLA	To the rest of the Group companies	Total
Auditing services	3,223	22,116	**25,339**
Other provided services related to auditing	1,459	1,592	**3,051**
Limited revision interim information services	1,194	144	**1,338**
Comfort letters debt issue services	205	474	**679**
Agreed procedure reports services (*)	60	974	**1,034**
Total	**4,682**	**23,708**	**28,390**

(*) Mainly agreed procedure reports required by the regulator in each country, as well as reports additional to the audit report required by current legislation in certain countries where the Group operates.

In 2019 professional fees for the services provided by KPMG Auditores, S.L. for auditing services and other services provided related to auditing rose to Euros 5,689 thousand and Euros 1,834 thousand, respectively (Euros 5,949 and 2,007 thousand in 2018, respectively). Other services related to auditing correspond mainly to the release of limited review reports, comfort letters and agreed procedures.

53. EARNINGS PER SHARE

The weighted average number of ordinary shares used in the calculation of the basic and diluted earnings per share at 31 December 2019 and 2018 (Note 3.y) is as follows:

	2019		2018 Restated (Note 2.d)	
	Basic	Diluted	Basic	Diluted
Average number of shares during the year	6,584,215,809	6,601,773,703	6,827,529,351	6,831,648,079
Average number of treasury shares held	(88,205,548)	(88,205,548)	(87,682,468)	(87,682,468)
Number of shares outstanding	**6,496,010,261**	**6,513,568,155**	**6,739,846,883**	**6,743,965,611**

Basic and diluted earnings corresponding to 2019 and 2018 is as follows:

	2019		2018 Restated (Note 2.d)	
	Basic	Diluted	Basic	Diluted
Net profit from continuing operations (*) (thousands of Euros)	3,471,665	3,471,608	3,065,220	3,064,927
Net profit from discontinuing operations (thousands of Euros)	(65,354)	(65,354)	(51,167)	(51,167)
Number of shares outstanding	6,496,010,261	6,513,568,155	6,739,846,883	6,743,965,611
Earnings per share (euros) from continued operations	**0.534**	**0.533**	**0.455**	**0.454**
Earnings per share (euros) from discontinued operations	**(0.010)**	**(0.010)**	**(0.008)**	**(0.008)**

(*) Profit for the year from discontinued activities net of tax from non-controlling interests.

54. AUTHORISATION OF THE CONSOLIDATED ANNUAL ACCOUNTS

The Consolidated annual accounts for the year ended on 31 December 2019 have been formally prepared by the directors of IBERDROLA on 24 February 2020.

55. EXPLANATION ADDED FOR TRANSLATION TO ENGLISH

These Consolidated financial statements are presented on the basis of IFRS, as adopted by the European Union. Certain accounting practices applied by the Group that conform to IFRS may not conform to other generally accepted accounting principles in other countries.

APPENDIX I

YEAR 2019 ADDITIONAL INFORMATION RELATED TO GROUP COMPANIES, JOINTLY-CONTROLLED COMPANIES AND ASSOCIATES OF THE IBERDROLA GROUP

Below is the detail of the proportion of direct or indirect ownership that Iberdrola, S.A. holds in its subsidiaries in its different businesses. The percentage of votes in the decision-making bodies of these subsidiaries, which are controlled by IBERDROLA, essentially corresponds to the percentage of ownership.

(*) The consolidation method by company is detailed as follows:

G Full consolidation

E: Integration by equity method

Company	Address	Activity	Percentage of direct or indirect stake		Method (*)
			31.12.2019	31.12.2018	
Liberalised Business					
Spain					
Cogeneración Gequisa, S.A.	Spain	Energy	50.00	50.00	E
Enercrisa, S.A.	Spain	Energy	50.00	50.00	E
Energía Portátil Cogeneración, S.A.	Spain	Energy	50.00	50.00	E
Energyworks Aranda, S.L.	Spain	Energy	99.00	99.00	G
Energyworks Carballo, S.L.	Spain	Energy	99.00	99.00	G
Energyworks Cartagena, S.L.	Spain	Energy	99.00	99.00	G
Energyworks Fonz, S.L.	Spain	Energy	100.00	100.00	G
Energyworks Milagros, S.L.	Spain	Energy	100.00	100.00	G
Energyworks Monzón, S.L.	Spain	Energy	100.00	100.00	G
Energyworks San Millán, S.L.	Spain	Energy	100.00	100.00	G
Energyworks Villarrobledo, S.L.	Spain	Energy	99.00	99.00	G
Energyworks Vit-Vall, S.L.	Spain	Energy	99.00	99.00	G
Fudepor, S.L.	Spain	Energy	50.00	50.00	E
Iberdrola Clientes, S.A.U.	Spain	Retailer	100.00	100.00	G
Iberdrola Clientes Internacional, S.A.U.	Spain	Holding	100.00	100.00	G
Iberdrola Cogeneración, S.L.U.	Spain	Holding	100.00	100.00	G
Curenergía Comercializador de Último Recurso, S.A.U. (Formely Iberdrola Comercialización de Último Recurso, S.A.U.)	Spain	Retailer	100.00	100.00	G
Iberdrola Generación España, S.A.U.	Spain	Energy	100.00	100.00	G
Iberdrola Generación Nuclear, S.A.U.	Spain	Energy	100.00	100.00	G
Iberdrola Generación Térmica, S.L.U.	Spain	Energy	100.00	100.00	G
Iberdrola Operación y Mantenimiento, S.A.U.	Spain	Services	100.00	100.00	G
Iberdrola Servicios Energéticos, S.A.U.	Spain	Services	100.00	100.00	G
Iberduero, S.L.U.	Spain	Energy	100.00	100.00	G
Intermalta Energía, S.A.	Spain	Energy	50.00	50.00	E
Nuclenor, S.A.	Spain	Energy	50.00	50.00	E
Peninsular Cogeneración, S.A.	Spain	Energy	50.00	50.00	E
Productos y Servicios de Confort, S.A.	Spain	Services	100.00	100.00	G
Tarragona Power, S.L.U.	Spain	Energy	100.00	100.00	G
Tecnatom, S.A. [(5)]	Spain	Other	30.00	30.00	-
Iberdrola Clientes Portugal, Unipessoal Ltda.	Portugal	Retailer	100.00	100.00	G

Company	Address	Activity	Percentage of direct or indirect stake		Method (*)
			31.12.2019	31.12.2018	
United Kingdom					
Scottish Power Retail Holdings Ltd. (Formerly, Scottish Power Generation Holdings Ltd.)	United Kingdom	Holding	100.00	100.00	G
ScottishPower (DCL), Ltd.	United	Energy	100.00	100.00	G
ScottishPower (SCPL), Ltd.	United	Energy	100.00	100.00	G
ScottishPower Energy Management (Agency), Ltd.	United Kingdom	Services	100.00	100.00	G
ScottishPower Energy Management, Ltd.	United	Energy	100.00	100.00	G
ScottishPower Energy Retail, Ltd.	United	Retailer	100.00	100.00	G
ScottishPower Generation (Assets), Ltd	United	Energy	100.00	100.00	G
SP Dataserve, Ltd.	United	Debt management	100.00	100.00	G
SP Gas Transportation Cockenzie, Ltd.	United	Inactive	100.00	100.00	G
SP Gas Transportation Hatfield, Ltd.	United	Inactive	100.00	100.00	G
SP Smart Meter Assets, Ltd.	United	Other	100.00	100.00	G
Mexico					
Hidrola I, S.L.U.	Spain	Holding	100.00	100.00	G
Cinergy, S.R.L. de C.V.	Mexico	Services	100.00	100.00	G
Iberdrola Soporte a Proyectos Liberalizados, S.A. de C.V. (Before, Electricidad de Veracruz, S.A. de C.V.)	Mexico	Services	100.00	100.00	G
Enertek, S.A. de C.V.	Mexico	Energy	99.99	99.99	G
Iberdrola Clientes, S.A. de C.V.	Mexico	Retailer	100.00	100.00	G
Iberdrola Cogeneración Altamira, S.A. de C.V.	Mexico	Energy	100.00	100.00	G
Iberdrola Cogeneración Bajío, S.A. de C.V.	Mexico	Energy	100.00	100.00	G
Iberdrola Cogeneración Ramos, S.A. de C.V.	Mexico	Energy	100.00	100.00	G
Iberdrola Energía Altamira de Servicios, S.A. de C.V.	Mexico	Services	100.00	100.00	G
Iberdrola Energía Altamira, S.A. de C.V.	Mexico	Energy	100.00	100.00	G
Iberdrola Energía Baja California, S.A. de C.V.	Mexico	Energy	100.00	100.00	G
Iberdrola Energía del Golfo, S.A. de C.V.	Mexico	Energy	100.00	100.00	G
Iberdrola Energía Escobedo, S.A. de C.V.	Mexico	Energy	100.00	100.00	G
Iberdrola Energía La Laguna, S.A. de C.V.	Mexico	Energy	99.99	99.99	G
Iberdrola Energía Monterrey, S.A. de C.V.	Mexico	Energy	99.99	99.99	G
Iberdrola Energía Noroeste, S.A. de C.V.	Mexico	Energy	100.00	100.00	G
Iberdrola Energía Tamazunchale, S.A. de C.V.	Mexico	Energy	99.99	99.99	G
Iberdrola Energía Topolobampo, S.A. de C.V.	Mexico	Energy	100.00	100.00	G
Iberdrola Generación, S.A. de C.V.	Mexico	Holding	100.00	100.00	G
Iberdrola Generación México, S.A. de C.V.	Mexico	Holding	100.00	100.00	G
Iberdrola México, S.A. de C.V.	Mexico	Holding	100.00	100.00	G
Iberdrola Servicios Corporativos, S.A. de C.V.	Mexico	Services	100.00	100.00	G
Servicios Administrativos Tamazunchale, S.A. de C.V.	Mexico	Services	100.00	100.00	G
Servicios de Operación La Laguna, S.A. de C.V.	Mexico	Services	100.00	100.00	G
Servicios Industriales y Administrativos del Noreste, S.R.L. de C.V.	Mexico	Services	51.12	51.12	G
Tamazunchale Energía, S.A.P.I. de C.V.	Mexico	Energy	100.00	-	G
Brazil					
Baguari Geraçao de Energia Elétrica, S.A.	Brazil	Energy	51.04	52.45	G
Bahia PCH II, S.A. Bahía Pequeña C. Hidroeléctrica	Brazil	Energy	51.04	52.45	G

Company	Address	Activity	Percentage of direct or indirect stake		Method (*)
			31.12.2019	31.12.2018	
Bahia PCH III, S.A. Bahía Geraçao de Energia	Brazil	Energy	51.04	52.45	-
Belo Monte Participaçoes, S.A.	Brazil	Holding	51.04	52.45	G
Companhia Hidrelétrica Teles Pires, S.A.	Brazil	Energy	26.03	26.75	E
Elektro Comercializadora de Energia Ltda.	Brazil	Retailer	51.04	52.45	G
Energética Aguas da Pedra, S.A.	Brazil	Energy	26.03	26.75	E
Energética Corumbá III, S.A. (4)	Brazil	Energy	12.76	13.11	E
Geraçao Ceu Azul, S.A.	Brazil	Energy	51.04	52.45	G
Geraçao CIII, S.A.	Brazil	Holding	51.04	52.45	G
Itapebí Geraçao de Energia, S.A.	Brazil	Energy	51.04	52.45	G
NC Energia, S.A.	Brazil	Retailer	51.04	52.45	G
Neoenergia Operaçao e Manuitençao, S.A.	Brazil	Services	51.04	52.45	G
Norte Energia, S.A. (4)	Brazil	Energy	5.10	5.25	E
Teles Pires Participaçoes, S.A.	Brazil	Holding	25.81	26.52	E
Termopernambuco, S.A.	Brazil	Energy	51.04	52.45	G
ROW					
Iberdrola Energy Deutschland, GmbH.	Germany	Services	100.00	100.00	G
Iberdrola Canadá Energy Services, Ltd.	Canada	Gas	100.00	100.00	G
Iberdrola Solutions, LLC	USA	Services	100.00	-	G
Iberdrola Energie France, S.A.S.	France	Services	100.00	100.00	G
Iberdrola Clienti Italia, S.R.L.	Italy	Services	100.00	100.00	G
Iberdrola Ireland, Ltd	Ireland	Services	100.00	100.00	G
Renewables Business					
Spain					
Aixeindar, S.A.	Spain	Energy	60.00	-	E
Anselmo León Hidráulica, S.L. (1)	Spain	Energy	100.00	100.00	E
Biocantaber, S.L.	Spain	Energy	50.00	50.00	E
Bionor Eólica, S.A.	Spain	Energy	57.00	57.00	G
Biovent Energía, S.A.	Spain	Energy	95.00	95.00	G
Cantaber Generación Eólica, S.L.	Spain	Energy	69.01	69.01	G
Ciener, S.A.U.	Spain	Energy	100.00	100.00	G
Desarrollo de Energías Renovables de La Rioja, S.A. (2)	Spain	Energy	63.55	40.51	E
Ecobarcial, S.A. (2)	Spain	Energy	43.78	43.78	E
Electra de Malvana, S.A. (2)	Spain	Energy	48.00	48.00	E
Electra Sierra de los Castillos, S.L.	Spain	Energy	97.00	97.00	G
Electra Sierra de San Pedro, S.A.	Spain	Energy	80.00	80.00	G
Eléctricas de la Alcarria, S.L.	Spain	Energy	90.00	90.00	G
Eme Hueneja Cuatro, S.L.	Spain	Energy	100.00	100.00	G
Energía de Castilla y León, S.A.	Spain	Energy	85.50	85.50	G
Energías Ecológicas de Tenerife, S.A. (3)	Spain	Energy	50.00	50.00	G
Energías Eólicas de Cuenca, S.A.U.	Spain	Energy	100.00	100.00	G
Energías Fotovoltaicas de Puertollano, S.L.	Spain	Energy	100.00	-	G
Energías Renovables de Belona, S.L.	Spain	Energy	100.00	-	G
Energías Renovables de Circe, S.L.	Spain	Energy	100.00	-	G
Energías Renovables de Febe, S.L.	Spain	Energy	100.00	-	G
Energías Renovables de Hermes, S.L.	Spain	Energy	100.00	-	G
Energías Renovables de Tione, S.L.	Spain	Energy	100.00	-	G
Energías Renovables de la Región de Murcia, S.A.U.	Spain	Energy	100.00	100.00	G

Company	Address	Activity	Percentage of direct or indirect stake		Method (*)
			31.12.2019	31.12.2018	
Eólica Campollano, S.A. (2)	Spain	Energy	25.00	25.00	E
Eólica 2000, S.L.	Spain	Energy	51.00	51.00	G
Eólicas de Euskadi, S.A.U.	Spain	Energy	100.00	100.00	G
Gestión de Evacuación de la Serna, S.L.	Spain	Energy	16.52	-	E
Iberdrola Eólica Marina, S.A.U.	Spain	Energy	100.00	100.00	G
Iberdrola Generación, S.A.U.	Spain	Energy	100.00	100.00	G
Fincalia Agropecuaria, S.L. (formerly, Iberdrola Renewables Solutions, S.A.)	Spain	Energy	100.00	100.00	G
Fincalia Agropecuaria siglo XXI, S.A.	Spain	Energy	100.00	100.00	G
Iberdrola Renovables Galicia, S.A.U.	Spain	Energy	100.00	100.00	G
Iberdrola Renovables Andalucía, S.A.U.	Spain	Energy	100.00	100.00	G
Iberdrola Renovables Aragón, S.A.U.	Spain	Energy	100.00	100.00	G
Iberdrola Renovables Canarias, S.A.U.	Spain	Energy	100.00	100.00	G
Iberdrola Renovables Castilla – La Mancha, S.A.U.	Spain	Energy	100.00	100.00	G
Iberdrola Renovables Castilla y León, S.A.	Spain	Energy	95.00	95.00	G
Iberdrola Renovables Energía, S.A.U.	Spain	Holding	100.00	100.00	G
Iberdrola Renovables Internacional, S.A.U.	Spain	Holding	100.00	100.00	G
Iberdrola Renovables La Rioja, S.A. (2)	Spain	Energy	63.55	63.55	E
Iberdrola Renovables La Rioja 2, S.A. (2)	Spain	Energy	63.55	-	G
Iberenova Promociones, S.A.U.	Spain	Energy	100.00	100.00	G
Iberjalón, S.A.	Spain	Energy	80.00	80.00	G
ICARO Renovables,S.A.	Spain	Energy	100.00	-	G
Minicentrales del Tajo, S.A.	Spain	Energy	80.00	66.58	G
Molinos de La Rioja, S.A. (2)	Spain	Energy	63.55	42.37	E
Molinos del Cidacos, S.A.	Spain	Energy	63.55	31.78	G
Parque Eólico Cruz del Carrutero, S.L.	Spain	Energy	76.00	76.00	G
Parque Eólico Encinillas, S.L.	Spain	Energy	49.00	-	E
Parque Eólico Panondres, S.L.	Spain	Energy	100.00	-	G
Peache Energías Renovables, S.A.	Spain	Energy	95.00	95.00	G
Producciones Energéticas Asturianas, S.L.	Spain	Energy	80.00	80.00	G
Producciones Energéticas de Castilla y León, S.A. (2)	Spain	Energy	85.50	85.50	E
Proyecto Nuñez de Balboa, S.L.	Spain	Energy	100.00	100.00	G
Renovables de Buniel, S.L.	Spain	Energy	75.00	-	G
Renovables de la Ribera, S.L.	Spain	Energy	50.00	50.00	E
Sistemas Energéticos Altamira, S.A.U.	Spain	Energy	100.00	100.00	G
Sistemas Energéticos Chandrexa, S.A.	Spain	Energy	96.07	96.07	G
Sistemas Energéticos del Moncayo, S.A.	Spain	Energy	75.00	75.00	G
Sistemas Energéticos La Gomera, S.A.U.	Spain	Energy	100.00	100.00	G
Sistemas Energéticos La Higuera, S.A.	Spain	Energy	55.00	55.00	G
Sistemas Energéticos Jaralón, S.A.	Spain	Energy	100.00	-	G
Sistemas Energéticos de la Linera, S.A.U.	Spain	Energy	100.00	100.00	G
Sistemas Energéticos Loma del Viento, S.A.	Spain	Energy	100.00	-	G
Sistemas Energéticos La Muela, S.A.	Spain	Energy	80.00	80.00	G
Sistemas Energéticos Mas Garullo, S.A.	Spain	Energy	78.00	78.00	G
Sistemas Energéticos Nacimiento, S.A.U.	Spain	Energy	100.00	100.00	G
Sistemas Energéticos Serra de Lourenza, S.A.	Spain	Energy	100.00	-	G
Sistemas Energéticos Tacica de Plata, S.A.U.	Spain	Energy	100.00	100.00	G
Sistemas Energéticos Torralba, S.A.	Spain	Energy	60.00	60.00	G
Sistemes Energetics Savalla del Comtat, S.A.U.	Spain	Energy	100.00	100.00	G
Sistema Fotovoltaico de Levante, S.A.	Spain	Energy	100.00	-	G
Sociedad Gestora de Parques Eólicos de Andalucía, S.A.	Spain	Energy	63.91	63.91	G

Company	Address	Activity	Percentage of direct or indirect stake		Method (*)
			31.12.2019	31.12.2018	
Sotavento Galicia, S.A. [4]	Spain	Energy	8.00	8.00	E
Ibertâmega – Sistema Electroprodutor Do Tâmega, S.A.	Portugal	Energy	100.00	100.00	G
Iberdrola Suporte Projecto Tâmega, Unipessoal Lda.	Portugal	Energy	100.00	100.00	G
United Kingdom					
Celtpower, Ltd.	United Kingdom	Energy	50.00	50.00	E
Coldham Windfarm, Ltd.	United Kingdom	Energy	80.00	80.00	G
Douglas West Extension, Ltd.	United Kingdom	Energy	72.00	-	G
East Anglia Offshore Wind, Ltd.	United Kingdom	Energy	50.00	50.00	E
East Anglia One, Ltd.	United Kingdom	Energy	60.00	100.00	G
East Anglia Three, Ltd.	United Kingdom	Energy	100.00	100.00	G
East Anglia One North Ltd.	United Kingdom	Energy	100.00	100.00	G
East Anglia Two Ltd.	United Kingdom	Energy	100.00	100.00	G
Morecambe Wind, Ltd.	United Kingdom	Energy	50.00	50.00	E
ScottishPower Renewable Energy, Ltd.	United Kingdom	Holding	100.00	100.00	G
ScottishPower Renewables (WODS), Ltd.	United Kingdom	Energy	100.00	100.00	G
ScottishPower Renewables UK, Ltd.	United Kingdom	Energy	100.00	100.00	G
ScottishPower Renewables (UK Assets), Ltd	United Kingdom	Energy	100.00	100.00	G
United States					
Aeolus Wind Power III, LLC	USA	Holding	81.50	81.50	G
Aeolus Wind Power III, LLC	USA	Holding	81.50	81.50	G
Aeolus Wind Power IV, LLC	USA	Holding	81.50	81.50	G
Aeolus Wind Power VII, LLC	USA	Energy	81.50	-	G
Atlantic Renewable Energy Corporation	USA	Holding	81.50	81.50	G
Atlantic Renewable Projects II, LLC	USA	Holding	81.50	81.50	G
Atlantic Renewable Projects, LLC	USA	Energy	81.50	81.50	G
Atlantic Wind, LLC	USA	Holding	81.50	81.50	G
Aurora Solar, LLC	USA	Holding	81.50	81.50	G
Avangrid Arizona Renewables, LLC	USA	Energy	81.50	81.50	G
Avangrid Logistic Services, LLC	USA	Energy	81.50	81.50	G
Avangrid Renewables Holdings, Inc.	USA	Holding	81.50	81.50	G
Avangrid Renewables, LLC	USA	Holding	81.50	81.50	G
Avangrid Texas Renewables, LLC	USA	Energy	81.50	81.50	G
Avangrid Vineyard Wind, LLC	USA	Holding	81.50	81.50	G
Bakeoven Solar, LLC	USA	Energy	81.50	81.50	G
Barton Windpower, LLC	USA	Energy	81.50	81.50	G
Big Horn II Wind Project, LLC	USA	Energy	81.50	81.50	G
Big Horn Wind Project, LLC	USA	Energy	81.50	81.50	G
Blue Creek Wind Farm, LLC	USA	Energy	81.50	81.50	G
Buffalo Ridge I, LLC	USA	Energy	81.50	81.50	G
Buffalo Ridge II, LLC	USA	Energy	81.50	81.50	G
Camino Solar, LLC	USA	Energy	81.50	-	G
Casselman Wind Power, LLC	USA	Energy	81.50	81.50	G
Colorado Green Holdings, LLC	USA	Holding	81.50	81.50	G
Colorado Wind Ventures, LLC	USA	Holding	81.50	81.50	G
Coyote Ridge Wind, LLC	USA	Energy	16.30	16.30	E

Company	Address	Activity	Percentage of direct or indirect stake		Method (*)
			31.12.2019	31.12.2018	
Deerfield Wind, LLC	USA	Energy	81.50	81.50	G
Desert Wind Farm, LLC	USA	Energy	81.50	81.50	G
Dillon Wind, LLC	USA	Energy	81.50	81.50	G
El Cabo Wind, LLC	USA	Energy	81.50	81.50	G
El Cabo Wind Holdings	USA	Holding	81.50	81.50	G
El Cabo Partners, LLC	USA	Energy	81.50	81.50	G
El Corazon Wind, LLC	USA	Energy	81.50	-	G
Elk River Wind Farm, LLC	USA	Energy	81.50	81.50	G
Elm Creek Wind II, LLC	USA	Energy	81.50	81.50	G
Elm Creek Wind, LLC	USA	Energy	81.50	81.50	G
Farmers City Wind, LLC	USA	Energy	81.50	81.50	G
Flat Rock Windpower II, LLC	USA	Energy	40.75	40.75	E
Flat Rock Windpower, LLC	USA	Energy	40.75	40.75	E
Flying Cloud Power Partners, LLC	USA	Energy	81.50	81.50	G
Flying Cow Wind, LLC	USA	Energy	81.50	-	G
Fountain Wind, LLC	USA	Energy	81.50	-	G
Golden Hills Wind Farm, LLC	USA	Energy	81.50	81.50	G
Goodland Wind, LLC	USA	Energy	81.50	81.50	G
Groton Wind, LLC	USA	Energy	81.50	81.50	G
Hardscrabble Wind Power, LLC	USA	Energy	81.50	81.50	G
Hay Canyon Wind, LLC	USA	Energy	81.50	81.50	G
Heartland Wind, LLC	USA	Energy	81.50	81.50	G
Helix Wind Power Facility, LLC	USA	Energy	81.50	81.50	G
Imperial Wind, LLC (Formely Bakeoven Wind, LLC)	USA	Energy	81.50	81.50	G
Juniper Canyon Wind Power II, LLC	USA	Energy	81.50	81.50	G
Juniper Canyon Wind Power, LLC	USA	Energy	81.50	81.50	G
Karankawa Wind, LLC	USA	Energy	81.50	81.50	G
Kitty Hawk Wind, LLC	USA	Energy	81.50	81.50	G
Klamath Energy, LLC	USA	Energy	81.50	81.50	G
Klamath Generation, LLC	USA	Energy	81.50	81.50	G
Klondike Wind Power II, LLC	USA	Energy	81.50	81.50	G
Klondike Wind Power III, LLC	USA	Energy	81.50	81.50	G
Klondike Wind Power, LLC	USA	Energy	81.50	81.50	G
La Joya Wind, LLC	USA	Energy	81.50	81.50	G
Lakeview Cogeneration, LLC	USA	Energy	81.50	81.50	G
Leaning Juniper Wind Power II, LLC	USA	Energy	81.50	81.50	G
Leipsic Wind, LLC	USA	Energy	81.50	81.50	G
Lempster Wind, LLC	USA	Energy	81.50	81.50	G
Locust Ridge II, LLC	USA	Energy	81.50	81.50	G
Locust Ridge Wind Farms, LLC (3)	USA	Energy	37.74	37.74	G
Loma Vista, LLC	USA	Energy	81.50	81.50	G
Loowit Battery Storage, LLC	USA	Energy	81.50	-	G
Lund Hill Solar, LLC	USA	Energy	81.50	81.50	G
Manzana Power Services, Inc.	USA	Services	81.50	81.50	G
Manzana Wind, LLC	USA	Energy	81.50	81.50	G
Midland Wind, LLC	USA	Energy	81.50	81.50	G
Minndakota Wind, LLC	USA	Energy	81.50	81.50	G
Mohawk Solar, LLC	USA	Energy	81.50	81.50	G
Montague Solar, LLC	USA	Energy	81.50	-	G
Montague Wind Power Facility, LLC	USA	Energy	81.50	81.50	G
Moraine Wind II, LLC	USA	Energy	81.50	81.50	G
Moraine Wind, LLC	USA	Energy	81.50	81.50	G
Mount Pleasant Wind, LLC	USA	Energy	81.50	81.50	G
Mountain View Power Partners III, LLC	USA	Energy	81.50	81.50	G
New England Wind, LLC	USA	Energy	81.50	81.50	G
New Harvest Wind Project, LLC	USA	Energy	81.50	81.50	G
Northern Iowa WindPower II, LLC	USA	Energy	81.50	81.50	G
Otter Creek Wind Farm, LLC	USA	Energy	81.50	81.50	G
Pacific Harbor Capital, Inc.	USA	Other	81.50	81.50	G
Pacific Wind Development, LLC	USA	Holding	81.50	81.50	G

Company	Address	Activity	Percentage of direct or indirect stake		Method (*)
			31.12.2019	31.12.2018	
Patriot Wind Farm, LLC	USA	Energy	81.50	-	G
Patriot Wind Holdings, LLC	USA	Holding	81.50	-	G
Patriot Wind TE Holdco, LLC	USA	Holding	81.50	-	G
Pebble Springs Wind, LLC	USA	Energy	81.50	81.50	G
Phoenix Wind Power, LLC	USA	Energy	81.50	81.50	G
Poseidon Solar, LLC	USA	Energy	40.75	-	E
Poseidon Wind, LLC	USA	Energy	40.75	-	E
PPM Colorado Wind Ventures, Inc.	USA	Holding	81.50	81.50	G
PPM Roaring Brook, LLC	USA	Energy	81.50	81.50	G
PPM Technical Services, Inc.	USA	Services	81.50	81.50	G
PPM Wind Energy, LLC	USA	Holding	81.50	81.50	G
Providence Heights Wind, LLC	USA	Energy	81.50	81.50	G
Rugby Wind, LLC	USA	Energy	81.50	81.50	G
San Luis Solar, LLC	USA	Energy	81.50	81.50	G
ScottishPower Financial Services, Inc.	USA	Other	81.50	81.50	G
ScottishPower Group Holdings Company	USA	Holding	81.50	81.50	G
Shiloh I Wind Project, LLC	USA	Energy	81.50	81.50	G
Solar Star Oregon II, LLC	USA	Energy	81.50	81.50	G
South Chestnut, LLC	USA	Energy	81.50	81.50	G
Start Point Wind Project, LLC	USA	Energy	81.50	81.50	G
Streator Cayuga Ridge Wind Power, LLC	USA	Energy	81.50	81.50	G
Tatanka Ridge Wind. LLC (Formely Buffalo Ridge III, LLC)	USA	Energy	81.50	81.50	G
Trimont Wind I, LLC	USA	Energy	81.50	81.50	G
Tule Wind, LLC	USA	Energy	81.50	81.50	G
Twin Buttes Wind, LLC	USA	Energy	81.50	81.50	G
Twin Buttes Wind II, LLC	USA	Energy	81.50	81.50	G
Vineyard Wind, LLC	USA	Energy	40.75	40.75	E
West Valley Leasing Company, LLC (5)	USA	Gas	81.50	81.50	-
Winnebago Windpower II, LLC	USA	Energy	81.50	81.50	G
Winnebago Windpower, LLC	USA	Energy	81.50	81.50	G
Wyeast Solar, LLC	USA	Energy	81.50	81.50	G
Mexico					
BII NEE Stipa Energía Eólica, S.A. de C.V.	Mexico	Energy	99.99	99.99	G
Corporativo Iberdrola Renovables México, S.A. de C.V.	Mexico	Services	100.00	100.00	G
Energías Renovables Venta III, S.A. de C.V.	Mexico	Energy	100.00	100.00	G
Eólica Dos Arbolitos S.A.P.I. de C.V.	Mexico	Energy	100.00	100.00	G
Iberdrola Soporte a Proyectos Renewables, S.A. DE C.V. (Before, Iberdrola Energía Norte, S.A. de C.V.)	Mexico	Services	100.00	100.00	G
Iberdrola Renovables Centro, S.A. de C.V.	Mexico	Energy	100.00	100.00	G
Iberdrola Renovables del Bajío, S.A. de C.V.	Mexico	Energy	100.00	100.00	G
Iberdrola Renovables México, S.A. de C.V.	Mexico	Holding	100.00	100.00	G
Iberdrola Renovables Noroeste, S.A. de C.V.	Mexico	Energy	100.00	100.00	G
Parque de Generación Renovable, S.A. de C.V.	Mexico	Energy	100.00	100.00	G
Parque Industrial de Energía Renovables, S.A. de C.V.	Mexico	Energy	51.00	51.00	G
Parques Ecológicos de México, S.A. de C.V.	Mexico	Energy	99.99	99.99	G
Pier II Quecholac Felipe Ángeles, S.A. de C.V.	Mexico	Energy	51.00	51.00	G
Servicios de Operación Eoloeléctrica de México, S.A. de C.V.	Mexico	Services	100.00	100.00	G
Brazil					
Arizona 1 Energia Renovável, S.A.	Brazil	Energy	51.04	52.45	G
Bonito 1 Energia Renovável, S.A. (5)	Brazil	Energy	51.04	-	-
Bonito 2 Energia Renovável, S.A. (5)	Brazil	Energy	51.04	-	-
Bonito 3 Energia Renovável, S.A. (formerly PCH Alto do Rio Grande, S.A.)	Brazil	Energy	51.04	51.04	G

Company	Address	Activity	Percentage of direct or indirect stake		Method (*)
			31.12.2019	31.12.2018	
Caetité 1 Energia Renovável, S.A.	Brazil	Energy	51.04	52.45	G
Caetité 2 Energia Renovável, S.A.	Brazil	Energy	51.04	52.45	G
Caetité 3 Energia Renovável, S.A.	Brazil	Energy	51.04	52.45	G
Calango 1 Energia Renovável, S.A.	Brazil	Energy	51.04	52.45	G
Calango 2 Energia Renovável, S.A.	Brazil	Energy	51.04	52.45	G
Calango 3 Energia Renovável, S.A.	Brazil	Energy	51.04	52.45	G
Calango 4 Energia Renovável, S.A.	Brazil	Energy	51.04	52.45	G
Calango 5 Energia Renovável, S.A.	Brazil	Energy	51.04	52.45	G
Calango 6 Energia Renovável, S.A.	Brazil	Energy	51.04	52.45	G
Calango Solar 1 Energia Renovável, S.A. (5)	Brazil	Energy	51.04	-	-
Calango Solar 2 Energia Renovável, S.A. (5)	Brazil	Energy	51.04	-	-
Canoas Energia Renovável, S.A.	Brazil	Energy	51.04	52.45	G
Canoas 2 Energia renovavel, S.A. (formerly, Tacca RJ Participacoes S.A.)	Brazil	Energy	51.04	52.45	G
Canoas 3 Energia renovavel, S.A. (formerly, Sever RJ Participacoes S.A.)	Brazil	Energy	51.04	52.45	G
Canoas 4 Energia renovavel, S.A. (formerly, Titanum RJ Participacoes S.A.)	Brazil	Energy	51.04	52.45	G
Chafariz 1 Energia renovavel, S.A. (formerly, Meridiano 1 Energia renovavel, S.A.)	Brazil	Energy	51.04	52.45	G
Chafariz 2 Energia renovavel, S.A. (formerly, Meridiano 2 Energia renovavel, S.A.)	Brazil	Energy	51.04	52.45	G
Chafariz 3 Energia renovavel, S.A. (formerly, Meridiano 3 Energia renovavel, S.A.)	Brazil	Energy	51.04	52.45	G
Lagoa 4 Energia renovavel , S.A.	Brazil	Energy	51.04	52.45	G
Lagoa 5 Energia renovavel , S.A.	Brazil	Energy	51.04	52.45	G
Chafariz 6 Energia renovavel, S.A. (formerly, Meridiano 4 Energia renovavel, S.A.)	Brazil	Energy	51.04	52.45	G
Chafariz 7 Energia renovavel, S.A. (formerly, Meridiano 5 Energia renovavel, S.A.)	Brazil	Energy	51.04	52.45	G
Elektro Renováveis do Brasil, S.A.	Brazil	Energy	51.04	52.45	G
Energias Renováveis do Brasil, S.A.	Brazil	Energy	51.04	52.45	G
FE Participaçoes, S.A.	Brazil	Energy	51.04	52.45	G
Força Eolica do Brasil 1, S.A.	Brazil	Energy	51.04	52.45	G
Força Eolica do Brasil 2, S.A.	Brazil	Energy	51.04	52.45	G
Força Eolica do Brasil, S.A.	Brazil	Energy	51.04	52.45	G
Lagoa 1 Energia renovavel , S.A.	Brazil	Energy	51.04	52.45	G
Lagoa 2 Energia renovavel , S.A.	Brazil	Energy	51.04	52.45	G
Lagoa 3 Energia renovavel, S.A. (formerly, Meridiano 6 Energia renovavel, S.A.)	Brazil	Energy	51.04	52.45	G
Lagoa 4 Energia renovavel, S.A. (formerly, Soumaya RJ Participacoes S.A.)	Brazil	Energy	51.04	52.45	G
Luzia 1 Energia Renovável, S.A. (5)	Brazil	Energy	51.04	-	-
Luzia 2 Energia Renovável, S.A. (5)	Brazil	Energy	51.04	-	-
Mel 2 Energia Renovável, S.A.	Brazil	Energy	51.04	52.45	G
Oitis 1 Energia Renovável, S.A. (5)	Brazil	Energy	51.04	-	-
Oitis 2 Energia Renovável, S.A. (5)	Brazil	Energy	51.04	-	-
Oitis 3 Energia Renovável, S.A. (5)	Brazil	Energy	51.04	-	-
Oitis 4 Energia Renovável, S.A. (5)	Brazil	Energy	51.04	-	-
Oitis 5 Energia Renovável, S.A. (5)	Brazil	Energy	51.04	-	-
Oitis 6 Energia Renovável, S.A. (5)	Brazil	Energy	51.04	-	-
Oitis 7 Energia Renovável, S.A. (5)	Brazil	Energy	51.04	-	-
Oitis 8 Energia Renovável, S.A. (5)	Brazil	Energy	51.04	-	-
Oitis 9 Energia Renovável, S.A. (5)	Brazil	Energy	51.04	-	-
Oitis 10 Energia Renovável, S.A. (5)	Brazil	Energy	51.04	-	-
Oitis 21 Energia Renovável, S.A. (5)	Brazil	Energy	51.04	-	-
Oitis 22 Energia Renovável, S.A. (5)	Brazil	Energy	51.04	-	-
Oitis 27 Energia Renovável, S.A. (5)	Brazil	Energy	51.04	-	-
Oitis 28 Energia Renovável, S.A. (5)	Brazil	Energy	51.04	-	-
Santana 1, Energia Renovável, S.A.	Brazil	Energy	51.04	52.45	G
Santana 2, Energia Renovável, S.A.	Brazil	Energy	51.04	52.45	G
Ventos de Arapuá 1 Energia renovavel, S.A.	Brazil	Energy	51.04	52.45	G

Company	Address	Activity	Percentage of direct or indirect stake		Method (*)
			31.12.2019	31.12.2018	
Ventos de Arapuá 2 Energia renovavel, S.A.	Brazil	Energy	51.04	52.45	G
Ventos de Arapuá 3 Energia renovavel, S.A.	Brazil	Energy	51.04	52.45	G
ROW					
Baltic Eagle, GmbH.	Germany	Energy	100.00	100.00	G
Iberdrola Renovables Offshore Deutschland, GmbH.	Germany	Energy	100.00	100.00	G
Iberdrola Renovables Deutschland, GmbH.	Germany	Energy	100.00	100.00	G
Iberdrola Renewables Australia PTY, Ltd.	Australia	Energy	100.00	100.00	G
Iberdrola Renewables Bulgaria, EOOD.	Bulgaria	Energy	100.00	100.00	G
Iberdrola Renewables Canadá, Ltd.	Canada	Holding	100.00	100.00	G
Rokas Aeoliki Cyprus, Ltd.	Cyprus	Energy	74.82	74.82	G
Ailes Marine, S.A.S.	France	Energy	70.00	70.00	G
Iberdrola Renovables France, S.A.S.	France	Energy	100.00	100.00	G
C. Rokas Industrial Commercial Company, S.A.	Greece	Holding	99.76	99.76	G
PPC Renewables Rokas, S.A.	Greece	Energy	50.88	50.88	G
Rokas Aeoliki Thraki III, S.A.	Greece	Energy	99.61	99.61	G
Rokas Construction, S.A.	Greece	Energy	99.76	99.76	G
Rokas Hydroelectric, S.A.	Greece	Energy	99.76	99.76	G
Iberdrola Renovables Magyarorszag, KFT.	Hungary	Energy	100.00	100.00	G
Iberdrola Renovables Italia, S.p.A.	Italy	Holding	100.00	100.00	G
Societá Energie Rinnovabili 2, S.p.A. (2)	Italy	Energy	50.00	50.00	E
Eoenergi Energia Eolica, S.A.	Portugal	Energy	100.00	100.00	G
Iberdrola Renewables Portugal, S.A.	Portugal	Holding	100.00	100.00	G
Parque Eólico da Serra do Alvao, S.A.	Portugal	Energy	100.00	100.00	G
Eolica Dobrogea One, S.R.L.	Romania	Energy	100.00	100.00	G
Iberdrola Renewables Romania, S.R.L.	Romania	Holding	100.00	100.00	G
Iberdrola Renewables South Africa (PTY), Ltd.	South Africa	Energy	100.00	100.00	G
Networks Business					
Spain					
Anselmo León Distribución, S.L. (1)	Spain	Energy	100.00	100.00	E
Anselmo León, S.A.U. (1)	Spain	Holding	100.00	100.00	E
Distribuidora de Energía Eléctrica Enrique García Serrano, S.L. (1)	Spain	Energy	100.00	100.00	E
Distribuidora Eléctrica Navasfrías, S.L. (1)	Spain	Energy	100.00	100.00	E
Eléctrica Conquense Distribución, S.A.	Spain	Energy	53.59	53.59	G
Eléctrica Conquense, S.A.	Spain	Holding	53.59	53.59	G
Electro-Distribuidora Castellano-Leonesa, S.A. (1)	Spain	Energy	100.00	100.00	E
Empresa Eléctrica del Cabriel, S.L. (1)	Spain	Energy	100.00	100.00	E
Herederos María Alonso Calzada – Venta de Baños, S.L. (1)	Spain	Energy	100.00	100.00	E
San Cipriano de Rueda Distribución, S.L. (1)	Spain	Energy	100.00	100.00	E
I-DE Redes Eléctricas Inteligentes, S.A.U. (Formely Iberdrola Distribución Eléctrica, S.A.U.)	Spain	Energy	100.00	100.00	G
Iberdrola Infraestructuras y Servicios de Redes, S.A.	Spain	Services	100.00	100.00	G
Iberdrola Redes España, S.A.U.	Spain	Holding	100.00	100.00	G
Sociedad Distribuidora de Electricidad de Elorrio, S.A. (1)	Spain	Energy	97.95	97.95	E
United Kingdom					
Manweb Services, Ltd.	United Kingdom	Energy	100.00	100.00	G
NGET/SPT Upgrades, Ltd.	United Kingdom	Energy	50.00	50.00	E
Scottish Power Energy Networks Holdings, Ltd.	United Kingdom	Holding	100.00	100.00	G

Company	Address	Activity	Percentage of direct or indirect stake		Method (*)
			31.12.2019	31.12.2018	
SP Distribution, Plc.	United Kingdom	Energy	100.00	100.00	G
SP Gas, Ltd.	United Kingdom	Inactive	100.00	100.00	G
SP Manweb, Plc.	United Kingdom	Energy	100.00	100.00	G
SP Network Connections, Ltd.	United Kingdom	General use connections	100.00	100.00	G
SP Power Systems, Ltd.	United Kingdom	Asset Management Services	100.00	100.00	G
SP Manweb, Plc.	United Kingdom	Energy	100.00	100.00	G
United States					
Avangrid, Inc.	USA	Holding	81.50	81.50	G
Avangrid Enterprises, Inc.	USA	Holding	81.50	81.50	G
Avangrid Management Company, LLC	USA	Holding	81.50	81.50	G
Avangrid Service Company	USA	Services	81.50	81.50	G
Avangrid New York TransCo, LLC	USA	Holding	81.50	81.50	G
Avangrid Networks. Inc.	USA	Holding	81.50	81.50	G
Avangrid Solutions, Inc.	USA	Other	81.50	81.50	G
Berkshire Energy Resources	USA	Holding	81.50	81.50	G
Cayuga Energy, Inc.	USA	Holding	81.50	81.50	G
Central Maine Power Company	USA	Energy	81.50	81.50	G
Chester SVC Partnership (3)	USA	Energy	40.75	40.75	G
CMP Group, Inc.	USA	Holding	81.50	81.50	G
CNE Energy Services Group, LLC	USA	Services	81.50	81.50	G
CNE Peaking, LLC	USA	Services	81.50	81.50	G
Connecticut Energy Corporation	USA	Holding	81.50	81.50	G
Connecticut Natural Gas Corporation	USA	Gas	81.50	81.50	G
CTG Resources, Inc.	USA	Holding	81.50	81.50	G
GCE Holding, LLC	USA	Holding	40.75	40.75	-
GenConn Devon, LLC	USA	Generation	40.75	40.75	-
GenConn Energy, LLC	USA	Generation	40.75	40.75	-
GenConn Middletown, LLC	USA	Generation	40.75	40.75	-
Maine Electric Power Company, Inc.	USA	Energy	63.80	63.80	G
Maine Natural Gas Corporation	USA	Gas	81.50	81.50	G
Maine Yankee Atomic Power Company (5)	USA	Other	30.97	30.97	-
MaineCom Services	USA	Telecommunications	81.50	81.50	G
NECEC Transmission, LLC	USA	Holding	81.50	-	G
New York State Electric & Gas Corporation	USA	Electricity and Gas	81.50	81.50	G
NORVARCO	USA	Holding	81.50	81.50	G
Nth Power Technologies Fund I, LP. (5)	USA	Other	21.92	21.92	-
RGS Energy Group, Inc.	USA	Holding	81.50	81.50	G
Rochester Gas and Electric Corporation	USA	Electricity and Gas	81.50	81.50	G
South Glens Falls Energy, LLC (5)	USA	Energy	69.28	69.28	-
TEN Transmission Company	USA	Gas	81.50	81.50	G
The Berkshire Gas Company	USA	Gas	81.50	81.50	G
The Southern Connecticut Gas Company (SCG)	USA	Gas	81.50	81.50	G
The Union Water Power Company	USA	Services	81.50	81.50	G
The United Illuminating Company	USA	Energy	81.50	81.50	G
Thermal Energies, Inc. (5)	USA	Inactive	81.50	81.50	-
Total Peaking Services, LLC	USA	Services	81.50	81.50	G
UIL Distributed Resources	USA	Services	81.50	81.50	G
UIL Group, LLC	USA	Holding	81.50	81.50	G
UIL Holdings Corporation	USA	Holding	81.50	81.50	G
United Capital Investments	USA	Inactive	81.50	81.50	G
United Resources, Inc.	USA	Holding	81.50	81.50	G
WGP Acquisition, LLC (5)	USA	Inactive	81.50	81.50	-
Xcelcom Inc.	USA	Inactive	81.50	81.50	G
Xcel Services, Inc. (5)	USA	Inactive	81.50	81.50	-

Company	Address	Activity	Percentage of direct or indirect stake		Method (*)
			31.12.2019	31.12.2018	
Brazil					
Afluente Geraçao de Energia Elétrica, S.A.	Brazil	Energy	53.33	54.57	G
Companhia de Eletricidade do Estado do Bahia, S.A.	Brazil	Energy	49.33	50.69	G
Companhia Energética de Pernambuco, S.A.	Brazil	Energy	45.76	47.02	G
Companhia Energetica do Rio Grande do Norte, S.A.	Brazil	Energy	46.70	47.98	G
Neoenergia Jalapão Transmissão de Energía, S.A. (formerly, EKTT 1 Serviços de Transmissão de Energía Elétrica SPE, S.A.)	Brazil	Energy	51.04	52.45	G
Neoenergia Santa Luzia Transmissão de Energía, S.A. (formerly, EKTT 2 Serviços de Transmissão de Energía Elétrica SPE, S.A.)	Brazil	Energy	51.04	52.45	G
Neoenergia Guanabara Transmissão de Energía, S.A. (formerly, EKTT 3 Serviços de Transmissão de Energía Elétrica SPE, S.A.)	Brazil	Energy	51.04	-	G
Neoenergia Itabapoana Transmissão de Energía, S.A. (formerly, EKTT 4 Serviços de Transmissão de Energía Elétrica SPE, S.A.)	Brazil	Energy	51.04	-	G
Neoenergia Lagoa dos Patos Transmissão de Energía, S.A. (formerly, EKTT 5 Serviços de Transmissão de Energía Elétrica SPE, S.A.)	Brazil	Energy	51.04	-	G
EKTT 6 Serviços de Transmissão de Energia Elétrica SPE S/A	Brazil	Energy	51.04	-	G
EKTT 7 Serviços de Transmissão de Energia Elétrica SPE S/A	Brazil	Energy	51.04	-	G
EKTT 8 Serviços de Transmissão de Energia Elétrica SPE S/A	Brazil	Energy	51.04	-	G
EKTT 9 Serviços de Transmissão de Energia Elétrica SPE S/A	Brazil	Energy	51.04	-	G
EKTT 10 Serviços de Transmissão de Energia Elétrica SPE S/A	Brazil	Energy	51.04	-	G
Neoenergia Vale do Itajaí Transmissão de Energía, S.A. (formerly, EKTT 11 Serviços de Transmissão de Energía Elétrica SPE, S.A.)	Brazil	Energy	51.04	-	G
Neoenergia Dourados Transmissão de Energía, S.A. (formerly, EKTT 12 Serviços de Transmissão de Energía Elétrica SPE, S.A.)	Brazil	Energy	51.04	52.45	G
Neoenergia Atibaia Transmissão de Energía, S.A. (formerly, EKTT 13 Serviços de Transmissão de Energía Elétrica SPE, S.A.)	Brazil	Energy	51.04	52.45	G
Neoenergia Biguaçu Transmissão de Energía, S.A. (formerly, EKTT 14 Serviços de Transmissão de Energía Elétrica SPE, S.A.)	Brazil	Energy	51.04	52.45	G
Neoenergia Sobral Transmissão de Energía, S.A. (formerly, EKTT 15 Serviços de Transmissão de Energía Elétrica SPE, S.A.)	Brazil	Energy	51.04	52.45	G
Elektro Operaçao e Manutençao, Ltda.	Brazil	Services	51.04	52.45	G
Elektro Redes, S.A.	Brazil	Energy	50.88	52.28	G
Lanmóvil Amara Celular da Bahia Ltd. (Lanmara) (1)	Brazil	Other	65.00	65.00	-
Neoenergia Investimentos, S.A.	Brazil	Holding	51.04	52.45	G
Neoenergia Servicios, Ltd.	Brazil	Services	51.04	52.45	G
Neoenergia, S.A.	Brazil	Holding	51.04	52.45	G
Potiguar Sul Transmissao de Energia, S.A.	Brazil	Energy	51.04	52.45	G
S.E. Narandiba, S.A.	Brazil	Energy	51.04	52.45	G

Company	Address	Activity	Percentage of direct or indirect stake		Method (*)
			31.12.2019	31.12.2018	
Other businesses					
Engineering					
Adicora Servicios de Intermediación de Ingeniería, S.L.U. (Before, Adícora Servicios de Ingeniería, S.L.U.)	Spain	Engineering	100.00	100.00	G
EA Servicios Explotación Nuclear GNIT, S.L.	Spain	Engineering	25.46	-	E
Empresarios Agrupados Internacional, S.A. (2)	Spain	Engineering	25.46	25.46	E
Ghesa Ingeniería y Tecnología, S.A. (2)	Spain	Engineering	42.15	42.15	E
Iberdrola Ingeniería de Explotación, S.A.U.	Spain	Engineering	100.00	100.00	G
Iberdrola Ingenieria y Construccion, S.A.U.	Spain	Engineering	100.00	100.00	G
Ingeniería, Estudios y Construcciones, S.A.	Spain	Engineering	100.00	100.00	G
Iberdrola Construçao e Serviços, Ltd.	Brazil	Engineering	100.00	100.00	G
Iberdrola Energy Proyects Canada Corporation	Canada	Engineering	100.00	100.00	G
Iberdrola Ingenieria y Construcción Costa Rica, S.A.	Costa Rica	Engineering	100.00	100.00	G
Iberdrola Energy Project, Inc.	USA	Engineering	100.00	100.00	G
Enermón S.A. de C.V.	Mexico	Engineering	100.00	100.00	G
Iberdrola Ingeniería y Construcción México, S.A. de C.V.	Mexico	Engineering	100.00	100.00	G
Iberservicios, S.A. de C.V.	Mexico	Engineering	100.00	100.00	G
Iberdrola Engineering and Construction Networks, Ltd.	United Kingdom	Engineering	100.00	100.00	G
Iberdrola Engineering and Construction UK, Ltd.	United Kingdom	Engineering	100.00	100.00	G
Iberdrola Engineering and Construction Ro, SRL.	Romania	Engineering	100.00	100.00	G
Iberdrola Engineering and Construction South Africa	South Africa	Engineering	100.00	100.00	G
Real Property					
Arrendamiento de Viviendas Protegidas Siglo XXI, S.L.	Spain	Real Property	100.00	100.00	G
Camarate Golf, S.A. (2)	Spain	Real Property	26.00	26.00	E
Iberdrola Inmobiliaria Patrimonio, S.A.U.	Spain	Real Property	100.00	100.00	G
Iberdrola Inmobiliaria, S.A.	Spain	Real Property	100.00	100.00	G
Iberdrola Inmobiliaria Real State Investment, EOOD	Bulgaria	Real Property	100.00	100.00	G
Desarrollos Inmobiliarias Laguna del Mar, S.A. de C.V.	Mexico	Real Property	100.00	100.00	G
Promociones La Malinche, S.A. de C.V.	Mexico	Real Property	50.00	50.00	E
Innovation					
Algaenergy, S.A. (5)	Spain	Services	14.84	14.84	-
Arborea Intellbird, S.L. (2) (4)	Spain	Other	18.89	18.89	E
Atten2 Advanced Monitoring Technologies, S.L. (2)	Spain	Other	23.27	23.27	E
Balantia Consultores, S.L. (2)	Spain	Services	20.64	-	E
GDES Tecnology for services, S.L. (2)	Spain	Other	40.00	40.00	E
Iberdrola Servicios de Innovación, S.L.	Spain	Other	100.00	100.00	G
Inversiones Financieras Perseo, S.L.	Spain	Holding	100.00	100.00	G
Iberdrola QSTP, LLC	Qatar	Services	100.00	100.00	G
Other businesses					
Subgrupo Corporación IBV Participaciones Empresariales	Spain	Holding	50.00	50.00	E
Siemens Gamesa Renewable Energy, S.A. (4)	Spain	Holding	8.07	8.07	E
Iberdrola Inversiones 2010, S.A.U.	Spain	Holding	100.00	100.00	G
Iberdrola Participaciones, S.A.U.	Spain	Holding	100.00	100.00	G

Company	Address	Activity	Percentage of direct or indirect stake		Method (*)
			31.12.2019	31.12.2018	
Corporation					
CarteraPark, S.A.U. (5)	Spain	Inactive	100.00	100.00	-
Iberdrola Corporación, S.A. (5)	Spain	Inactive	100.00	100.00	-
Iberdrola España, S.A.U.	Spain	Holding	100.00	100.00	G
Iberdrola Energía, S.A.U.	Spain	Holding	100.00	100.00	G
Iberdrola Financiación, S.A.U.	Spain	Financial	100.00	100.00	G
Iberdrola Finanzas, S.A.U.	Spain	Financial	100.00	100.00	G
Iberdrola International, B.V.	Holland	Financial	100.00	100.00	G
Iberdrola Finance Ireland, DAC	Ireland	Financial	100.00	100.00	G
Iberdrola Re, S.A.	Luxembourg	Insurance	100.00	100.00	G
Iberdrola Energía Internacional, S.A.U. (formerly, Iberdrola Energía Internacional, S.L.)	Spain	Holding	100.00	100.00	G
Scottish Power UK, Plc	United Kingdom	Holding	100.00	100.00	G
Scottish Power, Ltd.	United Kingdom	Holding	100.00	100.00	G
ScottishPower Investments, Ltd.	United Kingdom	Holding	100.00	100.00	G
ScottishPower Overseas Holdings, Ltd.	United Kingdom	Holding	100.00	100.00	G
SPW Investments Ltd.	United Kingdom	Holding	100.00	100.00	G

JOINT OPERATIONS OF THE IBERDROLA GROUP STRUCTURED THROUGH AN INDEPENDENT VEHICLE FOR THE YEARS 2019 AND 2018

			Percentage of direct or indirect stake	
Company	**Address**	**Activity**	**31.12.2019**	**31.12.2018**
LiberalisedLiberalised Business				
Asociación Nuclear Ascó – Vandellós, A.I.E.	Spain	Energy	14.59	14.59
Centrales Nucleares Almaraz – Trillo, A.I.E.	Spain	Energy	51.44	51.44
Renewables Business				
Infraestructuras de Medinaceli, S.L.	Spain	Energy	39.69	39.69
Sistema Eléctrico de Conexión Hueneja, S.L.	Spain	Energy	47.36	47.36
Other businesses				
Torre Iberdrola, A.I.E.	Spain	Real Property	68.10	68.10

Additionally, the IBERDROLA Group takes part in joint operations through joint ownership and other joint agreements described in Note 45.

PUBLIC

GROUP COMPANIES AT 31 DECEMBER 2018 WHICH HAVE LEFT THE PERIMETER IN 2019 AS A RESULT OF DISPOSAL, MERGER OR LIQUIDATION

Company	Address	Activity	Percentage of direct or indirect stake	
			31.12.2019	31.12.2018
Liberalised Business				
Sever RJ Participacoes S.A.	Brazil	Energy	-	51.04
Renewable Business				
Impulsora de Generación Fotovoltaica de México, S.A. de C.V.	Mexico	Energy	-	100.00
Infraestructuras de Generación Eléctrica, S.A. de C.V.	Mexico	Energy	-	100.00
Parque energías Renovables de México, S.A. de C.V.	Mexico	Energy	-	100.00
Pier IV, S.A. de C.V.	Mexico	Energy	-	51.00
Proyecto Alternativa Energética de México, S.A. de C.V.	Mexico	Energy	-	100.00
Other businesses				
Empresarios Agrupados, A.I.E.	Spain	Engineering	-	25.46
Iberdrola Engineering and Construction Poland, SP. Z.O.O W LIKWIDACJI (formerly, Iberdrola Engineering and Construction Poland, SP. Z.O.O.)	Poland	Engineering	-	100.00
Investigación y Desarrollo de Equipos Avanzados, S.A.U.	Spain	Other	-	100.00

(1) Companies that are controlled by the Group but due to their immateriality have been integrated using the equity method. At 31 December 2019, the total aggregate assets value and the profit for the year corresponding to these companies amounts to Euros 27,307 thousand and Euros 4,133 thousand, respectively. At 31 December 2018, the total aggregate assets value and the profit for the year corresponding to these companies amounts to Euros 40,537 thousand and Euros 5,301 thousand, respectively.

(2) Companies considered joint ventures, accounted for the equity method, where shareholders' agreements just grant the right to the net assets of the business.

(3) Companies, where despite holding a percentage of voting rights less than 51%, the Group holds the control through shareholders' agreements.

(4) Companies where the Group has significant influence despite holding a percentage of voting rights less than 20%, since it is represented these companies' Board of Directors.

(5) Companies where the Group holds the control, joint control or significant influence, but given its limited relevance, they have not been included in the consolidation scope.

APPENDIX II

INDUSTRY REGULATION AND FUNCTIONING OF THE ELECTRICITY AND GAS SYSTEM

Both IBERDROLA and some of the fully or proportionately consolidated subsidiaries engage in electricity business activities in Spain and abroad (see the Appendix to these Consolidated annual accounts) that are heavily affected by the respective regulatory frameworks. The fundamental regulation affecting the IBERDROLA Group, as well as the most significant developments of 2019, are outlined below.

1. European Union

The aim of the European legislation, applicable to all States that are in the EU where IBERDROLA Group operates, is the implementations of the single gas and electricity markets in order to facilitate the exchange of energy flows and allow any consumer in the European Union to deal freely with any supplier in the EU. In this respect, there are two types of legislation: the directives, which set out common criteria to be observed in internal markets and which the member states should transpose into national legislation; and the Regulations, which establish norms for the supranational issues, especially those related to the transit of gas and electricity, and are applicable directly.

Another set of regulations that indirectly affects the energy sector are those arising from the energy and climate policy. In 2007 the triple objective of reducing emissions of greenhouse gases (GHGs) by 20% was approved, setting a quota of renewable energy of 20% and a target for energy efficiency (reducing consumption by this percentage based on the trend), all by 2020. In 2014, the European Council supported going even further towards decarbonisation by setting an emission reduction target of 40% by 2030. During negotiations for the reform of the Renewable Energy and Energy Efficiency Directives, more ambitious targets were also agreed upon than those initially expected, with 32% and 32.5% being set respectively for 2030.

The Paris Agreement, adopted under the United Nations Framework Convention on Climate Change and signed by the European Union, came into force on 4 November 2016, having been signed by 195 countries. In order to implement this, the European Union is addressing reforms in its energy and climate policy with a view towards 2050.

As early as 2015, the European Commission (EC) implemented a strategic framework to achieve an Energy Union in order to integrate climate action established by the 2030 targets into a reform of the electricity market, while at the same time preserving a safe and competitively priced electricity supply for the industry and affordable prices for consumers.

This was mainly achieved with the submission of several proposals (beginning in 2015), all of which have already been approved: the reform of the European Union Emissions Trading System (EU ETS) to step up emissions reductions from 2021 on (approved in 2018), the Clean Energy legislative package for all Europeans (published in full in 2019) and the Clean Mobility package (approved in 2019). Finally, in December 2019, days after the inauguration of the new College of Commissioners, the Communication on the European Green Deal was published, aimed at achieving neutral emissions in the EU by 2050, strengthening the objectives previously set for 2030 and committing to transition plans in all sectors in order to improve competitiveness.

On 30 November 2016 the EC published the package Clean Energy for all Europeans, setting the framework to complete the implementation of the energy internal market and to achieve the environmental 2030 targets. At 31 December 2019, the DOUE has published all the rules and it is expected that the practical implementation in the market will take place before the end of 2020, with the transposition of the Directives in the Member States. The following are to be highlighted:

- Directive 2018/844 on the Buildings' Energy Efficiency: The directive requires member states to establish long-term renovation strategies for buildings focusing investment on the renovation of buildings that are highly energy-efficient and decarbonised before 2050. Moreover, it establishes minimum requirements for implementing recharge points for electric vehicles in buildings with more than 10 parking spaces.

- Directive (EU) 2018/2001 on Renewable Energy: It sets a general European renewable target of 32% by 2030, as well as a target of 14% in transport (per country) and an annual increase of 1.3% in heating and cooling. It establishes stable (non-retroactive) support schemes for renewables over a period of 5 years. It allows individual and collective self-consumption, ensuring contribution to the costs of using the network. In general, it prohibits charges for self-consumed energy, but allows them for larger installations (>30kW) and puts the sustainability of the system first.

- Directive (EU) 2018/2002/EU on Energy Efficiency: It sets a European energy saving target of 32.5% for 2030 (above the trend horizon), setting annual savings obligations per country for the 2021-2030 period equivalent to 0.8% of the average energy consumption at the end of the 2016-2018 period. It encourages the electrification of heating and cooling systems and transport, and expressly states that Member States may use contributions to the National Efficiency Funds as an alternative to the obligation schemes.

- Regulation (EU) 2018/1999 on Governance of the Energy Union and Climate Action: It sets the rules and timetable for the preparation and reporting to the EC of the Member States' National Plans on Energy Union and Climate Action, in accordance with the 2030 European targets, which should define the national strategy to ensure the achievement of the objectives and the security of supply. Each Member State shall draw up and communicate its long-term strategies to the Commission (a perspective of at least 30 years). Mechanisms for monitoring compliance with the 2030 targets will be established, which allows the EC to impose measures when collective targets are at risk.

- Directive 2019/944/EU and Regulation 2019/943/EU on the internal market for electricity: The following elements have been highlighted:

    - Capacity mechanisms: The emission limit of 550 g CO_2/kWh for new plants was agreed upon. For existing plants, the limit of 550 g CO_2/kWh and 350 kg CO_2 on average per year shall apply from 1 July 2025. At July 2025, no high-emission power plant may receive State aid in the form of a capacity mechanism (except those who have committed to existing capacity contracts before 31 December 2019).

    - Cross-border trade in electricity: 70% of the interconnection capacity for electricity trade should be made available. At January 2026, carriers will be able to use up to 30% of the interconnection capacity for safety margins, loop flows and internal flows.

    - Energy poverty and regulated prices: Member States may temporarily regulate prices to protect vulnerable households, but social protection systems should be given preference as a means of addressing energy poverty. Member States that maintain regulated prices for domestic consumers may continue to do so, but they must notify the European Commission

in advance and justify the need for their implementation. States should also submit market assessment reports between 2022 and 2025. The Commission will carry out its own evaluation of the prices regulated during 2025 and may propose that these prices be eliminated definitively.

In November 2017, the EC published its Clean Mobility package, which outlines measures to reduce emissions from the transport sector during the 2020-2030 period and to adapt the European industry to compliance with the Paris Agreement without losing a share in the global market. The most significant regulations are:

- Regulation (EU) 2019/631 on CO emission standards for new light vehicles: cars and vans registered in 2025 must emit 15% less than those sold in 2021 (revision in 2023). For 2030 the emission reduction goal compared to 2021 is 37.5% for new vehicles and 31% for new vans. Annual emissions targets shall be set by each manufacturer, with fines imposed if these targets are exceeded and incentives given to those who exceed a percentage of zero- and low-emission vehicle sales (<50gCO2/km, mainly electric, fuel cell and plug-in hybrids).

- Regulation (EU) 2019/1242 on CO_2emission standards for new heavy-duty vehicles: buses and lorries registered in 2025 must emit 15% less than in 2019. For 2030, the reduction target will be 30% compared to 2019 (revision in 2022). Annual emission limits are set by each manufacturer, with fines for manufacturers who exceed them and incentives for those who exceed a percentage of low-emission (those with less than 50% of each category's emissions in 2019) and zero-emission (without an internal combustion engine or that emits <1gCO2/km) heavy-duty vehicle sales.

- Directive (EU) 2019/1161 on Clean Transport Vehicles for administrations: promotes the acquisition and rental of clean vehicles for public administration, setting minimum targets per country for the 2021-2025 and 2026-2030 periods. For Spain, it will be 36.3% of light vehicles, 10% of trucks and 45% of buses (half of the buses with zero emissions) in the first period.

Within days of its inauguration, the new European Commission, chaired since December 2019 by the German Ursula von der Leyen, published *Communication COM (2019) 640* on the European Green Deal. It consists of a package of measures for the next 5 years of office that will transform the European Union into a competitive and efficient economy through the use of resources as well as net zero emissions by 2050, thereby promoting a fair and inclusive transition process. The Plan is based on 10 general pillars to promote decarbonisation, financing, and sustainable European energy consumption, ensuring an effective CO_2 price across the economy.

The legislative development will take place between 2020 and 2021, starting in March 2020 with the proposal for a European Climate Law, which will secure the goal of carbon neutrality by 2050. Subsequently, in summer 2020, an Impact Analysis will be presented on the 2030 target increase for emissions reductions by 50% or 55% compared to 1990 (currently 40%). This will require a review of all existing regulations (Renewable and Energy Efficiency Directives, EU ETS Reform, the Air Quality and Mobility Directive, the Energy Taxation Directive, European Infrastructure Standards, State Aid Guidelines, etc.), as well as the development of new legislation.

2. Industry regulation in Spain

The National Commission for Market and Competition (CNMC) is a public body attached to the Ministry of Energy, Tourism and Digital Agenda and is subject to parliamentary scrutiny. This body acts as a market regulator and supervisor and under Royal Decree-Law 1/2019 of 11 January, it also has the power to establish the methodology of remuneration, tolls and conditions of access to the transport and electricity and gas distribution networks at the next regulatory period (2020).

- **Industry regulation and functioning of the electric system in Spain**

The current electricity sector regulation is based on Law 24/2013, of 26 December, of the Electricity Sector (LSE) and its principles are summarised in:

1. **Activity separation**

   It establishes the legal and accounting separation of regulated activities (economic and technical management of the system, transmission and distribution) and liberalised activities (generation, wholesale and retail or other activities unrelated to electricity or activities abroad). However, both types of activities may be carried out in a group of companies, provided they are carried out by different companies.

2. **Power generation activity**

   Generation activity is carried out in free market competition, subject to a schedule of approvals, with its remuneration established in the market:

- The daily hour price for energy is established in the wholesale market by marginalist criteria.

- Additional remuneration for capacity payments, regulated by ITC Order 3127/2011: The investment in new capacity (20 years) or in air quality improvement (10 years) has been paid back. The availability was also paid back during the first half of 2018, although the latter incentive was abolished in 2019.

<u>Renewable generation</u>

Royal Decree 413/2014 on electricity generation by means of renewable, cogeneration and waste facilities establishes the remuneration scheme for existing and new facilities. The remuneration will be on the basis of six-year periods and some of them may be revised every three years. For facilities before July 2013, the remuneration consists of the sum of:

- Investment remuneration (EUR/MW) to cover, where applicable, the investment costs that cannot be recovered from the sale of electricity in market, based on reasonably profitability (that is, 7.398% before taxes), to be reviewed every six years.

- Operation remuneration (EUR/MWh) to cover the difference between the operating costs and income obtained in the electricity market. Depends on fuel prices and may be reviewed at least once a year.

On the other hand, the Order IET/1045/2014 established a classification of standard installations in terms of the technology, installed capacity or any another characteristic already in place for the application of this remunerative scheme. These have been revised by Order ETU/130/2017 for the period 2017-2019.

The remuneration for new facilities will be set by a competitive tendering process.

In 2019, the first wind energy auction in the Canary Islands was launched for projects co-financed by the European Regional Development Fund with 184 MW awarded, with the market price plus investment aid being received.

3. Agents that guarantee the proper functioning of the market

(6) System Operator (SO): Red Eléctrica de España, S.A. carries on the transmission management and system operation activities. The SO is responsible for managing adjustment markets which ensure a continuous balance between demand and power generation.

(7) Market Operator (MO): Iberian Market Operator (OMI) is responsible for the operation of MIBEL manages Portuguese and Spanish daily, intra-day and forward markets in Spain and Portugal.

4. Transmission and Distribution

The Electric Industry Law [LSE] establishes that distribution and transmission are regulated activities that are classified as low-risk, whose remuneration is determined by six-year regulatory periods.

- The investment with fees corresponding to the State's ten-year obligations with a differential suitable for low-risk activity (200 basis points) has been remunerated.

- The collection of the remuneration generated by new facilities starts in the year n+2.

Orders IET/2659/2015 and IET/2660/2015 determine the type of facilities and unit values to consider when calculating the remuneration between 2016 and 2019.

Remuneration to transmission and distribution for 2016 was published on Order IET/980/2016. However, in September 2017, a case was opened against this Order, declaring it detrimental to the public interest, which has not yet been resolved due to the treatment of amortised assets that are still in use. In turn, the parameters used in the calculation of the 2016 remuneration have been used to ensure that the final amount recognised takes into account the valuation of assets built by third parties, which are subsequently transferred to distribution companies.

Therefore, the final remuneration for the years 2016 to 2019 has not yet been published and an amount equivalent to that of 2016 is being provisionally settled, according to Orders ETU/1976/2016, ETU/1282/2017 and TEC/1258/2019, which maintain the published values for 2016 for distribution remuneration (EUR 5,175 million for the sector and Euros 1,655.5 million for IBERDROLA) and for transport (EUR 1,709 million for the sector).

5. Access tolls

Access tolls are defined as the consideration consumers will pay for use of the networks and other unrelated supply costs included in the invoice, designated as charges. Access tariffs are uniform across the country and are collected by the distributors, which act as the collector agents of the electric system.

Order TEC/1366/2018, of 20 December, establishes the electric power access tolls for 2019, including charges, with values similar to those applied in 2018. This order also:

- Provisionally maintains the transmission and distribution remuneration, until the orders with definitive values for 2019 are published.

- Establishes the use of accumulated surplus funds for the amount that is strictly necessary to balance income and costs. With regard to General State Budget revenues, it includes Euros 750 million for CO_2 auctions, although the Royal Decree-Law on Mining announced credit increases of up to Euros 1,000 million for this concept on the same day.

- It consolidates the repeal of availability payments, while maintaining the current capacity prices paid by customers.

- It establishes the provisional remuneration of the SO and MO,

In turn, Royal Decree-Law 14/2010 of 23 December and Royal Decree 1544/2011 of 31 October 2011 extended the application of access tolls to electricity producers by applying a provisional toll of Euros 0.5 per MWh to the grid.

6. Supply activity

From 1 July 2009 all consumers may freely contract their supply of electricity with a supplier of their choice. The government, however, maintains a Voluntary Price for the Small Consumer (VPSC), a regulated tariff for consumers that have a contracted power rating of less than 10 kW, and for those that do not meet the requirements to sign up for it but who temporarily do not have a valid contract with a free market operator.

Royal Decree 216/2014 establishes the legal regimen for contracting the VPSC and methodology for calculating it, such as sum of energy cost, access tolls and charges, and commercial margin. In addition, as established by Law 3/2014, it provides the option for consumers to contracting an electricity price fixed for a year with the reference trader.

Royal Decree 469/2016 amended the Voluntary Price for the Small Consumer (PVPC) commercial margin by laying out the method for calculating the costs of the three most efficient reference retailers (COR) (excluding the face-to-face channel), plus remuneration for the year of activity (1.05% of the energy price).

Order ETU/1948/2016 set the specific values for the period from April 2014 to 2018, which have been extended for the 2019-2021 period by Order TEC/1366/2018 on access tolls for 2019.

On the other hand, Royal Decree-Law 15/2018 on urgent measures approved a series of measures that affect marketing:

- The prohibition of door-to-door sales of electricity and gas at the customer's home, unless a prior appointment has been requested.
- The COR's must include a calculation of the application of time discrimination rates in the invoice.
- Enables fraudulent retailers to be banned.
- Enables power procurement in multiples of 0.1 kW for supplies below 15 kW.
- Supplies of less than 15 kW are exempted from reactive billing.

7. Social tariff

The Social tariff offers a discount on the regulated rate for certain vulnerable groups and is financed by the parent companies of all Groups with marketing activity according to the distribution calculation method and the settlement procedure outlined in the current regulations. IBERDROLA is responsible for financing 34.62% in 2019.

In 2016, the Royal Decree-law 7/2016, which regulates the mechanism for financing the cost of Social tariff and other measures to protect vulnerable electricity consumers, was published. It was subsequently developed by Royal Decree 897/2017, by Order ETU/943/2017, amended by Royal Decree-Law 15/2018, including urgent measures for energy transition and protections measures for consumers.

Three categories of vulnerable consumers were defined based on criteria entailing income, number of minors in the household and other conditions, and a VPSC discount between 25% and 100% is applied to their bill up to an annual consumption limit.

This regulation also reviews the processes for suspending the supply in the event of non-payment and adds an additional level of protection for households who benefit from the social tariff with minors under 16 years of age or with members who have a disability or are dependant, in which case the supply is considered essential, ruling out a cut in supply in the event of non-payment.

8. Electric mobility

The Royal Decree-law 15/2018 eliminates the figure of the load manager as another agent in the electrical system, which was introduced by Royal Decree-Law 6/2010. In this way, any consumer can provide recharging services, free or for payment on their own account or via third parties.

On the other hand, it enables distributors to develop recharging points when there is no private interest. Later on, if beneficial economic conditions come about, the installations will be transferred to other owners, with adequate compensation, with the process pending regulatory development.

9. Self-consumption

Royal Decree-Law 15/2018 introduces modifications to the LSE in relation to self-consumption. Thus, it eliminates the requirement to install a meter for generation and the limitation of installing less generation power than consumption power. It also eliminates charges and tolls for renewable self-consumed energy, cogeneration or waste and allows for shared self-consumption with the ability to fix quantities through use of the grid. Finally, it allows for surpluses to be remunerated as well as production remainders, and simplified compensation between deficits and surpluses of associated power installations equal to or less than 100 kW.

The above is outlined in Royal Decree 244/2019, which removes all limits to representation (to dominant operators) for any renewable self-consumption facility, develops the definition of nearby installations for the purposes of self-consumption and collective self-consumption, it enables surpluses to be remunerated and allows production and consumption facilities to have different owners.

10. Interruptibility and help for electro-intensive consumers

The interruptibility service for a consumer consists of reducing their power, considering the needs that may arise in the operation of the electrical system, according to technical and economic criteria.

The allocation of the interruptibility service will be carried out through an auction procedure managed by the system operator, as established in the Order IET/2013/2013 and resolution of 12 August 2016. In 2019, two six-monthly interruptibility auctions were held (Resolution of 6 November 2018 and Resolution of 24 May 2019).

11. Cogeneration

Royal Decree 413/2014 establishes the specific pay regime for cogeneration facilities.

For its part, Royal Decree-Law 20/2018 introduced an extension of its economic regime; high-efficiency cogeneration facilities that use renewable fuels or natural gas and that exceed their regulatory life after 1 January 2018 may receive operation remuneration for two years from the entry into force of this Royal Decree-Law, unless a new regulatory regime is developed.

Finally, Order TEC/1303/2018 granted some purine plants the right to an efficiency supplement during the 2007-2010 period, amounting to Euros 11 million, which was taken from the historical surplus. Euros 1 million corresponds to IBERDROLA plants.

12. Economic sustainability of the sector

The difference between collection of tariffs and access tolls and real costs related to the same, produced a revenue shortfall between 2000 and 2013, which was financed by the electric companies. Recovery of this shortfall is deferred through annuities incorporated in the annual tariff.

In order to eliminate the sector's structural deficit, Law 15/2012 established new taxes to finance the electricity sector and Royal Decree-Law 9/2013 amended the methodology for calculating the remuneration of transport, distribution, special arrangements and capacity payments.

In order to consolidate the tariff balance, the LSE of 2014 incorporates the principle of economic and financial sustainability of the electricity system, meaning that any regulatory measure which causes an increase in costs or a reduction in income for the electricity system should incorporate an equivalent reduction of other cost items or an equivalent increase in income that ensures the equilibrium of the system. The possibility of a new accumulation of deficits is ruled out.

The LSE limits the review of charges by stating that while the electrical system cost items reflect payments that correspond to outstanding debts from previous years, the charges cannot be revised downwards. It also sets out the obligation to automatically review tolls and charges if the annual or cumulative adjustment exceeds 2% or 5% respectively of the estimated income for the financial year.

The part of the imbalance that, without exceeding such limits, is not compensated by increases in tolls and fees will be financed by the parties to the settlement system in proportion to the remuneration that corresponds to them for their activities. The amounts thus contributed will be returned in the corresponding settlements during the following five years together with an interest rate equivalent to the market rate.

The excess income that could arise will be used to compensate imbalances from previous years and, additionally, by virtue of the Central State Budgets 2018 and 2019, to compensate companies for the litigation resulting from the electricity regulation. For its part, Royal Decree Law 15/2018 enables the Ministry to also use the accumulated surplus to cover possible deficits from 2018 and 2019 and increases the budgetary credit to transfer revenue from CO_2 auctions.

The Royal Decree 680/2014 regulates the procedure of budgeting, recognition, settlement and control of the surcharges on the production of electric power in the isolated electricity systems of the non-peninsular territories charged to the Central State Budgets, thus developing the provisions of the LSE, which established that from 1 January 2014, 50% of these surcharges would be financed against the Central State Budgets.

Final settlements for 2014, 2015, 2016, 2017 and 2018 were closed with an excess of Euros 550, 469, 421, 150 and 96 million, respectively. Once the return of the social tariff (2014, 2015 and 2016), the purine efficiency supplement and the transfers to the Institute for Diversification and Energy Savings (idea) are subtracted in order to finance investment projects in renewables, the accumulated surplus of Euros 1,039 million will be deposited in a CNMC account.

13. Energy efficiency

The European Union has set itself the target of achieving a 20% improvement in energy efficiency by 2020 and at least of 32.5% in 2030.

Law 18/2014 contains a set of mechanisms designed to achieve the energy saving targets established in the Energy Efficiency Directive. To this end, it created the National Energy Efficiency Fund, managed by the Institute for the Diversification and Saving of Energy (Instituto para la Diversificación y Ahorro de la Energía) and financed by energy traders (gas and electricity, wholesalers of oil products and of liquid petroleum gases), according to their sales.

Order TEC/332/2019, of 20 March, has established contributions to the Fund for 2019.

- **Industry regulation and functioning of the gas system in Spain**

The natural gas sector has undergone significant changes in its structure and operation in the last ten years, from a monopoly to a fully open market, driven mainly by the deregulation measures about natural gas market in European directives (2009/73/EC Directive is currently in force) aimed at opening up markets and creating a single European gas market.

1. **Activity separation**

The Hydrocarbon Industry Law of 1998 laid the foundations for the new gas system, particularly with regard to the separation of activities (regulated and liberalised), the introduction of third-party access to the regulated network, the abolition of the former concessions for piped gas supply and their conversion into regulated administrative permits.

Law 34/1998 provided for the legal separation of liberalised and regulated activities and the segregation for accounting purposes of the various regulated activities. Law 12/2007, the functional separation between network activities and liberalised activities and between network activities and technical system management was implemented. In 2012, the Royal Decree-law 13/2012 was approved, establishing further measures of separation in management of the transmission network.

The gas system has been structured around two types of activities: regulated activities (regasification, basic storage, transmission and distribution) and liberalised activities (trading and supply).

2. **Liberalisation of the gas sector**

The liberalisation of the gas sector was initiated following the Royal Decree 6/2000, establishing firstly the role of the System's Technical Manager, and Royal Decree 949/2001 the specific terms and conditions for third-party network access and, a remuneration system for regulated activities and a cost-based system of tariffs, tolls and fees structured according to pressure levels and consumption bands. The remuneration is updated annually by ministerial orders and resolutions.

The economic system also established a settlement procedure that would allow for redistribution of revenues collected between the various regulated activities.

Other issues related to the regulation of the transmission, distribution and supply businesses, the administrative authorisation procedures for natural gas facilities and the regulation of certain aspects of the supply business are dealt with in the Royal Decree 1434/2002.

The liberalisation process in Spain was completed by Law 12/2007, which transposed Directive 2003/55/EC, eliminating tariff supply and establishing a functional separation between activities.

In the electricity system, the market deregulation process was completed on 1 July 2008 with the elimination of regulated supply for customers and the creation of last-resort supply. Currently, low-pressure customers with annual consumption of less than 50,000 kWh who do not choose another supply option shall be supplied by a last-resort supplier at a price calculated automatically. The price is automatically calculated in an additional way.

3. Technical operation of the system

Order ITC 3126/2005 develops the rules for the gas system technical management rules. Inter alia, these regulations established that each operator is individually responsible for maintaining its liquidity and enacts specific protocols for the conduct of the technical system manager in exceptional operating circumstances.

Despite the sector's progressive deregulation, prevailing regulation upholds the state's obligation to ensure the safety and continuity of supply. the Royal Decree 1766/2007 stipulates that direct market suppliers and consumers must maintain minimum security stocks equivalent to 20 days' consumption.

Additionally, by virtue of the Winter Gas Plan in force published in 2017, retailers are required to maintain an "internal reserve" (November-March) as required in LNG, equal to 3.5 days of the contracted input capacity to the transmission and distribution network.

The state also maintains responsibility for obligatory planning work for certain infrastructures (for example, gas pipelines forming the core transmission network, the secondary transmission network, determining the total liquid natural gas regasification capacity necessary to supply the system and core natural gas storage facilities). For all other infrastructures, the state's planning work is indicative only. The Royal Decree-law 13/2012 enacted a series of measures to halt the construction of new infrastructure in a context of falling demand for gas.

Royal Decree 335/2018 amended several royal decrees concerning the administrative processing of certain facilities, the procedure to be followed in the case of a ban on a retailer and the fixing of tolls and fees. The latter has been pending implementation as powers are being transferred to the CNMC.

4. Remuneration

Law 18/2014, on measures for growth, competitiveness and efficiency, previously the Royal Decree-law 8/2014 established the principle of economic and financial sustainability for the gas system. This principle is reinforced with the obligation to automatically review tolls and fees if the annual imbalance between revenues and costs of the gas system exceeds the following limits 10% of the year's receivables or 15% of the sum of the annual imbalance plus annual payments recognised and pending amortisation.

The part of the imbalance that, without exceeding the above limits, is not compensated by the increase in tolls and fees, will be financed by the parties to the settlement system in proportion to their remuneration. The amounts contributed will be returned in the following five years and will earn an interest rate equivalent to the market rate.

The deficit accumulated as at 31 December 2014 will be financed by the owners of the installations during a period of 15 years.

On the other hand, the remuneration of the regulated activities will be based on the costs necessary for an efficient and well-managed company to carry out the relevant activity, following the principle of performing the relevant activity at the lowest cost for the gas system. In addition, the remuneration of regulated activities will be on the basis of six-year regulatory periods. The first regulatory period ends on 31 December 2020. Every three years' adjustments may be made to the remuneration parameters within the gas system in the event that there are significant changes in revenues or costs.

The remuneration system for distribution is based on the system of the previous year, adjusted to market growth. The remuneration system for transmission, storage facilities and regasification is based on the net value of the assets, plus a complement associated to demand performance. Also, operating and maintenance costs are taken into consideration.

5. Organised gas market

The Hydrocarbon Industry Law has been modified by Law 8/2015, of 21 May. The main aspects introduced by Law 8/2015 regarding the gas system are:

- The creation of an organised wholesale gas market.
- The designation of the operator of the regulated gas market.
- Measures relating to minimum security stock levels
- CORES (*Corporación de Reservas Estratégicas de Productos Petrolíferos*) is enabled to constitute, maintain or manage natural gas and liquefied natural gas strategic stocks.
- Inspections may be carried out by any natural gas installation company (not only distribution companies).

Finally, the Royal Decree 984/2015, of 30 October, regulated the organised wholesale gas market and the third party access to the facilities of the natural gas system. Sets the bases for the development of an organised gas market, including the negotiation of short-term standardised products by an electronic platform managed by the Market Operator (MIBGAS - OMEL), together with a centralised guarantee management system. In addition, this market will centralise the hiring capacity through a technical system manager (ENAGAS), with standardised products and auction procedures.

At the end of 2017, the Resolution was published establishing the conditions for the provision of the mandatory market maker service by the controlling operators of the natural gas market (Endesa and GNF). They are obligated to maintain a minimum volume of purchase and sale offers up to a maximum annual volume of 5.68% of its volume from supplying gas to Spain.

The separation of prices between the purchase and sales offers must be equal to or less than Euros 0.50 per MWh. This measure is complementary to the regular call for voluntary market makers.

3. Industry regulation in the UK

The principal laws that govern Scottish Power Ltd.'s (hereinafter, SCOTTISH POWER) activities are the Electricity Act 1989 (Electricity Act) and the Gas Act 1986 (Gas Act), as substantially amended and supplemented by numerous subsequent enactments, including the Gas Act 1995, the Utilities Act 2000, the Energy Act 2004, the Energy Act 2008, the Energy Act 2010, the Energy Act 2011, the Energy Act 2013, the Energy Act 2016, the Domestic Gas and Electricity (Tariff Cap) Act 2018 and various EU Directives (subject to any changes arising from the UK's forthcoming exit from the EU).

1. The Regulatory Authorities

The principal regulatory authority for utilities is the Gas and Electricity Markets Authority (*GEMA*), comprising a chairman and other members appointed by the Secretary of State for Business, Energy and Industrial Strategy (BEIS). GEMA is backed by the *Office of Gas and Electricity Markets* (OFGEM). The main regulatory instrument used by GEMA is the licensing regime, which encompasses the different activities of the energy industry under one license, to which standard conditions are applied as well as a series of statutory obligations, known as relevant requirements, which are taxed by GEMA as if they were conditions of the license.

GEMA's principal objective is to promote the interests of consumers and promote effective competition. Under the Energy Act 2010, the interests of such consumers must be taken as a whole, including their interests in the reduction of greenhouse gases and in the security of the supply of gas and electricity to them.

In furthering this objective GEMA must ensure that all reasonable demands for electricity and gas are met, ensure that licence holders are able to finance the activities they are obliged to undertake, and contribute to the achievement of sustainable development. Vulnerable customers should be considered, as well as certain guidelines on social and environmental issues.

GEMA's functions include the granting of licences (and their revocation in certain limited circumstances), the making of changes to licence conditions (including the operation of price controls for the monopoly network functions), the review of industry code modifications, operating schemes for promoting renewable electricity and energy efficiency, and the enforcement of the industry's obligations.

GEMA regulatory activities should be transparent, accountable, proportionate, consistent and focused only on cases where action is needed, as well as being in line with what are considered best regulatory practices.

GEMA has the power to impose monetary penalties for past and ongoing breaches of licence conditions and relevant requirements and it can order that redress is provided to consumers. Fines and redress orders for a particular breach can in aggregate be up to 10% of the licensee´s applicable turnover.

The principal Regulatory Authority for competition matters is the Competition and Markets Authority (CMA). They can undertake general market investigations and, working concurrently with GEMA, can investigate potential breaches of competition law in the utility field. Consumer protection matters are enforced by the CMA, OFGEM and Local Authority Trading Standards departments.

2. Licences

Companies within the SCOTTISH POWER Group hold licences for various functions including:

- the supply, generation, transmission and distribution of electricity;

- the shipping of gas (that is, arranging for the insertion, the transmission, and the removal of it from the public network); and

- the transportation of gas to certain specific sites.

The conditions of licences regulate such matters as:

- for network licences: the quality of service and the charges that can be made.

- for supply to domestic consumers: consumer protection provisions including rules on standards of conduct, provision of information, debt and disconnection, cost reflective pricing, in relation to payment methods, information supply to customers and on treating customers fairly.

- for most types of licence: rules requiring adherence to industry codes that set down the detailed technical rules for operating the industry, and providing for OFGEM to determine whether proposed changes to the codes should go ahead.

The Gas Act 1995 and Utilities Act 2000 introduced standard licence conditions to ensure that all holders of a particular licence type are subject to the same conditions. Under the Electricity and Gas Regulations 2011 (Internal Markets), modifications of individual or standard licencing terms no longer require the holders´ consent.

On 24 June 2016, the CMA issued a report as a result of an investigation into the supply and acquisition of energy in Great Britain (Energy Market investigation). The report concluded that competition in the wholesale gas and electricity markets works well and that the presence of vertically integrated firms does not have a detrimental impact on competition.

However, a number of adverse effects on competition were identified in the retail market, some due to ill-conceived regulation, but mainly focussed on the 'weak customer response' from the 70% of customers who are on standard variable tariffs (SVT) and who lose out through lack of engagement in the market. Most of the solutions proposed by the CMA (remedies) focused on increasing competition in the SVT segment, except in the particular case of customers with prepaid meters, where the CMA decided to impose a price ceiling, as a transitional safeguard, set above the *efficient* price level.

On 19 July 2018, the law on electricity and gas for domestic clients (the Tariff Cap), which requires OFGEM to temporarily establish a ceiling (cap) for all domestic customers with Standard Variable Rates (SVT) or any other default rate, in addition to ensuring that authorised activities remain bankable. The cap should be maintained until the end of 2020 and, thereafter, can be extended annually up to a maximum of 3 years. OFGEM implemented a default tariff cap from 1 January 2019.

The customers covered by the tariff limit of the prepaid meters proposed by the CMA were not affected by this default tariff cap. After a price ceiling analysis on customer rates with prepaid meters, the CMA decided in July 2019 to review the methodology for establishing this cap and to recommend OFGEM to consider protecting customers with prepaid meters once this cap expires on 31 December 2020.

3. Price controls

As discussed in the previous paragraph, following the energy market investigation (carried out between 2014 and 2016), the CMA introduced a safeguard rate for domestic consumers with prepaid meters, which it would apply from 1 April 2017 to 31 December 2020. Following the publication of the 2018 Tariff Cap Law, customers' electricity and gas rates at standard variable rates or other default rates have been subject to a price limit. The tariff cap is set by OFGEM.

The provisions in Competition Act 1998 and the Transmission Constraint Licence Condition (TCLC) may set a limit on prices charged to commercial customers or on other prices in the wholesale electricity and gas markets. TCLC prohibits electricity generators from making excessive profits resulting from actions in balance markets. OFGEM has published guidelines on the interpretation and application of the TCLC. The condition was renewed and made permanent on 16 July 2017; some elements were removed to address potential overlap with the European Union rules on the integrity of the energy market and transparency (REMIT).

In 2014, OFGEM implemented electricity market liquidity obligations for large integrated retail and generation businesses, including SCOTTISH POWER. These include obligations to facilitate trading with smaller companies and also an obligation to create market in a number of wholesale products during two windows (periods) in each business day. SCOTTISH POWER was exempted from complying with these obligations on 31 January 2019 following the sale of its thermal generation business. OFGEM fully suspended this obligation on 18 November 2019 in view of the drop in the number of companies subject to it.

Networks qualify as a natural monopoly and its income is governed by a defined framework such as RIIO (Income = Incentives + Innovation + Outputs). It sets a revenue profile for a specified period (8 years in the current RIIO-1 with the opportunity for OFGEM to propose a limited revision every four years) which would deliver a target return on investments based on the regulator's assessment of the costs of an efficient network operator and the likely capital programme (aided by a business plan submitted by the Company). The formula also includes various incentives and takes account of inflation. The formula uses a Market Indicator for setting the debt cost, and phases in (for electricity) an asset depreciation period of 45 years.

In the transmission business, the RIIO-T1 framework became effective from April 2013 and will be valid until March 2021. In distribution, RIIO-ED1 for the SCOTTISH POWER network in the South of Scotland and in the Manweb area came into force on 1 April 2015 and will be valid until March 2023.

OFGEM has initiated the process to establish the second part of the RIIO, to commence with RIIO-T2 in April 2021. It has been confirmed that the RIIO-T2 and RIIO-ED2 frameworks will be valid for 5 years. The RPI (Retail Price Index) will be replaced by the CPI (Consumer Price Index) or CPIH (CPI considering the cost of housing) and will introduce a new Return Adjustment Mechanism (RAM) for companies receiving higher returns than expected. The involvement of different stakeholders in the process is being improved through the creation of Stakeholder Challenge and User Groups.

OFGEM is committed to introducing more competition into electrical grids and has confirmed that there will continue to be three options in the RIIO-T2 that would apply to transport projects that are large, new and separable, subject to possible legislative changes. The options are: the CATO model (Competitively Appointed Transmission Owner); the Special Purpose Vehicle (SPV) model, in which projects would be delivered through an SPV that would competitively offer the financing, construction and operation of assets at a supervised OFGEM auction; and a Competitive Proxy Model (CPM) in which the owner of the transport license would develop the project and OFGEM would establish the permitted revenue using competitive benchmarks. OFGEM has also stated its intention to introduce new competitive models for electrical distribution in RIIO-ED2.

4. Other issues

Other key elements of the regulatory regime in the United Kingdom include:

Renewables Obligation (RO)

The United Kingdom Government has set the goal to reach at least 30% of its electricity from renewable sources by 2020. To this end, the RO Orders (which apply separately to different parts of the United Kingdom within a unified scheme) place obligations on suppliers of electricity to source an increasing proportion of their electricity from renewable sources (based on the expected level of renewable energy production in each year plus a 10% spread in order to prevent certificate prices from falling sharply).

Suppliers meet their obligations by presenting sufficient Renewables Obligation Certificates (ROCs) or by paying an equivalent amount into a fund. If suppliers fail to meet their obligations and the total deficit is above a limit amount, the deficit is recovered through the remaining suppliers through a socialisation process.

The proceeds of the fund are paid back to those suppliers that have presented ROCs in proportion to the number of ROCs presented. Since April 2009, the RO has been banded so that differing technologies receive different levels of support depending on the expected costs.

The RO is closed for new projects no later than 31 March 2017 and, to foster renewables, the Government has implemented the Contract for Difference (CFDs) mechanism that was part of Electricity Market Reform (EMR). The RO remains in effect for those facilities that accessed the programme prior to the closing date. SCOTTISH POWER's onshore wind project portfolio that received planning permits on time to enter the grace period have been approved for the RO. Payments will continue until 31 March 2027 for projects that started generating energy before 1 April 2009 and for 20 years after entry into the RO for later dated projects.

Electricity Market Reform (EMR)

The principal elements of the United Kingdom Government's EMR programme are:

- a new incentive scheme, based on CFDs to support low carbon generation; and
- a Capacity Market to support security of supply (market-wide auction mechanism).

The first Allocation Round took place on 4 February 2015 in two "pots"; one for established technologies (mainly onshore wind and solar) and a second one for less established technologies (mainly offshore wind). SCOTTISH POWER's714 MW East Anglia ONE offshore Wind Farm achieved a contract in the auction at a price of GBP 119.89 per MWh. The second round concluded on 11 September 2017 and procured some 3.2 GW of offshore wind, mostly at a clearing price of GBP 57.50 per MWh. The Government held a third round of CFD allocation for less-established technologies in 2019 (Allocation Round 3) in which more than 5 GW of offshore wind was allocated at GBP 39.65 per MWh for wind farms that started to operate in 2023/2024 and GBP 41.61 per MWh for wind farms that started to operate in 2024/2025. This third round was held subject to a maximum allocation of 6 GW (which was approved under EU State Aid). A budget allocation of GBP 557 million (2011/12 prices) has been made in aggregate for allocation rounds between now and about 2025.

Annual Capacity Market auctions took place in December 2014, 2015, 2016 and 2018, for capacity delivery in winter 2018, 2019, 2020 and 2021, respectively.

On 15 November 2018, the European Court of Justice confirmed Tempus Energy's challenge to the European Commission, annulling its decision not to raise objections to State Aid to the UK'S CM. BEIS announced a waiting period until the Commission could reapprove the mechanism and, on 6 December 2018, it published its plan to hold a T-1 auction in the summer of 2019 for delivery of the capacity in winter 2019/2020, making any agreement conditional on the re-approval of State Aid. This auction was held on 11-12 June 2019 with the allocation of 3.6 GW of capacity at a price of GBP 0.77 per kWh per year. On 22 March 2019, the European Commission began an investigation into CM and on 24 October 2019, this investigation confirmed that the UK Capacity Market complies with State Aid rules. After this confirmation, BEIS ordered the EMR Delivery Body and the Electricity Settlers Company to take steps to restore the CM, including late payments to generators that had been paralysed since November 2018. These payments must be fully settled in January 2020. The EMR Delivery Body plans to hold a T-3 auction (with delivery of the capacity in 2022/2023), a T-1 auction (delivery in 2020/2021) and a T-4 auction (delivery in 2023/2024) during the first quarter of 2020. BEIS has implemented changes in the rules governing participation in these upcoming auctions so that unsubsidised renewables, such as onshore wind, can participate (subject to the appropriate correction or de-rating factors).

EU-ETS and United Kingdom Carbon Price Support

The Climate Change Act 2008 set out targets for the United Kingdom towards reducing greenhouse emissions (compared to 1990 levels) by at least 80% by 2050, with interim reduction targets. In June 2019, the United Kingdom Parliament amended the Climate Change Act to introduce a new legally binding target for net zero GHG emissions by 2050.

The United Kingdom continues to participate in the European emissions market (EU Emissions Trading Scheme - EU-ETS), but it is expected that it will leave this mechanism at the end of 2020 as a result of the departure from the EU on 31 January 2020 and the transition period associated with this exit ending on 31 December 2020.

The Carbon Price Support mechanism is a United Kingdom tax imposed on fossil fuels used for electricity generation at differential rates which simulate a charge on the CO_2 emissions. In recent years, this charge has been set at GBP 18 per tonne and the Government announced in its budgets that it will maintain this value in 2020/2021.

The United Kingdom government is expected to clarify its position on CO_2 pricing starting at the end of 2020, with the possibility of a new Carbon Emission Tax to be added to the existing Carbon Price Support mechanism (this possibility is addressed in parallel with the consideration of a new United Kingdom ETS scheme linked to the European one).

Energy Companies Obligation (ECO)

Energy suppliers who supply over a specific number of domestic customers are required to achieve energy efficiency improvements or heating cost reductions by domestic customers.

As with any other cost, the costs of making those improvements can be incorporated by suppliers into tariffs, subject to the need to remain competitive in the market. These costs will need to be taken into account in any price caps that may be set by OFGEM.

The current ECO Programme (ECO3), which began in October 2018 and will continue until 31 March 2022, is focused on vulnerable clients. Under ECO3, the established limit in the number of customers below which a small supplier is exempt from joining the programme is reduced in phases. In 2019/2020, suppliers with less than 200,000 customers are exempt, and in 2020/2021, those with less than 150,000 customers (instead of the original 250,000).

Coal plants closure

In November 2015, the British government announced plans to consult on requirements for all coal power stations without carbon capture and storage (CCS) to close by 2025 (subject to any security of supply issues). In January 2018 the Government confirmed its intention of eliminating coal generation from the system in 2025.

Pollution Control

European pollution control directives are: The Integrated Pollution Prevention and Control (IPPC), the Large Combustion Plant Directive (LCPD) and the Industrial Emissions Directive (IED) impose limits on various categories of emissions transposed into United Kingdom law through amendments to the Environmental Permitting (England and Wales) Regulations 2010 and the Pollution Prevention and Control (Scotland) Regulations 2012. These controls are enforced by the Environment Agency or, in Scotland, by the Scottish Environmental Protection Agency.

The Medium Combustion Plants Directive places emission limits on smaller generating and other combustion plants. As part of the implementation of this, DEFRA (*Department for Environment, Food & Rural Affairs*) is expected to impose NO_x limits on diesel generators, which could reduce the air quality implications of allowing such plants to participate in the capacity mechanism.

Moreover, following the entry into force of the EU Clean Energy Package, the United Kingdom government is implementing provisions on new CO_2 emission limits for new and existing generation plants that want to participate in the next Capacity Market auctions.

4. Industry regulation in USA

1. Electricity and natural gas distribution

Some of the most important specific regulatory processes that affect AVANGRID Networks, Inc. (hereinafter, AVANGRID NETWORKS) include the New York rate settlement for NYSEG and RG&E, the Connecticut United Illuminating distribution rate case decision, the Maine and Connecticut transmission Federal Energy Regulatory Commission (FERC) Return on Equity (ROE) case and the Reforming Energy Vision (REV) process of New York.

The revenues of AVANGRID NETWORKS are essentially regulated, being based on tariffs established in accordance with administrative procedures set by the various regulatory bodies. The tariffs applied to regulated activities in the United States are approved by the regulatory commissions of the different States and are based on the cost of providing service. Energy, financial and capital costs are included (capital costs show the Company's capital index and legitimate capital profitability).

Energy costs that are set on the New York and New England wholesale markets are passed on to consumers. The difference between energy costs that are budgeted for and those that are actually incurred by the utilities is offset by applying compensation procedures that result in either immediate or deferred tariff adjustments.

These procedures apply to other costs, which are in most cases exceptional (effects of extreme weather conditions, environmental factors, regulatory and accounting changes, treatment of vulnerable customers, etc.) that are offset in the tariff process.

Each of the eight supply companies in AVANGRID NETWORKS must comply with regulatory procedures that differ in form but in all cases conform to the basic framework outlined above.

As a general rule, tariff reviews cover various years (three in New York and Connecticut) and provide reasonable returns on equity, protection and automatic adjustments for exceptional costs incurred and efficiency incentives.

2. New York

- **NYSEG and RG&E rates**

On 20 May 2019, NYSEG and RG&E presented the new rates (rate cases) before the New York State Department of Public Service (NYDPS). The effective date of the new rates, assuming a suspension period of approximately 11 months, will be 17 April 2020. The proposed rates facilitate the transition of companies to a cleaner energy future while allowing important initiatives such as vegetation management, resilience and emergency preparedness. Companies are requesting delivery revenues to be based on an ROE of 9.50% and a capital index of 50%. The following table provides a summary of the proposed increases in the delivery rate, delivery income percentages, and total revenue percentages for the four companies:

Utility	Income increase (Millions USD)	Income increase (%)	Total income (%)
NYSEG Electric	156.7	20.4	10.4
NYSEG Gas	6.3	3.0	1.4
RG&E Electric	31.7	7.0	4.1
RGE Gas	5.8	3.3	1.4

NYPSC and other parties testified on 15 September 2019. The NYPSC recommended an 8.2% ROE and a 48% capital. NYPSC recommended the following rate increases/reductions: for NYSEG Electricity, a rate increase of USD 76.7 million; for NYSEG Gas, a rate decrease of USD 15.9 million; for RG&E Electricity, a rate increase of USD 0.68 million; and for RG&E Gas, a rate decrease of USD 22.5 million. NYPSC also recommends that NYSEG credit the environmental reserve with USD 30.7 million and USD 0.42 million due to the Company's legal decisions in 2017 and 2018 that denied insurance claims against OneBeacon and Century in an insurance lawsuit.

Talks between NYSEG, RG&E, NYPSC and approximately 20 other parties began in October 2019 and will continue during the first quarter of 2020. A decision on the rate cases is expected during the second quarter of 2020.

- **New York storm in March 2017**

On 11 March 2017 the New York State Department of Public Service (NYPSC) commenced an investigation of NYSEG's and RG&E's preparation for and response to the March 2017 wind storm, which affected more than 219,000 customers. On 16 November 2017, the NYPSC issued a staff report on the findings of the investigation with several recommendations for future responses to storms, and alleged that NYSEG and RG&E had breached their own emergency response plan in several respects.

Moreover, on 16 November 2017, the NYPSC issued an Institution Procedure and to Show Cause Order, consulting the companies on whether or not the NYPSC should take into account the recommendations of the staff report.

On 18 May 2018, the NYSEG and RG&E filed two Joint Settlement Proposals before the NYPSC. These Proposals reflect the Companies' agreement to make resilience and emergency response investments totalling USD 3.9 million, which will not be reflected in the Company's rate base or operating expenses. On 18 April 2019 NYPSC approved the proposals.

- **New York storms in March 2018**

In March 2018, following the two winter storms that impacted more than one million customers in New York, including 520,000 NYSEF and RG&E customers, NYPSC commenced an investigation of these utilities preparation for and response to these events. The investigation was expanded to include New York's spring storms in 2018.

On 18 April 2019, the NYPSC issued the 2018 Staff Report on the findings of its investigation, identifying 94 recommendations to be implemented in the Emergency Response Plans (ERPs) for utilities. The report also identified possible violations by several utilities, including NYSEG and RG&E.

Also on 18 April 2019, the NYPSC issued an Instituting Procedure and to Show Cause Order for the major utilities in New York, including NYSEG and RG&E. The order requires utilities to demonstrate why NYPSC should not pursue civil and/or administrative sanctions for the apparent non-compliance with their respective ERPs as approved and ordered by NYPSC. The NYPSC also orders the utilities to address, within 30 days, whether the NYPSC should order, reject, or partially modify the 94 recommendations contained in the 2018 staff report. NYSEG and RG&E responded to the Order by accepting, with minor modifications, most of the recommendations.

On 17 December 2019, an Agreement on the 2018 Storm Investigation was submitted to the NYPSC. The Agreement establishes a fine of USD 10.5 million (after taxes) for infractions; NYSEG will hire and maintain20 additional employees to fulfil line or construction and maintenance (UCM) positions with storm restoration responsibilities; NYSEG will maintain 175 employees trained in damage assessment, excluding employees performing restoration work during an emergency; NYSEG agrees to hire an external consultant to audit and evaluate storm response training programmes. The Agreement document is pending approval by NYPSC and a decision is expected in the first quarter of 2020.

- **The NYPSC requires the Council to initiate proceedings against the NYSEG**

On 18 April 2019, the NYPSC issued an Order Directing Counsel to the Commission to initiate a special proceeding or lawsuit in the New York State Supreme Court to stop and prevent future violations by NYSEG of the NYPSC orders and regulations.

3. Maine

- **CMP Distribution Rate**

On 29 May 2018, the Maine Public Utilities Commission (MPUC) received a complaint from ten people requesting an investigation to determine whether CMP (Central Maine Power) and its parent companies are obtaining excessive profits. The lawsuit also requests that CMP be denied cost recovery due to the October 2017 storm. CMP responded on 8 June by arguing the lack of grounds for the claim and requesting its dismissal. On 24 July 2018, the MPUC issued a complaint dismissal order in relation to the CMP parent companies and October 2017 storm costs.

However, MPUC calculated CMP profits and found that the profits in 2016 and 2017 exceeded the reasonable permitted range and, therefore, opened an investigation and ordered CMP to present a rate case by 15 October 2018.

On 15 October 2018, CMP presented its rate case, where it proposes to maintain the same rates that are currently in effect and to use savings derived from changes in federal tax laws to keep its distribution prices stable and at the same time, make its electrical system more resilient. CMP plans to use the savings from the Tax Cut and Jobs Act, approved in December 2017, to pay for the costs of resilience programmes and other investments.

On 22 February 2019, the MPUC issued its Analysis and the Office of the Maine Public Advocate (OPA) presented testimony in response to CMP's rate case. The MPUC recommended a reduction in CMP's distribution rates of USD 2.0 million – USD 3.6 million, a base ROE of 9.35% and a capital ratio of 50%, prior to the management efficiency adjustment. The MPUC recommended a management efficiency adjustment to reduce the allowed ROE of 9.35% by 75-100 basis points due to the low performance of CMP customer service. The OPA recommended an ROE of 9.33% and a capital index of 55%.

On 9 January 2020, the MPUC issued its Examiner's Report recommending an increase in the distribution rate of 20.5 million or 8.1% starting 1 March 2020, based on a base ROE of 9.25% and an equity of 50%. The base ROE of 9.25% is reduced by 75 basis points to 8.50% for a management efficiency adjustment due to low customer service performance following the implementation of the Company's new billing system in October 2017. The Commissioners plan to decide whether to accept, reject or modify the report on 30 January 2020.

- **CMP SmartCare Investigation**

On 1 March 2018 MPUC initiated an investigation on metering and billing problems related to CMP’s new billing system (SmartCare) and proceed to a forensic audit. In December 2018, the Audit concluded that the systems had worked as expected, but that there was an unnecessary large amount of errors and delays in bills during the initial stage of the operation.

Another subsequent audit carried out by the Office of the Main Public Advocate (BerryDunn) found no systematic use errors, although it did find billing errors that did not imply errors in the amounts billed.

In January 2020, the MPUC released its Examiners Report included the final investigation conclusions and insisted for the third time that CMP's billing and metering systems works well and that no systematic errors had been detected. CMP will implement: (i) and independent audit program to solve pending complaints, and (ii) a SmartCare supervision and testing programme carried out by an independent third-party.

It is expected that in 2020 MPUC commissioners will make a final decision.

4. Connecticut

- **UI Rate**

On 15 December 2016, the Connecticut Public Utilities Regulatory Authority (PURA) issued its final resolution, by which it authorised a rate of USD 57 million (compared to the USD 98.3 million requested by UI during the process) distributed over three years (2017, 2018 and 2019). The rate increase in 2017 was set at USD 43.0 million, with an additional USD 11.5 million and USD 2.9 million in 2018 and 2019, respectively. PURA established an ROE of 9.10% and an equity ratio of 50%.

The three-year rate plan retains the existing earnings sharing level whereby earnings above the allowed ROE are shared equally between customers and shareholders. The Company's revenue decoupling mechanism continues. The PURA did reduce the residential basic service charge to USD 9.65 per month.

- **SCG Rate**

On 30 June 2017, Southern Connecticut Gas Company (SCG) submitted a request to PURA to apply new rates at 1 January 2018.

On 13 December 2017, PURA approved the amended settlement agreement and the new rates are effective at 1 January 2018 the DIMP as proposed by SCG, the amortization of certain regulatory liabilities and rate increases based on an ROE of 9.25% and approximately 52% equity level.

The parties also agreed on a three-year rate plan with rate increases of USD 1.5 million, USD 4.7 million and USD 5 million in 2018, 2019, and 2020, respectively. The new rates are effective at 1 January 2018.

- **CNG Rate Agreement**

On 30 June 2018, Connecticut Natural Gas (CNG) submitted a request to PURA to apply new rates at 1 January 2019. CNG requested a three-year rate plan for 2019, 2020 and 2021 and a proposed ROE of 10.20%. On 30 August 2018, the parties submitted a three-year agreement, which includes rate increases based on an ROE of 9.30% and 54%, 54.5% and 55% equity during years 1, 2 and 3. The parties agreed to rate increases of USD 9.9, 4.6 and 5.2 million in 2019, 2020 and 2021, respectively.

On 19 December, PURA approved the new rates that entered into force on 1 January 2019.

5. Massachusetts

On 17 May 2018, Berkshire Gas Company (BGC) submitted a request to the Massachusetts Department of Public Utilities (MDPU) requesting approval for an increase in the distribution rate of approximately USD 3.3 million, an ROE of 10.35% and 61.5% equity, as well as a revenue dissociation mechanism.

On 4 December 2018, BGC and the Office of the Attorney General submitted a Resolution Agreement, which provides for an increase in the base distribution rate of USD 1.6 million from 1 January 2018 and an additional increase of USD 0.7 million from 1 November 2019, conditional upon certain investments being made. The rate increase is based on an ROE of 9.70% and 55% equity. The Agreement provides for the implementation of a Revenue Decoupling Mechanism and a pension expenditure tracker, and also establishes that BGC shall not request changes that take effect before 1 November 2021. The DPU approved the agreement on 18 January 2019.

6. FERC

FERC Rates: CMP and UI transport rates are regulated by FERC and managed by ISO New England (ISO-NE). The rates are calculated annually according to a formula authorised by FERC that allows for operating and maintenance cost recovery, as well as obtaining profit on the invested assets. Before 16 October 2014, FERC proposed a base ROE of 11.14% and additional incentives on ROE, applicable to assets, based on length of service, voltage and other factors.

On 30 September 2011, a complaint (Complaint I) was filed requesting FERC to reduce the ROE to 9.2% for the calculation of the ISO-New England transmission rate.

On 16 October 2014, FERC issued its final decision on Complaint I, in which it established a base ROE of 10.57% and a maximum total ROE (including incentives) of 11.74% for the period between October 2011 and December 2012 and, prospectively, from 16 October 2014.

In June 2015, the parties concerned filed an appeal with the Court of Appeals, which annulled the decision on Complaint I and referred it to FERC for a second review. The Court ruled that FERC should have determined the unjust and unreasonable nature of the base ROE of 11.14% before establishing a new base ROE of 10.57%.

On 26 December 2012, a second complaint regarding the ROE (Complaint II) was filed for a later rate period, in which a reduction of the ROE to 8.7% was requested. On 19 June 2014, FERC accepted Complaint II and established a 15-month refund effective date of 27 December 2012.

On 31 July 2014, a third complaint (Complaint III) was filed for a subsequent rate period in which a reduction was requested for the current ROE from 11.14% to 8.84%. On 29 April 2016, a fourth complaint (Complaint IV) was filed for a period after the previous complaints, in which a reduction of the existing base ROE from 10.57% to 8.61% and the establishment of a maximum ROE of 11.24% was requested.

CMP and UI prepared sufficient funds to handle refunds from Complaints I, II and III, in accordance with FERC's 2015 decision on Complaint I, and reimbursements were made to customers in relation to Complaint I. The provision of CMP and UI for Complaints I, II and III At 30 September 2017 was USD 22.2 million and USD 4.4 million, respectively.

On 5 October 2017, the New England Transmission Owner's (NETO) transportation companies submitted a request to dismiss all the ROE complaints, given that the complainants had failed to demonstrate the unjust and unreasonable nature of the existing ROE of 11.14% as required by the Court's decision. The NETO also stated that Complaints II, III and IV should also be dismissed due to an error in estimating the claims in relation to Article 206 of the Federal Energy Act. In the event that FERC did not underestimate the claims, the NETOs requested FERC to consolidate the claims and issue a final decision on the matter.

On 16 October 2018, FERC issued an Order Directing Briefs with respect to claims I - IV on the ROE. FERC sent to the United States Court of Appeals (D.C. Circuit) Opinion No. 531-A, issued on 16 October 2014, concerning the ROE of Complaint I. FERC proposes a methodology, including the New ROE Method, which results in a base ROE of 10.41% and a maximum ROE of 13.08% for Complaint I. The order is not final and requires the Paper Hearing on the proposed new ROE method.

The initial Briefs and responses were presented in January and March 2019. There is no decision due date. FERC order applies to Complaint I. If adopted, the new ROE method should apply to the periods of Complaints II, III and IV. At the same time, in March 2019, FERC initiated a separate general information collection procedure to consider new ROE methods, which is in progress. In addition, in December 2019, FERC issued an order establishing the ROE for transport owners in the MISO (Midcontinent Independent System Operator) region, using a methodology that differed somewhat from the method proposed in the Order Directing Briefs.

CMP and UI have made a provision for a base ROE of 10.57% and a cap of 11.74%, amounting to USD 26.4 million. If the new ROE proposed by FERC (base ROE of 10.41% / ROE cap of 13.08%) is adopted for all complaint periods, the preliminary impacts would be: single payment of USD 24 million (regularisation of the past) and an annual profit increase of USD 3.4 million.

FERC Rate Calculation Procedure: in February 2018, an agreement was reached providing the calculation of regional and local transport rates for periods consistent with most rate periods for transport throughout the country.

The new formula will enter into force on 1 January 2020.

7. Electricity generation from renewable energy resources

In addition to the federal government, many state governments have taken measures to promote the development of electricity production from renewable sources. Typically, state programmes tend to be: 1) An obligation for public services to generate or acquire a minimum amount of electricity generated from renewable sources, or Renewable Portfolio Standards (RPS) and 2) Tax incentives. So far, the federal government has mainly supported renewable development through tax credits for production and investment, as well as accelerated tax depreciation.

State Law

Nearly 30 states have implemented mandatory requirements according to RPS regulations that typically range from 15% to 33% of production by 2025, with several states, including New York and California, establishing even higher long-term requirements. Requirements are normally implemented through a system of negotiable renewable energy certificates that verify that a kWh has been generated from a renewable source.

Several state legislative assemblies have discussed the repeal or delay of their RPS requirements. In 2014, Ohio enacted a law to stop the programme until 2017, and in 2019, it set 2026 as the date to completely repeal the law. In 2015, Kansas replaced its mandatory RPS with a 20% voluntary standard as part of a compromise that retained existing property tax exemptions. By contrast, in 2018, California established a 60% RPS requirement for 2030, while in 2019, the states of New York, Nevada, New Mexico, Maryland and Maine have imposed 50-80% RPS for the next 10-25 years.

Several states have also established CO_2 emission reduction policies that should result in further development of renewable energy, according to California's 2006 state greenhouse gas emissions law. In 2019, Washington enacted a law to ban coal generation in any utility by 2025, with zero net CO_2 emissions standards for subsequent years. Also in 2019, New York, New Mexico and Nevada have established long-term CO_2 emission reduction requirements.

Several east coast states have also established mandates for offshore wind power acquisition, including Massachusetts, Connecticut, New York, New Jersey and Maryland.

Most states offer tax incentives to promote investment in renewable sources. For example, in Washington and Colorado, the sale and use of renewable energy equipment is tax-exempt. Several states have reduced capital gains taxes in renewable energy plants, while Minnesota has imposed a capital gains tax instead of a fixed production tax. Other states, such as Texas, encouraged the construction of electrical infrastructure (competitive renewable energy zones, CREZ) to facilitate the transport of electricity from renewable energy to charging points. The Texas CREZ is now complete.

Federal Law

In 1992, the United States Congress enacted a law that approved a Production Tax Credit (PTC) of USD 15 per MWh (revised with inflation) for the generation of electricity in wind farms during the first ten years of operation of the projects.

This programme has been renewed on numerous occasions and has been expanded to include electricity generation from other renewable sources, such as biomass, geothermal energy, urban solid waste and hydropower.

In 2005, Congress approved a 30% Investment Tax Credit (ITC) for solar energy projects.

On 18 December 2015, Congress extended and established the progressive withdrawal from the PTC, now USD 24 per MWh. Wind projects that were launched before 2017 could qualify for full credit, while those that started construction between 2017 and 2019 would opt for reduced credit. These qualifying facilities could also opt for a 30% ITC rather than the PTC.

It should be noted that in December 2019, Congress approved an extension of the PTC and ITC for wind power. Instead of the gradual elimination of the credit in 2019, Congress extended it to projects implemented in 2020 to a higher level of credit (60% for PTC; 18% for ITC).

In 2015, Congress also initiated the progressive withdrawal from the ITC for solar energy projects. Projects that were launched before 2020 will be eligible for a 30% ITC, but those whose construction begins after 2019 will opt for a lower ITC.

The 2019 tax law has not included an extension of the solar ITC or other clean tax credits, such as a 30% offshore wind ITC, 30% for storage or a tax credit for the purchase of electric vehicles.

FERC

In terms of generation, FERC has focused on two areas.

- The resilience of the system. Following FERC's decision not to adopt the proposal submitted by the Department of Energy, which would have directed payments to generation with its fuel supply stored at the plant, FERC initiated a new procedure to collect information on the matter. This matter remains open at FERC. The president of the Commission has stated that he would take resilience measures if all commissioners agree, but consensus seems unlikely in the short term.

- Eligibility requirements. FERC, together with some of the Regional Transport Organisations, has approved or is considering changes in the eligibility requirements of the capacity markets. In December 2019, FERC issued its last set of directives aimed at the PJM capacity market. FERC has ordered the PJM to establish several minimum capacity market offer price for resources receiving income in accordance with state laws (aid or subsidies), such as renewable or zero-emission credit programmes. FERC believes that the minimum offer price will exclude certain resources from participating in the capacity market, thereby increasing the offsetting price of the capacity market, which would benefit certain existing resources, such as natural gas generators. In 2020, FERC will continue to consider these issues.

5. Industry regulation in Mexico

Mexico's Energy Reform began in late 2013 with the modification of three articles of the Mexican Constitution, introducing a profound transformation of the electricity and hydrocarbons sector, with the creation of a new regulatory framework and the promotion of competition that was non-existent until then. As a result of this reform, 21 laws were enacted and/or amended during 2014 and 2015, and 25 regulations were created or amended.

Besides having an impact on the hydrocarbons sector, the Proposal also introduced new business opportunities in the generation, transmission, distribution and management of electricity infrastructure. This transformation opens the energy sector to private investment in activities previously reserved for the State.

One of the goals of the industry restructuring is to improve the power generation, promoting the use of renewable sources or low carbon emissions. Thus, the Government introduced Clean Energy Certificates (CECs) through the Electricity Industry Law (Ley de la Industria Eléctrica - LIE).

The previous regulatory framework respects and maintains the conditions and rights for existing businesses and facilities prior to the reform.

1. Post-Energy Reform Competencies

The State is exclusively responsible for the planning and control of the National Electrical System (SEN), as well as the public service for the transport and distribution (T&D) of electrical energy, the latter being the regulated activities. The legislation provides for the possibility of entering into service contracts with private companies, and creating opportunities to participate in the construction, operation and maintenance of T&D infrastructures.

Power generation, excluding nuclear, is open to private investment, as well as power sales to the end users.

The LIE regulates the activities of the electricity sector in Mexico and allows private companies to generate and sell electricity in the wholesale market, as well as to invest in transport and distribution networks through Public-Private Associations and other legal structures included in the legislation.

From the regulatory side, three agencies have primary responsibility for the sector. The Energy Secretariat ("SENER") has the policy function; the Energy Regulatory Commission ("CRE") has the regulatory function; and the National Energy Control Centre ("CENACE"), a new decentralised agency, manages the power grid and the wholesale electric market.

2. Public Policy on Energy

In June 2019, SENER published the annual update of the National Electrical Sector Development Programme (PRODESEN). It includes projections of energy generation, demand and infrastructure requirements for the next 15 years (2019-2033).

On 12 July 2019, the 2019-2024 National Development Plan was published in the Official Gazette of the Federation, containing the elements of public policy to be followed by the federal government during the six-year period ending in 2024. With regard to the energy sector, the federal government proposes the recovery of State Production Enterprises, the Federal Electricity Commission (CFE) and Petróleos Mexicanos. In addition, it highlights the need to install 30 GW by 2024. The proportion defined by the President of the Republic is maintained in terms of participation in private sector power generation (54% CFE and 46% private).

On 26 November 2019, the National Agreement on Investment in Private Sector Infrastructure was approved to reaffirm the confidence of domestic and foreign investors creating a scenario of macroeconomic stability, announcing an investment of MXN 859,022 million over the six-year period in 147 private investment projects. In February 2020, the energy sector projects will be announced, of which 6 are Electric Energy projects, with an investment equivalent to MXN 63,560 million.

3. Energy Secretariat

As part of the Energy Reform, the Energy Secretariat (Secretaría de Energía - SENER) has been empowered to plan and coordinate the energy policy, both for hydrocarbon and electric sectors.

In 2017, SENER published the requirements for Clean Energy Certificates for the years 2018 to 2022, setting them at 5% of total consumption for 2018, 5.8% for 2019, 7.4% for 2020, 10.9% for 2021 and 13.9% for 2022. In 2019, it published an agreement ratifying these requirements.

In relation to the promotion of clean energy, the mechanism for the sale of Clean Energy Certificates (CEL) to encourage new clean energy generation projects remains in force. However, in October 2019, SENER approved modifications to the guidelines for granting CEL, in order for the CFE clean generation plants existing prior to the Reform to be able to accredit CEL for their generation. This measure in practice eliminates the need for the CFE Basic Supply to buy CEL in long-term auctions, with the aim of not increasing the Basic Supply fees for domestic customers.

4. Regulatory Body

As a key part of the reform, in August 2014, the new Co-ordinated Energy Regulatory Bodies Act was issued, which sets out the operating guidelines and responsibilities of the National Hydrocarbons Commission (CNH) and the Energy Regulatory Commission (CRE). The CRE, as a Coordinated Energy Regulatory Body, has technical, operational and management autonomy. It is authorised to issues regulation and rates for the activities of the electricity and hydrocarbons industry, as well as to manage and supervise permits in this area.

5. National Agency for Energy Control

The National Agency for Energy Control (CENACE) is a decentralised public body with the authority to exercise operational control of the SEN and operate in the wholesale electricity market, as well as the other powers identified in the Electricity Industry Law and other applicable provisions. In addition, it guarantees open access to the National Transmission Network and the General Distribution Networks to all public and private market participants.

Like it does every year, in February 2019 it issued the results of the Power Balance Market for the year 2018, which sets the price to the capacity available during the 2018 year. This availability is recognised for the 100 critical hours of the system.

On 31 January 2019, the new government cancelled the fourth long-term energy auction, clean energy certificates (CEL) and power certificates.

6. Federal Electricity Commission Act

The Federal Electricity Commission (CFE) Act of August 2014 establishes that the CFE becomes a State Production Company (EPE) exclusively owned by the federal government, with budgetary and government autonomy, with the Board of Directors composed of members of the competent secretariats (SENER, Treasury, etc.) and independent directors. The CFE will operate through its affiliates and subsidiaries and will participate in the generation, transmission, distribution and marketing of electricity.

On 25 March 2019, SENER published the amendment of the Terms of the strict legal separation of the CFE. In addition to the above, on 25 November 2019, the reallocation of assets and contracts for generation to CFE affiliates and subsidiaries was published.

7. Transmission and Distribution

According to the LIE, the State will carry out the electric power transmission and distribution activities as a public service through State Production Companies (EPE) or its subsidiaries.

The Reform introduces the possibility for the State to conclude contracts with individuals for the implementation of activities related to this public service, such as financing, installation, maintenance, management, operation, expansion, modernisation, monitoring and maintenance of the infrastructure necessary for the provision of this service. However, the first two tenders called in order for private companies to participate jointly with SENER and the CFE for the construction and operation of high voltage direct current transmission lines were cancelled in January 2019.

8. Generation and Retail

The LIE sets forth that the generation and sale of electric power can be developed by public or private companies subject to compliance with permits and market rules. When the power of a generation plant is equal to or greater than 0.5 MW will require a CRE permit.

There are three types of permits to supply electrical power: 1) basic supply with a regulated rate (for consumers with a demand of less than 1 MW), 2) supply qualified under liberalised conditions for consumers with a demand of 1 MW or greater, and 3) last resort supply, for temporary use when qualified consumers have not chosen a supplier or they are no longer supplied by a particular supplier.

SENER can review the 1 MW threshold to choose the qualified supply. However, becoming a qualified consumer is optional, only mandatory for new costumers.

In this line, several Qualified Service Provider (QSP) permits have been issued, competing since 2016 with the CFE subsidiary dedicated to that service and which are key to market liberalisation.

9. Wholesale electricity market

The wholesale electric market (WEM) began operations in early 2016. This is a local marginal price market operated by CENACE, where generators, retail companies and qualified consumers can carry out transactions for energy, power, related services, CEL and Financial Rights of Transmission in the Daily Market, Hourly Market and Real-Time Market.

10. Respect for the generation permits granted under the Public Power Service Law (LSPEE)

The LIE established a transitional regime for permits under the repealed Public Power Service Law (LSPEE). In particular, the permits and contracts for self-sufficiency, co-generation, independent production, small production, import, export and continuous own use granted under this law will continue to be governed by it as long as it is not opposed under the LIE. The new government undertook, in principle, to respect the Contracts granted under said Law and to not modify the applicable legal framework for a period of three years.

11. Electricity tariffs

On 16 December 2019, the methodology was approved that determines the values of the electricity tariff without any changes. Thus, rate stability is expected in relation to the values of 2019. In this way, the Federal Government can fulfil its commitment to not increase electricity tariffs in real terms (considering inflation).

12. Natural Gas System

As part of the Energy Reform, Petróleos Mexicanos (PEMEX) became a Productive State Company with budgetary and government autonomy. It also has a Board of Directors, composed of members of the competent secretariats (SENER, Treasury, etc.) and independent directors. It currently operates through its subsidiaries and affiliates. Concurrently with this transformation, the natural gas transportation system was transferred from PEMEX to CENAGAS, the National Operator of the Natural Gas Pipeline Grid in order to promote an open market for its transportation, distribution and commercialisation.

CENAGAS has issued the 2015-2019 5-year programme for the Expansion of the National Natural Gas Transmission and Storage System governing its operation, of which two revisions have been issued. As part of this programme, CFE called for several bidding processes to contract natural gas transportation services from pipelines to be owned by private companies. The contractual terms of the pipelines in question were renegotiated in 2019 to facilitate the payment of CFE for their use. In the second half of 2019, the first, the South Texas Gas Pipeline – Tuxpan, began operations.

6. Industry regulation in Brazil

1. Generation

The Brazilian system

Although hydroelectric generation's share has decreased in recent years, Brazil's generation system is predominantly hydraulic. In terms of contribution to the generation mix, from 2000 to 2019, hydraulic capacity has been reduced from 83% to 60%. Wind participation, for its part, has increased to 9%. In the coming years, the government expects the system to expand mainly with wind, solar and natural gas.

The Brazilian system is interconnected, but split into four electrical regions: Southeast, South, Northeast and North. These regions have distinct hydrology and the synergies between them can be used. That is why the National System Operator (ONS) performs centralised electrical dispatch based on the optimisation of the audited costs of the generation plants. This is based on a number of software programmes to determine which generation assets (hydro and thermal power plants) will be dispatched, considering hydrological uncertainty, reserve storage capacity, thermal power plant costs (both fuel and operation and maintenance) and the estimated generation of unmanageable resources (wind and solar). In addition to defining the dispatch of plants, these programmes calculate the energy price from the marginal operating cost (MOC) of the system. The market price is known as the Dispute Settlement Price (DSP), which corresponds to the MOC, limited by a set minimum and maximum price.

Guaranteed Energy (physical guarantee)

Since the system is predominantly hydraulic, the installed capacity is insufficient to measure the supply guarantee. Therefore, each plant has an associated guaranteed energy (physical guarantee), calculated by the Brazilian Government, which represents its contribution to the system in terms of reliability. The physical guarantee of thermal power plants and hydroelectric plants (dispatchable generation) is calculated by computer programmes at the time the plant participates in the auction. The physical guarantee for unmanageable resources is calculated by considering their long-term generation expectations.

The regulation states that the physical guarantee of hydroelectric plants must be reviewed every five years. However, the first revision was made in 2017 and only for power plants that had been in operation for a minimum of five years.

The following table shows the physical guarantee (in average MW) of the plants in which NEOENERGIA has a stake:

	Avg MW	
Utility	**Physical Guarantee**	**NEONERGIA interest**
Baguari	84.7	51%
Corumbá III	49.3	70%
Itapebi	209.1	100%
Dardanelos	154.9	51%
Teles Pires	930.7	51%
Baixo Iguaçu	172.4	70%
Belo Monte	4,571	10%

Energy Reallocation Mechanism (MRE)

The financial mechanism that allows for centralised dispatching and mitigates the hydrological risk of power plants is called the energy reallocation mechanism (MRE), and all hydroelectric plants are obliged to participate in it. For the MRE, the important factor is total hydropower generation, not the individual generation of each plant. According to this mechanism, the total hydroelectric generation between each plant is allocated each month in proportion to its fraction of the total physical guarantee of the system. The total hydroelectric generation of the MRE generator set divided by the total physical guarantee of the generators is called the Generation Scaling Factor (GSF) and its monthly calculation is used for accounting operations. The energy allocated to each generator is the GSF applied to its physical guarantee.

Recent hydrology and litigation

The MRE worked well until 2012. Since then, hydrological conditions and the incorporation of the non-hydrological risks mechanism have reduced the GSF and caused a significant financial impact on hydroelectric plants. This led to a short-term market judicialisation process that forced regulatory improvements in order to prevent the allocation of non-hydrological risks to hydroelectric generators, such as, for example, compensation for thermal dispatch outside the merit order, as well as the possibility of renegotiating the hydrological risk for generators with contracts in the regulated market (ACR). This renegotiation transfers the risk of GSF below certain indices (89 to 100%) to regulated consumers in exchange for a risk premium paid periodically by generators. This premium may be reduced if the generator chooses to cede its secondary energy (GSF> 1) to consumers, known as SP products. If the generator also wants to be covered against the risk of reducing its physical guarantee, it has what is called the SPR product at its disposal.

NEOENERGIA plants were renegotiated according to the following table:

Utility	GSF product
Corumbá III	SP90
EAPSA	SP90
Itapebi (2)	SP100
Baguari	SP91
Teles Pires	SP92
Belo Monte	SPR100
Baixo Iguaçu	SP89

(2) Since the terms of renegotiation were conditional on being energy contracts in the regulated market, which in the case of Itapebi ended in 2017, the renegotiation of that plant is no longer in force.

However, most litigation by generators that had contracts in the free market remains in effect. In October 2018, the courts overturned a precautionary measure that protected certain generators from GSF payment, but the amounts to be paid from 2015 to February 2018 remain under legal dispute.

The present value of the pending hydrological risk of the legal decision amounts to BRL 7,930 million and the final resolution depends on the publication of a specific law regulating the GSF. During 2020, it is expected that the parliamentary procedure of a bill (PL 3975/2019) will continue, which seeks to eliminate all factors not related to the hydrological situation from the GSF calculation.

Generation assets

In the generation business, NEOENERGIA manages about 4 GW of installed capacity between hydroelectric, wind and natural gas plants. Of these, a total of 1 GW is under construction.

The most relevant hydraulic projects are: Itapebi (100% of NEOENERGIA), Teles Pires (50.1% stake); Belo Monte (10% stake) and Baixo Iguaçu (70% stake).

NEOENERGIA has 100% of its wind power production contracted in the long-term PPA in the free and regulated markets. The expansion potential and recent wind awards of the group are summarised as follows:

- Nine wind farms in the Chafariz Complex (state of Paraíba) that sold their energy at the A-6 auction in 2017. According to the auction rules, these wind farms will begin commercial operations on 1 January 2023.

- Six wind farms also in the Chafariz Complex (state of Paraíba) that will sell their energy in the free market and whose construction authorisations were issued in January 2019. The works began in October 2019 and are scheduled to begin commercial operations by the end of 2022.

- Two wind farms (Oitis 1 and 8) that sold their energy at the A-4 auction in 2019 and whose authorisations were approved in November 2019. According to the auction rules, these wind farms will begin commercial operations on 1 January 2023, with 30% of their energy being sold on the regulated market (ACR).

- Ten wind farms (Oitis Complex) to be built in the states of Piauí and Bahia, whose construction authorisations were obtained in December 2019, are scheduled to start commercial operations by the end of 2022.

Regarding thermal generation, NEOENERGIA owns the Termopernambuco gas plant, which emerged from the Thermal Generation Priority Programme (PPT), established by the Ministry of Mines and Energy in 2000. This plant has energy sales contracts with Celpe and Coelba in force until 2024.

Generation auctions

On 1 March 2019, the Ministry of Mines and Energy (MME) published the indicative schedule of auctions for the purchase of Electricity from New Ventures and Existing Generation Ventures for the 2019-2021 three-year period:

Auction	Indicative date
A-4 Auction (New)	28 June 2019
A-6 Auction (New)	18 October 2019
A-4 Auction (New)	28 May 2020
A-4 and A-5 Auction (Thermal)	30 April 2020
A-6 Auction (New)	24 September 2020
A-1 and A-2 Auction (Existing)	4 December 2020
A-4 Auction (New)	29 April 2021
A-6 Auction (New)	30 September 2021
A-1 and A-2 Auction (Existing)	3 December 2021

In addition, on 16 October, the Ministry of Mines and Energy (MME) released the guidelines for the upcoming A-4 and A-5 auctions for the purchase of Electricity from Existing Generation Ventures with the possibility of the participation of New Generation Ventures. It will take place on 30 April 2020 and national coal or gas thermal power stations can participate exclusively. This is an unprecedented initiative in which, in addition to maintaining those plants whose energy and fuel sales contracts are close to expiry, the aim is to replace diesel thermal power stations with more efficient and cleaner gas plants.

At the new A-4 energy auction in 2019, held on 28 June, an average of 81.1 MW were contracted at an average price of BRL 151.15 per MWh. This involves the incorporation into the system of 401.6 MW of power and an average of 165 MW of physical guarantee from 15 projects: six solar, three wind farms, five mini-hydroelectric and one biomass. The NEOENERGIA Group was awarded two wind farms, Oitis 1 and Oitis 8 (an average of 11.9 MW), with a price of BRL 80 per MWh.

At the A-6 auction on 18 October, an average of 1,155.2 MW were contracted at a price of BRL 176.09 per MWh. NEOENERGIA was not awarded any project. By technology:

Technology	Installed capacity (MW)	Contracted capacity (average MW)	Number of Projects	Price (BRL per MWh)
Hydroelectric	445	172	27	206
Wind	1,040	181	44	99
Solar	530	60	11	84
Natural gas	734	673	3	189
Biomass	230	70	6	188
Total	**2,979**	**1,156**	**91**	**-**

In December, two auctions were held for electricity from existing plants to adjust the demand needs of distributors over the next two years.

- At the A-1 auction, an average of 29 MW was awarded at a price of BRL 158.37 per MWh. The resulting supply contracts will last from 1 January 2020 until 31 December 2021.
- At the A-2 auction, an average of 279 MW was awarded at a price of BRL 171.52 per MWh. The resulting supply contracts will last from 1 January 2021 until 31 December 2022.

Regulatory laws published in 2019

On 6 June, ANEEL published Order No. 1.635 modifying the Electricity Marketing Rules to correct the unavailability discount of thermal power plants used to calculate compensation to hydroelectric generators for drawing their generation from the merit order. The order also determined the recounting of operations since April 2017, when the payment of such compensation to hydroelectric generators began.

On 29 December, CNPE Resolution No. 29 of the *Conselho Nacional de Política Energética* was published defining the general supply guarantee criterion to be applied to generation expansion studies and operation planning, as well as the calculation of the physical guarantees of energy and power of the generation projects. The criterion for assessing the suitability of the energy supply will be based on (i) the conditional expected value of the energy not supplied and (ii) the conditional expected value of the marginal operating cost. With respect to power, it will be based on (i) the explicit risk of insufficient power supply and (ii) the conditional expected value of insufficient power supply. The parameters and limits must still be defined by the MME through an order.

2. Distribution

Distribution activities are regulated under a monopoly and are carried out within the framework of a 30-year concession which can be extended during the same period at the discretion of the granting authority (Union). At the end of the concession period, the assets will revert to the Union and the concessionaire must be compensated for the investments made that have not depreciated or amortised.

The Brazilian regulatory framework is based on a maximum price system that is revised every four to five years, depending on each concession contract, known as a rate revision, in which the main rate parameters are defined. COELBA and COSERN have a rate cycle of five years, while CELPE and ELEKTRO have a four-year cycle.

In addition, ANEEL annually updates the rates with the intention of ensuring that the cost of energy acquisition, the charges and the costs of transmission (known as parcel A) are transferred to the rate, as well as updating the costs of distribution (known as parcel B) with inflation, discounting a predetermined efficiency factor (factor X).

An annual tracking mechanism called the CVA (*Account to Offset the Variation of the Values of the Items of Parcel "A"*) is used to record the imbalances in Parcel A, which must be transferred to the rates in the next rate review process.

Rate revisions and adjustments

On 20 August 2019, ANEEL approved the fifth rate revision of ELEKTRO, reducing its rates by an average of 8.31%. It entered into force on 27 August with a Parcel A reduction of 7.3%, while Parcel B increased by 2.3%.

In addition, during 2019, the annual rate adjustments of CELPE, COSERN and COELBA took place:

- On 16 April, ANEEL approved COSERN's annual rate adjustment, increasing its rates on average by 4.73% and entering into force on 22 April 2019. The highlight was a 7.59% increase in Parcel B as a result of the update with IGP-M inflation minus factor X.

- On 16 April, ANEEL approved COELBA's annual rate adjustment, increasing its rates on average by 6.22% and entering into force on 22 April 2019. The highlight was an 8.28% increase in Parcel B as a result of the update with IGP-M inflation minus factor X.

- On 23 April, ANEEL approved CELPE's annual rate adjustment, increasing its rates by 5.04% on average, entering into force on 29 April 2019. The highlight was a 7.9% increase in Parcel B as a result of the update with IGP-M inflation minus factor X.

	COELBA	ELEKTRO	CELPE	COSERN
2019 Measurement System	**Change**	**Change**	**Change**	**Change**
Variation Parcel A	(2.68%)	(7.30%)	1.75%	(0.77%)
Variation Parcel B	8.28%	2.30%	7.90%	7.59%
Economic adjustment index	1.33%	(4.99%)	3.57%	1.84%
Parcel A Monitoring Account/Other Financial Components	5.31%	7.44%	6.51%	6.48%
Total	**6.64%**	**2.45%**	**10.08%**	**8.32%**
Removal of previous year's financial components	(0.42%)	(10.77%)	(5.05%)	(3.60%)
Consumer impact	**6.22%**	**(8.32%)**	**5.03%**	**4.72%**

Demand coverage

According to the current regulation, distributors must sign a PPA with the generators in order to guarantee the supply of their demand. The cost that distributors assume for the purchase of this energy is transferred to the final rate, provided that it covers between 100% and 105% of the estimated consumption. If the distributor buys energy below 100% of its estimated demand, it may be sanctioned. On the contrary, if it has contracts above 105% of its demand, the distributor is exposed to short-term price risk.

Among the reasons that can lead to surplus energy contracted by distributors, the following are the most notable: (i) the migration of consumers to the free market (without distributors being able to reduce the quantities contracted with generators); (ii) market retraction due to economic crisis; (iii) energy contracting above the need stated by the distributor in the auction, to allow the contracting of all the energy of the marginal power plant that wins the auctions, in order to make its construction viable.

In order to solve the problem of over-contracting, the Surplus Selling Mechanism (MVE) was created in 2019, which was previously regulated by Regulation Resolution No. 824/2018. It is an optional mechanism where the distributor can sell its contractual surplus to the free market. In principle, it is a risk mechanism, since distributors define a sales price and the financial result will depend on the Cash Settlement Price (CSP), as well as the average purchase price of the distributor and its contractual position. Moreover, it is an asymmetric mechanism, since the proceeds from the sale of the surplus will be shared with consumers, while the losses are assumed by the distributor. Only in the case of being above 105% and if over-contracting cannot be considered involuntary, both profits and losses will be entirely for the distributor.

Tariff Flags System

Since 2015, energy tariffs are complemented by the Tariff Flags System, which currently has the following modalities: green, yellow and red, levels 1 and 2, indicating whether the cost of the energy transferred to the rates will be maintained or increased, depending on the electricity generation conditions. The green flag is activated when the rate, defined in the rate adjustment or revision, is sufficient to cover the cost of purchasing energy from distributors. The yellow and red colours (levels 1 and 2) increasingly mean a higher energy cost expectation than what the rate covers.

Therefore, by the adding flag value to the consumer's final rate, Tariff Flags essentially seek: (i) to ensure coverage, in the period between tariff processes, for the additional costs of purchasing energy from distributors; and (ii) to inform the sector and consumers of the actual generation costs in the system.

In 2019, the flag values were defined according to the following table based on the resolutions in effect during each period:

	Brazilian Reals/MW		
Flag	**From May 2018 REH No 2.392/2018**	**From June 2019 REH No 2.551/2019**	**From November 2019 REH No 2.628/2019**
Green	-	-	-
Yellow	10	15	13.43
Red - level 1	30	40	41.69
Red - level 2	50	60	62.43

In 2019, the green flag was set for January, February, March, April and June, the yellow flag for May, July, October and December and the level 1 red flag for August, September and November.

Remuneration parameters

Some important parameters involved in the periodic tariff reviews of distributors, such as the weighted average cost of capital (WACC), regulatory operating costs and factor X, have been reviewed through public consultations in 2019. However, no final decision on any of these parameters has yet been published.

The weighted average cost of capital (WACC) is used to define the remuneration of investments made by power distributors. On 6 March, ANEEL decided to maintain the weighted average cost of regulatory capital (WACC) at 8.09% for distribution activities. Following this decision, the methodology used in 2015 will be maintained and the current percentage will be applied until December 2019. In October 2019, ANEEL published Public Consultation No. 026/2019 with the aim of obtaining proposals on the methodology for calculating and updating the rate of remuneration of regulatory capital.

Tariff benefit review

According to Regulatory Resolution No. 800/2017, the distributor must promote the periodic review of the consumer register with tariff aids. One third of consumers listed in the register should be reviewed in 2019, one third in 2020 and the remaining third in 2021. In accordance with the established timetable, distributors notified consumers of the need to submit the supporting documentation justifying their entitlement to the aid over the course of 2019. Once the minimum notification period of 6 months had elapsed, in cases where the notified consumer had not submitted the required information or had not complied with the established criteria, the tariff aid was cancelled and the consumer was reclassified. Therefore, At January 2020, these consumers will receive their energy bills without tariff benefits.

3. Transmission

In the electric transmission business, NEOENERGIA has five concession contracts between 2009 and 2013, which include transmission lines and substations, as well as reinforcements. They generate an annual allowed profit (RAP in Portuguese) of approximately BRL 83 million.

Company	Annual allowed profit (Millions of Brazilian Reals)
Afluente T	42.7
SE Narandiba	9.6
SE Extremoz II	3.2
SE Brumado II	2.0
Potiguar Sul	25.8
Total	**83.3**

These assets are subject to tariff reviews every five years, in addition to annual adjustments for currency corrections. In 2019, SE Narandiba and Potiguar Sul underwent a tariff review process and the tariff for Afluente T will be reviewed in 2020.

Also, as a result of the transmission auctions in 2017 and 2018, NEOENERGIA has the following concessions, whose projects are in the development phase and will come into operation in the coming years (RAP in accordance with REH No. 2.565/2019):

Concession	Receita Anual Permitida (RAP) (Millions of Brazilian Reals)
EKTT 1	135.6
EKTT 2	61.7
EKTT 3	120.9
EKTT 4	71.4
EKTT 5	125.0
EKTT 11	200.7
EKTT 12	72.0
EKTT 13	14.6
EKTT 14	14.3
EKTT15	13.3
Total	**829.5**

A transmission auction was held in 2019. The 30-year concession for 12 lots in 12 Brazilian states was auctioned, with a total of 2,380 km of lines and 18 substations with a transformation capacity of 7,900 MVA and an estimated total investment of BRL 4,200 million. With the highest discount levels on the starting price in history (60.30% on Total RAP), NEOENERGIA was awarded Lot 9, a project to construct 210 km of 230 kV transmission lines and the new 230/138 kV Rio Formoso II SE substation with 1,000 MVA of transformation capacity, as well as the expansion of the existing Rio das Éguas SE substation. The contracted RAP was BRL 18 million, which represents a 64.04% discount in relation to the initial RAP. The deadline for the project's construction has been set at 48 months and the estimated investment is BRL 300 million.

4. Other regulatory changes

Deregulation of the electricity market

In December 2018, the Ministerial Order announcing the deregulation of the electricity market was published, establishing that from July 2019, consumers with a capacity of over 2.5 MW may migrate to the free market and from January 2020, consumers with a capacity of over 2 MW may also do the same. In order to ensure continuity in this process, on 16 December 2019, the Ministry approved three additional stages of the deregulation time line: from 1 January 2021, consumers with a capacity of ≥ 1,500 kW; from 1 January 2022, consumers with a capacity of ≥ 1,000 kW and from 1 January 2023, consumers with a capacity of ≥ 500 kW.

Modernisation of the electricity sector

On 4 April 2019, the Ministry of Mines and Energy created the Working Group for the Modernisation of the Sector under Ordinance No. 187. Several working meetings and public consultations were held on various topics throughout 2019. On 29 October 2019, Ordinance No. 403 was published, establishing the Implementation Committee for the Modernisation of the Electricity Sector. Fifteen action fronts were identified, under the co-ordination of the Ministry, with the participation of the regulator ANEEL, the system operator ONS, the Chamber of Commerce for Electric Energy (CCEE), Empresa de Pesquisa Energética (Energy Research Company - EPE) and industry associations. The committee will be in place for two years, with the possibility of an extension for a further year.

Meanwhile, two proposals to reform the electricity sector are being considered in parliament, PL 1.917/2015 in the Chamber of Deputies and PLS 232/2016 in the Federal Senate. The texts are similar, containing proposals discussed at Public Consultation No. 33, initiated by MME in 2017, and which were also discussed in 2019 in the Working Group for the Modernisation of the Sector.

Hourly price in the short-term market

As established by Order No. 301 of 31 July 2019, the hourly price will be implemented in 2021. However, in 2020 the system operator will start using the *Modelo de Despacho Hidrotérmico de Curto Prazo* DESSEM computer model as a guideline for the dispatch of generation plants. This model will be used in the future to calculate the hourly price.

New CSP limits

On 1 October 2019, Regulatory Resolution No. 858 was published, with the new criteria for calculating the CSP limits. The minimum value will be the highest value between the regulatory variable costs (Energy Optimisation Tariff, EOT) of Itaipu and the EOT of all other power plants. With respect to the maximum value, two values are established: a structural maximum limit and an hourly maximum limit, the latter being valid only when the implementation of the hourly CSP is completed (2021). If the daily average of the CSP exceeds the structural value, an adjustment will be made throughout the daily curve so that it does not exceed that value. The values for 2020 were published on 17 December 2019: the minimum CSP will be BRL 39.68 per MWh and the maximum structural CSP will be BRL 559.75 per MWh. A maximum hourly CSP of BRL 1,148.36 per MWh was also published, but only for use in the shadow operation of the new DESSEM computer system.

Extension of the Electricity for Everyone programme until December 2022 (Decree No. 9.357/2018)

In October 2019, COELBA signed the contract for the tenth phase of the Electricity for Everyone programme, with an investment of BRL 1,052,914.19 for the execution of the works included in the Universalisation Plan. The *Electricity for Everyone* programme was created in 2003 and aims to provide electricity to rural, isolated and economically disadvantaged areas. The programme is coordinated by the Ministry of Energy and Mines, run by Eletrobrás and executed by concession-holders and rural electrification cooperatives. This programme is funded jointly with: 1) sectoral funds such as the *Conta de Desenvolvimento Energético* (CDE) and the *Reserva Global de Reversão* (RGR), 2) by State Governments and 3) by distribution companies (which subsequently recover investments in the corresponding tariff reviews).

New resolution on sanctions imposed on electricity sector agents

In June 2019, ANEEL published Regulatory Resolution No. 846/2019, in force since December 2019 and which approves the procedures, parameters and criteria for the imposition of sanctions on electricity sector agents and establishes general guidelines for inspection. Amendments have been made to the framework of offences by creating new types of sanctions. In addition, the limit for the payment of fines has been increased to 20 days, and the maximum percentage of fines within the penalty groups has also been amended. It also establishes the possibility of suspending the right to participate in tenders, to enter into contracts with ANEEL and to receive authorisations, when the technical/commercial indicators are not met, the deadline for the commissioning of the facilities is not respected and the obligations arising from the inspections are not fulfilled, among other things.

CONSOLIDATED DIRECTORS' REPORT 2019

This directors' report has been prepared taking into consideration the "Guide of recommendations for the development of directors' reports of listed companies", published by the CNMV in July 2013.

1. COMPANY'S POSITION

I. IBERDROLA's identity and its triple dimension: business, corporate and institutional

IBERDROLA heads a leading global group in the energy sector. Its activities are focused on the production, transportation, distribution and supply of electricity, which is essential for millions of users and customers. IBERDROLA relies on environmentally friendly and highly innovative sources of energy and technologies to remain at the forefront of digital transformation.

IBERDROLA pursues its corporate interests by observing best corporate governance practices and taking into consideration all stakeholders affected by its business activities and influence as an institution. It therefore seeks to build a relationship framework based on continuous dialogue and active listening, as well as on the principles of transparency and equal treatment, thus enabling stakeholders to become part of its successful business enterprise and allowing to create strong ties with them that foster trust and instil a sense of belonging to a great company. In particular, IBERDROLA has been a pioneer in enhancing the effective engagement and involvement of shareholders in the life of the company. It considers this to be of paramount importance to remain a leader in this area.

Acutely aware of the clear economic, social and environmental impacts of all of its activities, IBERDROLA maintains a constant two-way dialogue with its stakeholders and has accepted the mandate of its shareholders, by undertaking various reforms of its by-laws, to protect the communities in which it operates and help them prosper, including the most fragile or vulnerable groups.

IBERDROLA therefore views this mandate as an opportunity to work together in building a healthier, more accessible energy model based on electricity, while observing human rights and championing initiatives that help achieve a more just, egalitarian and healthy society. In doing so, it focuses on accomplishing the Sustainable Development Goals (SDGs) approved by the United Nations, most notably those relating to universal access to electricity and the fight against climate change, but also others such as promoting innovation, improving levels of education, protecting biodiversity, gender equality, and the empowerment of women, as well as the protection of disadvantaged groups. Ultimately, it seeks to make all stakeholders part of the social dividend —or shared value— generated by its activities, meaning the sum of all the economic, social and environmental values that a company generates through its activities across the communities in which it operates.

II. The IBERDROLA Group

IBERDROLA is the parent and holding company of a large group of enterprises present in Spain, Portugal, the United Kingdom, the United States, Mexico and Brazil, among other countries. IBERDROLA is structured into three levels to segregate the functions of strategy, supervision and control of the overall group (entrusted to the holding company); those of organising and coordinating the businesses of each country (entrusted to the sub-holding companies); and those involving the day-to-day administration and effective management of each of those businesses (the purview of the companies heading each business unit).

The corporate and governance structure of the IBERDROLA Group works in conjunction with the business model, which allows the businesses to be globally integrated, helps achieve the maximum operational efficiency of the various units and ensures the effective dissemination, implementation and monitoring of the general strategy, the basic management guidelines established for each business, and best practices.

The business model combines a decentralised decision-making structure, inspired by the principle of "subsidiarity", with robust coordination mechanisms to ensure that all of the Group's businesses are globally integrated; all on the basis of an effective system of checks and balances to prevent management power from becoming centralised in a single governance body or person.

The IBERDROLA Group has minority shareholders in both the holding company and in certain sub-holding companies, such as the Brazilian company Neoenergia, S.A. or the North American company Avangrid, Inc., which is also listed on the stock market. Through a special framework to strengthen the autonomy and independence of its listed sub-holding companies, IBERDROLA ensures that the legitimate interests of the shareholders of such companies other than those of IBERDROLA are protected and harmoniously co-exist with the wider interests of the Group and of the shareholders of the main holding company.

The company has undergone a major transformation over the last 15 years, staying clearly ahead of the energy transition in order to tackle the challenges posed by climate change and the need for clean a clean, trustworthy smart business model.

Boasting a track record that spans over 170 years, today Iberdrola is a multinational group leading the energy sector. It is the top wind producer and one of the largest utilities in stock market capitalisation worldwide. The Group supplies electricity to some 100 million people in the countries in which it operates.

We lead energy transition towards a sustainable model through investments in renewables, smart networks, large-scale energy storage and digital transformation to offer advanced products and services to our customers.

As a result of our commitment towards the environment and our support to the decarbonisation of the economy, we stand out as a leading electricity company in renewables and we have reduced our emissions in Europe in 75% since 2000, reaching levels that are 70% below the average of European sector companies.

The IBERDROL Group is today present in the following countries and geographical areas, were we hold a leading position and are a bench marking reference due to our sustainable energy model.

- Spain: first energy company and first wind producer.
- International: present in Portugal, France, Italy, Germany, Greece, Hungary, Romania, Cyprus, etc.
- United Kingdom: 100% renewable producer, transmission and distribution networks in Scotland, Wales and England.
- United States: Electricity and gas distributor in New York, Maine, Connecticut and Massachusetts and third wind producer.
- Brazil: one of the energy leaders.
- Mexico: first private electricity producer.

1.1. Business model

The current trends in the energy sector — the decarbonisation and electrification of the economy, technological advances and customers' increased connectivity — confirm the focus of our three global businesses: networks, renewables and generation and retail, and all of them centred on the customer.

The IBERDROLA Group accelerates value creation through five strategic pathways: profitable growth, operational excellence, a customer-focused approach, optimisation of capital, and finally digitisation and innovation.

To make its business model as competitive as possible, IBERDROLA has organised the management of its activities into three global businesses:

Renewable Business: The renewables area is tasked with generating and marketing electricity from renewable sources: wind (onshore and offshore), hydroelectric and mini-hydroelectric, solar thermal, photovoltaic, biomass, etc.

Networks business: the networks area is responsible for the construction, operation and maintenance of power lines, substations, transformer substations and other facilities for delivering power from the production centres to the end user.

Generation and Retail businesses: The generation and retail area focuses on the production of electricity through the construction, operation and maintenance of generation plants and the sale and purchase of energy in wholesale markets. It also supplies energy and additional products and services to end customers.

1.2 Purpose and Values of the IBERDROLA Group

The Group's purpose, or reason for being, is none other than to continue working together to build a healthier and more accessible energy model increasingly based on electricity. In response to recent developments and best practices in the realm of corporate governance, this purpose —now part of the company— replaces the mission and vision that the IBERDROLA Group had until now been pursuing, while also identifying its ultimate objective; the one that steers its business, corporate and institutional reality and makes it a major player in ensuring the sustainable economic and social progress of all its stakeholders and all communities in which it operates. This very purpose generates the social and the economic dividend embodied in the by-Laws, which represent the Group's real and effective contribution to the different economic and social environments in which it is present.

The Group's purpose is based on three corporate values: sustainable energy, integrating force and driving force, all of which express its desire to engage with and commit to the social reality in which its business activities unfold, with all the demands, challenges and opportunities this entails.

The corporate purpose and values, embodied in the Purpose and Values of the IBERDROLA Group, are the general principles comprising the corporate governance system, and are also the basis for the Code of Ethics; a binding and mandatory set of commitments that all directors, managers, employees and suppliers of the Group have embraced as part of their pledge to implement and achieve these goals and values.

The Group's purpose

The Group's purpose and therefore our reason for being is to continue working together to build a healthier and more accessible energy model increasingly based on electricity.

This purpose, focused on the well-being of people and the preservation of our planet, reflects the strategy that the Group has been pursuing for years and its commitment to continue fighting for:

a) A real and global energy transition which, based on the decarbonisation and electrification of the energy sector in particular and of the economy as a whole, contributes to the fight against climate change and generates new opportunities for economic, social and environmental development and progress.

b) An energy model that is more electric, forsaking the use of fossil fuels to make wider use of renewable energy sources, efficient energy storage systems, smart grids and digital transformation.

c) An energy model that is healthier for people, whose short-term health and well-being depend on the quality of their environment.

d) An energy model that is more accessible for all, favouring inclusiveness, equality, equity and social development.

e) An energy model that is built on collaboration with all of the agents involved and with society as a whole.

The Group's values

To achieve the Group's purpose, the Group strategy and all of its actions are inspired by and based on three core values:

a) Sustainable energy: we aim to inspire while creating economic, social and environmental value for all the communities in which we operate, with our sights firmly set on the future.

   We act responsibly toward people, communities and the environment and we are fully committed to the sustainable development strategy defined by the Company's Board of Directors, which seeks to maximise the social dividend generated by the Group's activities and businesses, from which all of our stakeholders will ultimately benefit.

   To achieve this, all Group employees work in accordance with the ethical principles enshrined in our Code of Ethics.

   More precisely, they seek to ensure transparency, the safety of people, sustainable value creation for the Company and its surrounding environment, while striving to identify and understand the expectations of all stakeholders and working to ensure the well-being of both present and future generations.

b) Integrating force: we possess great strength and a deep sense of responsibility and we therefore work together and combine our talents towards a purpose that will benefit everyone involved.

The Group's employees make up a diverse team that is ready to achieve the success of our business project. To this end, the Group seeks to ensure that its professionals work without geographic, cultural or operational barriers, share talent, knowledge and information, and adopt a global and long-term vision.

In building this team, the Group drives the development of its professionals and helps train future generations in order to improve levels of enthusiasm, empathy, creativity and initiative at work, while making them better people and ensuring their respect for human relations. The Group also fosters and encourages genuine and constructive dialogue between its human team and its other stakeholders.

c) Driving force: we make small and large changes while being efficient and self-demanding, always in pursuit of continuous improvement.

We innovate and instigate large and small changes that make life easier for people.

We expect our professionals to adopt a non-conformist attitude, to constantly seek excellence and opportunities for improvement, to embrace change and new ideas, to learn from mistakes, to evolve with feedback on their actions and to anticipate the needs of stakeholders. To achieve this, we favour simple, agile and efficient processes that feature the latest technology for organising work and sharing information.

1.3. IBERDROLA's corporate governance model

Corporate governance system

The Corporate Governance System constantly updates its corporate governance system, consisting of By-Laws, the Purpose and Values of the IBERDROLA Group and the Code of Ethics, the Corporate Policies, the governance rules of the corporate decision-making bodies and other internal committees, and compliance. The Company promotes the creation of working groups composed of authorised representatives of the stakeholder group(s) affected in each case, Company employees and top-level external experts in the field concerned.

IBERDROLA develops its strategy in accordance with the purpose and values to which all Group entities and people are committed. Its common element is the creation of sustainable value, seeking social dividend and leadership in the development of its activities.

The general corporate governance policy contains a summary of the basic principles regulating the corporate governance of the Company and of the Group and of its most important components. They are all available on www.iberdrola.com.

1.4 Corporate structure and Governance and Business model of the Group

Given the nature of the activities carried out by the IBERDROLA Group, its organization responds to the strategic business units, rather than product and service lines. These businesses are managed independently, as they respond to different technologies, regulations, and geographic markets (Note 7).

The IBERDROLA Group has a decentralised structure and management model to approximate the decision-making to places where they should have effect, through the subholding companies and parent companies of the businesses. In addition, the independence and listed subholding companies reinforced autonomy are guaranteed.

The corporate structure encompasses the Company (IBERDROLA, S.A.), subholding companies and business parent companies.

- IBERDROLA, S.A. (Parent company)

  The Board of Directors of the Company defines and supervises the Group's policies, strategies and general guidelines for the management thereof and adopts strategic decisions.

  The chairman of the Board of Directors and chief executive officer of the Operating Committee, with the technical support of the Operating Committee, the Group's Business CEO and the rest of the management team, assumes the duty of organisation and strategic coordination of the Group through the dissemination, implementation and monitoring of the overall strategy and of the basic management guidelines established by the Board of Directors.

- Subholding companies

  The subholding companies, which group investments of the head of business companies that develop the activities in the different countries where the Group operates.

  They contribute to organisation and strategic coordination in their respective countries, disseminating and implementing the Group's guidelines and management policies.

  They centralise common services provided to those head of business companies, always in accordance with the provisions of the applicable law and, in particular, the regulations on the separation of activities.

  The subholdings have boards with independent directors, and their own chief executive officer, Audit and Compliance Committees, Internal Audit departments and Compliance units or departments.

  On the other hand, companies that are not wholly-owned by the Group keep their own corporate and governance structure in order to comply with all the contractual obligations undertaken with other external shareholders.

- Listed subholding companies

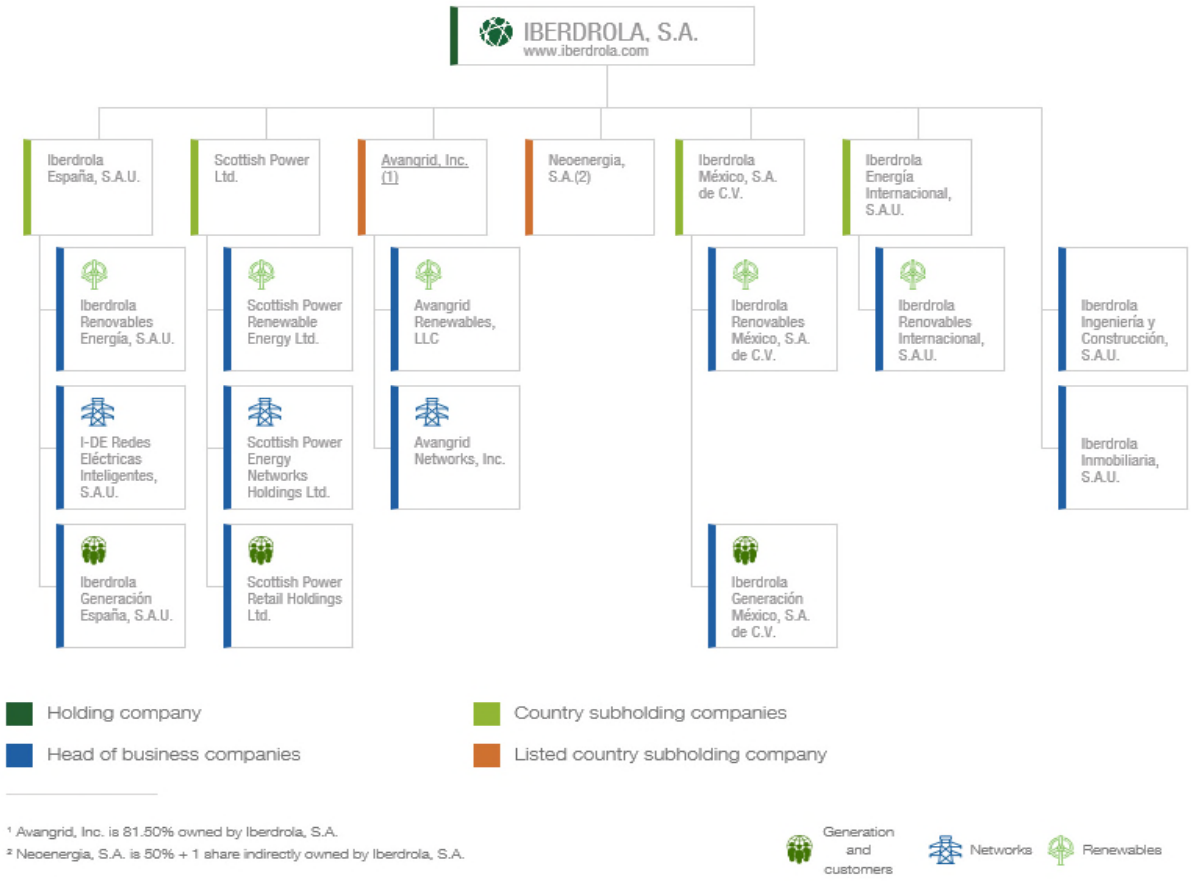
  Listed subholding companieshave a special framework of reinforced autonomy projected in the scope of regulations, related transactions and management.

- Head of business companies

  The head of business companies assume decentralised executive responsibilitiesand they carry out the day-to-day administration and effective management of each of the businesses, and are responsible for the day-to-day control thereof.

  They are organised through their Boards of Directors, which may include independent directors, and their own governing bodies; they may also have their own audit committees, internal audit areas, and compliance departments.

Simplified scheme of the corporate structure of the Group



This corporate set-up seeks to ensure agile and rapid decision-making in the day-to-day management of the companies that head the various businesses, while at the same time ensuring proper levels of coordination at the Group level, as a result of the supervisory functions performed by the Company's sub-holding companies.

Based on this corporate structure, the Group's governance model is determined by the following principles, which duly distinguish between supervisory and control functions on the one hand, and the effective day-to-day management of the Group on the other:

a) Vesting of powers in the Board of Directors to approve the Group's strategic objectives, define its organisational model and supervise and enforce its effective implementation and compliance.

b) The organisation and strategic coordination of the Group is entrusted to the chairman of the Board of Directors and chief executive officer (with the technical support of the Operating Committee), the Managing Director of Business, who has overall responsibility for all of the Group's businesses, and the rest of the management team.

c) The strategic organisation and coordination function is further strengthened through the sub-holding companies for those countries and businesses decided by the Board of Directors.

d) The head of business companies of the Group assume decentralised executive responsibilities. They carry out the day-to-day administration and effective management of each of the businesses, and are responsible for the day-to-day control thereof.

Within the Group's corporate and governance structure, the Operating Committee is an internal committee of the Company whose core remit is to provide technical, information and management support to the chairman of the Board of Directors and chief executive officer, in order to facilitate the development of the Group's business model. The composition and duties of the committee are described in the Internal Regulations on the Composition and Duties of the Operating Committee.

1.5. Organisation of the Board, or bodies in which it delegates its decision, including control functions and the policy followed with minority interests.

A comprehensive description of the governance structure of the Company, functions and internal regulations of the committees can be seen in Appendix C of the Annual Corporate Governance Report, which forms part of this directors report.

1.6. Regulatory framework of the activities

A comprehensive description of sector regulation and operation of electric and gas system in the markets in which the Group operates can be seen in Appendix II "Sector regulation and functioning of the electricity and gas system" of these annual accounts.

1.7. Main products and services, production processes

The main products that IBERDROLA offers to its customers are power and natural gas, both in the wholesale and retail markets reaching the final consumer. Also offers a wide range of products, services and solutions in the fields of:

- Improving the quality of life, calm and safety of the consumer.
- Efficiency and energy services.
- Caring for the environment: renewable energy and sustainable mobility.
- Power quality and safety of the facilities.
- Installation of electrical infrastructure.
- Global management of facilities and energy supplies.

Through its subsidiaries it also provides engineering and construction services of power generation facilities, distribution and control; operation and maintenance of power generation facilities, management and promotion of the ground; and sale and rental of housing, offices and commercials. More detailed information can be found in www.iberdrola.com, in "customers" section.

As a general rule, companies directly manage the activities that belong to its core business, and outsource other estimated to be developed more efficiently by other specialized companies, which IBERDROLA requires certain quality standards and responsible behaviour in environmental, social and labour fields.

This information can be extended with corresponding indicators described in the Sustainability Report.

1.8. Strategic principles for the 2018-2022 period

Twenty years ago, IBERDROLA anticipated climate change would be one of the most significant challenges of our time and adapted its business model to this reality. Ever since, IBERDROLA has invested more than Euros 100,000 million in order to achieve a safe, efficient decarbonised energy model. The energy scenario on which Iberdrola will be operating in the years ahead is based in three pillars:

- The need to decarbonise the global economy.
- Technological advances, continuing the trend toward increased efficiency in terms of the sources of renewable energy and electricity grids.
- New demands from consumers, who will need new energy services possible thanks the possibilities offered by digitalisation.

All this will imply an increase in electricity demand, which is at the core of energy transition, substantially increasing its participation in the total consumption of end energy[1], highlighting the importance of electrifying other uses of energy, such as, for example, transport or cold and heat industry.

To satisfy this growing demand of electricity it will be essential to increase investment in renewable energies, which, in accordance with the International Energy Agency, could attain two thirds of total electricity generation in 2040 and also in efficient, smart and flexible transmission and distribution electricity infrastructures.

In face of this scenario, IBERDROLA will continue developing its strategy in the different markets where it is present, consolidating its position in renewable generation, networks and storage:

- In Spain, IBERDROLA will continue reinforcing its leading position if networks and renewable energies making the most of the visibility resulting from the Energy and Climate Integrated National Plan. Also, the company will also continue to develop its renewable energy portfolio through wind and solar power projects, to set the grounds for future growth.
- In the United States, through its subsidiary company AVANGRID, it has eight regulated transmission and distribution companies in in New York, Connecticut, Maine and Massachusetts and is among the country's three largest wind energy producer, the Group will continue investing in energy infrastructures and renewables through the platform and will continue its growth strategy in offshore and onshore wind, as well as photovoltaic power.

[1] According to the International Energy Agency, the contribution of electricity to the final demand of energy could increase from 19% in 2018 to 31% in 2040 (World Energy Outlook 2019, Sustainable Development Scenario).

- In the United Kingdom, where IBERDROLA has become the first 100% renewable utility, its commitment to renewable energy will continue to be underlined, especially that of offshore wind power. The development of the "East Anglia One" offshore wind farms in the North Sea, of 714 MW, which will be in full operation in 2020, stands out. Moreover, the Group will continue to develop transmission and network infrastructures.

- In Mexico, where it will consolidate is position as the second largest producer in the country through the construction of several efficient renewable generation projects.

- In Brazil, through NEONERGIA, one of the country's largest electricity. The company is present in 18 states and has growth opportunities in the fields of renewable energy and transmission and distribution networks.

- In other countries such as Germany, France, Portugal, Italy or Ireland.

Operating efficiency

IBERDROLA will continue to boost its operating efficiency on the strength of technical progress in digitalisation of all its synergies resulting from the homogenization of processes through the implementation of the best practices of the group in all its businesses.

This profitable growth strategy will lead to sustainable growth of profit, allowing the company to improve remuneration to shareholders in a growing sustainable manner in line with profit, as well as maintaining a strong financial position.

This caption of the directors' report of IBERDROLA contains forward-looking information, including financial projections and estimates and their underlying assumptions, statements regarding plans, objectives and expectations with respect to future operations, capital expenditures, synergies, products and services and statements regarding future performance or administrators estimates which are based on assumptions that are considered reasonable by them.

Although IBERDROLA believes that the expectations reflected in such forward-looking statements are reasonable, investors are cautioned that forward-looking information and statements are subject to various risks and uncertainties, many of which are difficult to predict and generally beyond the control of IBERDROLA, risks that could cause actual results and developments to differ materially from those expressed in, or implied or projected by, the forward-looking information and statements.

Forward-looking statements are not guarantees of future performance and have not been reviewed by the auditors of IBERDROLA. You are cautioned not to place undue reliance on the forward-looking statements, which speak only at the date they were made. All subsequent oral or written forward-looking statements included in this report are expressly qualified in their entirety by the cautionary statement above. All forward looking statements included herein are based on the information available on the date hereof. Except for required by applicable law, IBERDROLA undertakes no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

2. BUSINESS EVOLUTION AND RESULTS

2.1 Global environment

In 2019, the average evolution of IBERDROLA's currencies against the euro was: the US dollar and sterling pound went up 5.5% and 0.7%, respectively, whereas the Brazilian reals went down 2.5%.

With regard to trends in terms of demand and electrical output during the period in the main activity areas of the company, it is worth mentioning that:

- The energy balance in the peninsular system in the first half of 2019 has been characterised by an increase in combined cycles (+93%), nuclear (+5%), solar (+19%) and wind (+8%) production, whereas there was a decrease in coal (-69%) and hydroelectric energy (-27%), compared to same period last year.

  Moreover, in terms of demand, it increased by 2% with respect to 2018, while in terms adjusted for work and temperature, it grew by 0.3%.

- In the United Kingdom, electricity demand dropped by 9.7% compared to 2018, whereas gas demand dropped by 7%.

- In the area where Avangrid operates on the east coast of the United States, electricity and gas demand increased by 1.9% and 2.2%, respectively, compared to 2018.

- On the other hand, in the Iberdrola area in Brazil, electricity demand rose by 3.9% compared to 2018.

2.2 Basic indicators

At the end of 2019, the IBERDROLA Group had 48,922 MW installed , of which 66% produce emission-free energy while operating at a very low variable cost. In the table below distribution classified by countries and technologies is shown:

Power per countries (MW)	2019	2018	MW change
Spain	26,203	25,574	629
United Kingdom	2,506	2,086	420
United States	7,900	7,180	720
Mexico	9,463	6,592	2,871
Brazil	1,885	1,640	245
IEI	965	961	4
Total	**48,922**	**44,033**	**4,889**

Power per technology (MW)	2019	2018	MW change
Renewables	29,113	26,908	2,205
Onshore wind	16,417	15,251	1,166
Offshore wind	964	544	420
Hydroelectric	10,666	10,421	245
Mini hydroelectric	303	300	3
Solar and other	763	392	371
Nuclear	3,166	3,166	–
Gas combined cycles	15,124	12,440	2,684
Cogeneration	645	645	–
Coal	874	874	–
Total	**48,922**	**44,033**	**4,889**

The IBERDROLA Group's total production in this period rose by 4,6% to 143,004 GWh (136,737 GWh in 2018). The distribution by geographical areas and technologies is the following:

Net production per country (GWh)	2019	2018	% charge
Spain	57,492	56,636	1.5
United Kingdom	4,617	10,576	(56.3)
United States	20,506	19,462	5.4
Mexico	51,068	41,323	23.6
Brazil	6,656	6,560	1.5
IEI	2,665	2,180	22.2
Total	**143,004**	**136,737**	**4.6**

Net production per technology (GWh)	2019	2018	% charge
Renewables	50,770	53,684	(5.4)
Onshore wind	36,591	35,711	2.5
Offshore wind	2,211	1,642	34.7
Hydroelectric	10,615	15,711	(32.4)
Mini hydroelectric	340	279	21.9
Solar and other	1,013	341	197.1
Nuclear	23,630	23,419	0.9
Gas combined cycle	65,825	55,910	17.7
Cogeneration	2,453	2,108	16.4
Coal	326	1,616	(79.8)
Total	**143,004**	**136,737**	**4.6**

In the Renewables business, the greater contribution of offshore wind from Wikinger (it was commissioned progressively during the first half of 2018) and the beginning of operations of East Anglia 1, as well as the contribution of new photovoltaic capacity installed in Mexico, offset the lower hydroelectric output.

2.3 Business evolution

2.3.1 Analysis of the profit and loss account

The key figures for the financial year 2019 are as follows:

Millions of Euros	2019	2018	% charge
Revenue	36,438	35,076	3.9
Gross margin (1)	16,263	15,435	5.4
EBITDA (2)	10,104	9,349	8.1
EBIT (3)	5,877	5,439	8.0
Net profit for the period attributable to the parent	3,406	3,014	13.0

(1) Gross Margin: Revenue – Procurements

(2) EBITDA: Operating profit+ Amortisation and provisions + Valuation adjustments, trade and contract assets

(3) EBIT: Operating profit

In 2019, the IBERDROLA Group attained a record-breaking EBITDA of Euros 10,104 million, exceeding for the first time the amount of Euros 10,000 million, representing a growth of 8.1%.

Profit for the year overpassed the goals initially set. All countries had a positive performance thanks to the growth of the Networks and Generation and Retail businesses, which has resulted in the parent company's profit for the year rising Euros 392 million, up 13% compared to 2018 to reach Euros 3,406 million.

The IBERDROLA Group adopted on 1 January 2019 IFRS 16 “Leases” (Note 2.a).

2.3.1.1 *Gross Margin*

The gross margin stood at Euros 16,263 million, increasing Euros 828 million, up 5.4% compared to 2018, supported by the contribution of all countries. The improvement of reference currencies improves Gross Margin in Euros 215 million.

Gross margin by business is as follows:

Millions of Euros	2019	2018	% charge
Networks business	8,131	7,641	6.4
Liberalised business	4,688	4,168	12.5
Renewables business	3,446	3,611	(4.6)
Other businesses	44	58	(24.1)
Corporation and adjustments	(46)	(43)	(7.0)
Gross Margin	**16,263**	**15,435**	**5.4**

- **Networks Business**

The Networks business improves its contribution by Euros 490 million, 6.4%, and reached Euros 8,131 million (Euros 7,641 million in 2018). The contribution by geographies is as follows:

Millions of Euros	2019	2018	% charge
Spain	2,117	2,109	0.4
United Kingdom	1,311	1,222	7.3
United States	2,875	2,780	3.4
Brazil	1,828	1,530	19.5
Total	**8,131**	**7,641**	**6.4**

As notable events in the evolution of Networks' gross margin during the period we can highlight the following:

- Gross margin in Spain reached Euros 2,117 million, Euros 8 million higher than the previous year, mainly explained by the assignment of the optic fibre network in Euros 49 million. Said effects have been offset by recognising in 2018 a positive extraordinary impact of Euros 53 million. Other effects offset among each other rose gross margin in Euros 12 million.

- The United Kingdom contributes Euros 1,311 million, up by Euros 89 million compared to 2018 (7.3%). The revaluation of the Sterling Point implies Euros 10 million. The better income from transmission and distribution due to the larger asset portfolio explains this increase.

- The contribution of the United States in the period stands at Euros 2,875 million, Euros 95 million higher than in the previous year (3.4%), mainly due to a greater contribution of New York and Connecticut rate cases, the recovery of expenses from the previous years storms and the impact of exchange rates (Euros 150 million). On the negative side, rate adjustment stands out. It took place from the third quarter of 2018, when the impact of the tax reform (Euros 69 million) was transferred onto customers, which had no impact on net profit due to lower taxes as a result, as well as the adjustment of the Revenue Decoupling Mechanism, consisting in the return to customers of previous year's volumes exceeding those recognised by the rate regulator.

- In Brazil gross margin reaches Euros 1,828 million (19.5%), Euros 298 million more than in 2018, despite the negative impact of the devaluation of the Brazilian real (Euros 46 million), due to positive tariff reviews for COELBA and COSERN from April 2018 and for ELEKTRO from August 2019, the greater contribution of transmission assets and the increase in demand (3.9%).

- **Renewables business**

The Renewables business decreased its gross margin by 4.6% to Euros 3,446 million (Euros 3,611 million in 2018), Euros 165 million lower than 2018.

The contribution by geographies to gross margin by the Renewables Business is:

Millions of Euros	2019	2018	% charge
Spain	1,251	1,580	(20.8)
United Kingdom	678	644	5.3
United States	852	835	2.0
Brazil	174	178	(2.2)
Mexico	113	88	28.4
IEI	378	286	32.2
Total	**3,446**	**3,611**	**(4.6)**

Below, the evolution of the Renewables Business's gross margin is explained:

- In Spain, gross margin reached Euros 1,251 million, down by 20.8%, compared to the same period in 2018, due to lower wind and hydroelectrical power output in 7.2% and 34.8% and prices in wholesale markets.

- The United Kingdom's gross margin increased by Euros 34 million to Euros 678 million (5.3%). The revaluation of the Sterling Pound implies Euros 5 million, as well as better prices, which offset the sale of hydroelectric power assets at the end of 2018.

- The contribution of the United States for the period totalled Euros 852 million (2%), up by Euros 17 million more compared to the previous year. The revaluation of the US dollar has a positive impact of Euros 45 million since the local currency goes down due to the fact that the greater installed power has not been able to compensate low wind conditions and the maturity of PPA agreements.

- Mexico improved its contribution by Euros 25 million and reached Euros 13 million in 2019. The revaluation of the US dollar improves this margin on Euros 6 million and the increase in output up by 50.7% in Euros 19 million due to the increase of solar capacity, which compensates lower wind output.

- Brazil contributes Euros 4 million less compared to 2018 due to the depreciation of the Brazilian reals resulting from lower wind output (-6.0%), partially offset by an increase in hydroelectrical power commissioned in Baixo Iguazú.

- Iberdrola Energía Internacional (IEI), improves Euros 92 million, reaching Euros 378 million driven by the contribution of the Wikinger offshore wind farm, which was progressively commissioned in 2018 and whose output went up to 1,277 GWh (887 GWh in 2018) improving its contribution in Euros 75 million. Better output in rest of the world, better prices and exchange rates explain the Euros 7 million.

- **Liberalised business**

The Liberalised business (Generation and Supply) increased its contribution to gross margin in Euros 520 million reaching Euros 4,688 thousand (Euros 4,168 million in 2018), broken down by countries as follows:

Millions of Euros	2019	2018	% charge
Spain	2,932	2,396	22.4
United Kingdom	684	863	(20.7)
Mexico	935	756	23.7
Brazil	92	134	(31.3)
IEI	45	19	136.8
Total	**4,688**	**4,168**	**12.5**

- In Spain gross margin reaches Euros 2,932 million, up Euros 536 million (22.4%) compared to 2018, mainly due to higher output, better margins, active management of retail's portfolio (energy and smart solutions) and the impact of recognising the assignment of long-term LNG supply agreements at fair value, resulting in Euros 87 million.

- The UK's gross margin stood at Euros 684 million (-20.7%) due to the impact of lower margins as a result of price cap and the market environment recording less sales both in electricity (9.7%) and gas (7%).

- Mexico contributes Euros 935 million to gross margin (23.7%), Euros 179 million more than in 2018 due to an increase in capacity during 2018 which became fully operating in 2019 (combined cycle of Escobedo, cogeneration of Bajío and repowering of Monterrey IV) and the commissioning of the combined cycle of El Carmen in September 2019 and Topolobampo II in October 2019. The appreciation of the US dollar amounts to Euros 49 million.

- Brazil's gross margin went down Euros 42 million to Euros 92 million due to the non-recurring impact of the retail business and lower margins.

- Iberdrola Energía Internacional (IEI), formerly Rest of the World, grouping retail activity in Europe, contributes Euros 45 million to gross margin, up Euros 26 million compared to 2018.

- **Other businesses**

The contribution of other businesses amounted to Euros 44 million, a decrease of Euros 14 million compared to 2018 (Euros 58 million in 2018), due to the sale of the trading and gas storage business in the United States in 2018.

2.3.1.2 *Gross Operating result – EBITDA*

Consolidated EBITDA increased by Euros 755 million, 8.1%, to Euros 10,104 million (compared to Euros 9,349 million in 2018). The impact of variations in exchange rates imply Euros 123 million. Notwithstanding these effects, EBITDA would improve in 6.8% amounting to Euros 632 million.

Contributions are detailed in the following table:

Millions of Euros	2019	2018	% charge
Networks Business	5,262	4,915	7.1
Liberalised business	2,469	2,038	21.1
Renewables business	2,385	2,445	(2.5)
Other businesses	28	29	(3.4)
Corporation and adjustments	(40)	(78)	48.7
EBITDA	**10,104**	**9,349**	**8.1**

The EBITDA performance variables are explained as follows:

- **Net operating expenses**

Net operating expenses go up Euros 175 million (4.2%) to Euros 4,330 million (Euros 4,155 million in 2018). The impact of exchange rates increases net operating expenses in Euros 64 million. Without taking this into account, the increase would be of Euros 111 million, up 2.7%, including Euros 50 million for efficiency measures, recognised mainly in the fourth quarter. They will have a positive income in upcoming years.

Millions of Euros	2019	2018	% charge
Networks Business	2,184	2,079	5.1
Liberalised business	1,411	1,328	6.3
Renewables business	719	698	3.0
Other businesses	15	28	(46.4)
Corporation and adjustments	1	22	(95.5)
Net operating expenses	**4,330**	**4,155**	**4.2**

- **Taxes**

Taxes decrease in Euros 102 million, down 5.3% compared to 2018, to reach Euros 1,829 million due to lower taxes in Spain as a result of lower hydroelectrical power output and lower prices.

2.3.1.3. *Net Operating result – EBIT*

EBIT totalled Euros 5,877 million, 8.0% lower in comparison with 2018 (Euros 5,439 million), and the breakdown by businesses is:

Millions of Euros	2019	2018	% charge
Networks business	3,296	3,034	8.6
Liberalised business	1,492	1,139	31.0
Renewables business	1,222	1,397	(12.5)
Other businesses	17	20	(15.0)
Corporation and adjustments	(150)	(151)	0.7
EBIT	**5,877**	**5,439**	**8.1**

- **Valuation adjustments, trade and contract assets**
  - Trade payable provisions totalled Euros 297 million increasing Euros 44 million compared to 2018.
- **Amortisation, depreciation and provisions**
  - Amortisations and depreciation record a rise of 7.5% to Euros 3,929 million due to a greater asset portfolio and an increase in the Group's activity, as well as the impact of IFRS 16 (Euros 127 million). These were partially offset by a lower amortisation and depreciation resulting from the nuclear plants (Euros 111 million) and the sale of generation assets in the United Kingdom (Euros 70 million).
  - Provisions represent Euros 55 million due to lower reversals of provisions of the Renewables business project portfolio in the US.

2.3.1.4. *Financial Result*

Negative financial result increases in Euros 144 million to Euros 1,300 million (Euros 1,156 million in 2018). Therefore, the average cost of debt stands at 2.92% (2.97% in 2018).

The breakdown of items in said variation is as follows:

Millions of Euros	2019	2018	Change
Debt	(1,239)	(1,175)	(64)
Capitalised finance costs	223	193	30
Derivative financial instruments	(120)	(46)	(74)
Update financial provisions	(164)	(146)	(18)
Other	–	18	(18)
Total	**(1,300)**	**(1,156)**	**(144.0)**

This variation is explained by:

- debt grows Euros 64 million due to an increase in average balance, as a result of investment efforts and the application of IFRS 16 despite interest costs going down 5 basis points;
- more assets in progress, improving the comparison in Euros 30 million, and
- Derivatives go down Euros 74 million mainly due to the effect of exchange rate hedges in Mexico, offset by other headings in profit.

2.3.1.5 *Results of Companies Consolidated by the Equity Method*

"Profit/loss of equity-accounted investees" amounted to Euros 14 million

2.3.1.6 Income from non-current assets

Gains on disposal of non-current assets amounted to Euros 203 million, up Euros 194 million compared to 2018 (Euros 9 million).

In 2019 the most significant transactions have been the assignment of long-term use of exceeding capacity of the optic fibre (Euros114 million) and the sale of the 50% stake in the companies Dry Lake II, LLC., and Cooper Crossing, LLC (Euros 53 million). Additionally, there have been gains on the sale of La Joya North (Euros 9 million), due to the sale of real property (Euros 22 million) and the sale of other (Euros 5 million).

2.3.1.7 *Net profit for the period attributable to the parent*

Net income rose to Euros 3,406 million, Euros 392 million more than in the previous year, as a result of corporate income tax in the amount of Euros 914 million going down in Euros 45 million compared to 2018. Taxes are positively affected by the amendment of the Double Taxation Treaty between Spanish and the USA, eliminating US tax on dividends if the investment is higher than 80% (before they were subject to a tax rate of 10%). Since the amendment was approved several years following the execution of the agreement, IBERDROLA Group has removed deferred tax liabilities currently recognised under non-distributed earnings, resulting in an extraordinary impact of Euros 123 million.

Moreover, non-controlling interests rose 26.3% to Euros 408 million, mainly due to profit in Brazil.

2.4 Operative evolution of the period

2.4.1 *Networks business*

A. Spain

The IBERDROLA Group has approximately 11.1 million managed supply points and total distributed energy reaching 93,509 GWh, a decrease of 0.4% compared to the same period of the previous year (93,897 GWh in 2018).

The TIEPI (continuity of supply indicator) for 2019 was 45.1 minutes, an improvement of 1.12% on the previous year (44.6 minutes in 2018).

The table shows the values of the TIEPI (interruption time in minutes), and NIEPI (number of interruptions in number) in relation to the previous year:

	2019	2018
Accumulated TIEPI	45.1	44.6
Accumulated NIEPI	1.0	0.9

B. United Kingdom

The IBERDROLA Group has more than 3.5 million supply points in the United Kingdom. The volume of energy distributed during 2019 was 31,451 GWh (32,460 GWh in 2018), a decrease of 3% compared to 2018.

All quality of service indicators, the average Customer Minutes Lost (CML) and the number of consumers affected by interruptions per every 100 customers (Customer Interruptions, CI) have been as follows:

	2019		2018	
	CML	CI	CML	CI
Scottish Power Distribution (SPD)	32.4	43.4	35.9	49.4
Scottish Power Manweb (SPM)	34.8	34.2	34.7	35.4

Service quality indicators have been affected by the storms Erik in February, Gareth in March and Hannah in April. They affected Scottish Power Manweb (SPM) more particularly, resulting in average interruption time slightly going down compared to the previous year.

In August 2019, Scottish Power Energy Networks (SPEN) joined Low Carbon Strategic Partnership with the Scottish Government and Scottish Southern Energy Networks. This association is focused on the role of electrical networks in favouring energy transition towards a zero-emission economy in Scotland and dedicate its efforts to the roll-out of electric vehicles and the electrification of heating systems.

C. United States

– Distribution

In the United States IBERDROLA has 2.2 million electricity supply points. The volume of energy distributed in the year was 36,615 GWh, which represents a drop of 1.9% compared to 2018 (37,336 GWh).

The System Average Interruption Frequency Index (SAIFI) and the Customer Average Interruption Duration Index (CAIDI) are as follows:

	2019		2018	
	SAIFI	CAIDI	SAIFI	CAIDI
Central Maine Power (CMP)	1.53	2.07	1.24	2.14
NY State Electric & Gas (NYSEG)	1.35	1.93	0.84	2.07
Rochester Gas & Electric (RG&E)	0.72	1.84	0.54	1.85
United Illuminating Company (UI)	0.50	1.29	0.50	1.54

Avangrid's distribution area was impacted by the storm Quiana in February, which affected the State of New York more in particular. In the last quarter, in October, the storm Nor'Easter hit the State of Maine specifically and in November, new wind and snow storms affected service in the states of New York and Maine.

Despite these and other climate events, Avangrid increased its global customer average interruption duration index (CAIDI) and the average number of interruptions per customer (SAIFI) in 6.7 and 4.3% respectively.

– Gas

At the end of 2019 there are slightly more than million gas users in the United States who have been supplied with 60,581GWh, a 2.2% increase compared to the previous year (59,301 GWh).

D. Brazil

The evolution of demand for Brazil's distribution companies in 2019 rose by 3.9% reaching 58,991 GWh (56,760GWh in 2018), due to a better performance of economy, larger number of customers and temperatures higher than those in 2018.

Energy distributed (GWh) 100% of business	2019	2018	% Change
COELBA	21,272	20,133	5.7
COSERN	5,782	5,704	1.4
CELPE	14,263	13,777	3.5
ELEKTRO	17,674	17,146	3.1
Total	**58,991**	**56,760**	**3.9**

At the end of the year, the number of customers served by the distributors at the end of the year amounts to 14 million.

Number of customers (million) 100%	2019	2018
COELBA	6.1	5.9
COSERN	1.5	1.5
CELPE	3.7	3.7
ELEKTRO	2.7	2.7
Total	**14.0**	**13.8**

In 2019 the construction of the transmission projects awarded in the bids in 2017 and 2018 moved forward as expected and the commissioning of a static compensator of 500kV in São Paulo was completed.

Additionally, in December 2019, Neonergia was awarded a project in the bid organised by the Brazilian regulator ANEEL. The project consists in the construction of 210-km transmission line and of a substation of 1,000 MVA.

2.4.2 *Liberalised business*

A. Spain and Portugal

A.1. Generation

Installed capacity in Spain (not considering renewables) totals 10,032 MW, with no variations compared to 2018. The breakdown by technologies is:

Power per technology (MW)	2019	2018	Change
Nuclear	3,166	3,166	–
Gas combined cycles	5,694	5,694	–
Cogeneration	298	298	–
Coal	874	874	–
Total	**10,032**	**10,032**	**–**

In 2019 nuclear production stands at 36,031 GWh, up 15.7%. The evolution of the year by technologies is as follows:

Net Production (GWh)	2019	2018	% Change
Nuclear	23,630	23,419	0.9
Gas combined cycle	9,622	3,996	140.8
Cogeneration	2,453	2,108	16.4
Coal	326	1,616	(79.8)
Total	**36,031**	**31,139**	**15.71**

A.2 Retail

Supplied energy (electricity and gas) in Spain amounted to 66,825 GWh (66,836 GWh in 2018), 56,408 GWh of electricity and 10,417 GWh of gas.

Electricity sales on the free market in 2019 increased by 1.3% to 49,088 GWh compared to 48,448 GWh supplied in the same period of 2018. Electricity supplied at the voluntary price for small consumers ("PVPC") amounted to 7,320 GWh (7.435 GWh in 2018).

Gas supplied in the free market in 2019 decreased by 5.1% to 10,308 GWh compared to 10,867 GWh supplied in 2018.

International retail (Portugal, Italy, France and Germany, mainly) IBERDROLA supplied 9,702 GWh during 2019, compared to the 9,225 GWh supplied in 2018, and was the second-ranking seller in the medium voltage industrial clients segment.

B. United Kingdom

Retail

Regarding sales, during 2019 customers were supplied with 18,072 GWh of electricity and 25,835 GWh of gas (20,008 GWh of electricity and 27,773 GWh of gas supplied during 2018). SCOTTISH POWER had 3 million electricity customers and 2 million gas customers at 31 December 2019. Furthermore, the roll-out of smart meters continues and at the end of the year reached 1.5 million.

C. Mexico

IBERDROLA is the leading private electricity producer in Mexico. Installed capacity rose to 8,599 MW (5.914 MW in 2018). The commissioning of the combined cycles of El Carmen (866 MW), Escobedo (892 MW) and Topolobampo II (911 MW) stand out.

Currently, the combined cycle of Topolobambo III (779 MW) is under construction and it is expected to be commissioned in 2020.

The electricity supplied from combined cycle and cogeneration plants amounted to 49,417 GWh (40.227 GWh in 2018), representing a load factor of 79%, as generation with natural gas is the basis of electricity generation in Mexico. Cumulative availability of the plants in Mexico has been 93%.

D. Brazil

Brazil's generation power corresponding to the gas combined cycles Termopernambuco is 533 MW, whose production peaked in 2019 to 3,309 GWh.

2.4.3. Renewables business

At the end of 2019, the Renewables business had an installed capacity of 28,998 MW (26,794 MW in 2018).

Renewable production decreased by 5.4% to 50,770 GWh (53,684 GWh in 2018).

In the last 12 months, IBERDROLA Group has increased its capacity in 2,204 MW, following this breakdown:

MW installed	2019	2018	MW change
Onshore wind	16,417	15,251	1,166
Spain	5,762	5,526	236
United Kingdom	1,891	1,891	–
United States	7,045	6,305	740
Mexico	594	408	186
Brazil	516	516	–
IEI	609	605	4
Offshore wind	964	544	420
United Kingdom	614	194	420
IEI	350	350	–
Hydroelectric (*)	10,854	10,607	247
Spain	10,018	10,016	2
Brazil	836	591	245
Other technologies	763	392	371
Total	**28,998**	**26,794**	**2,204**

(*) Additionally, the Networks business in the US has 115 MW of hydro power.

A. Onshore wind energy

In the last 12 months, IBERDROLA Group's installed capacity by country is as follows:

- In Spain, the following wind farms were added: Pradillo (22 MW), Ballestas (42 MW) and Casetonas (28 MW). Moreover, the Group has taken control over Molinos del Cidacos (144 MW);

- In the US, the following wind farms were added: Karankawa (307 MW), Patriot (226 MW), Montague (201 MW) and Otter Creek (78 MW). Moreover, the following wind farms have been derecognised, due to loss of control, as is the case with the 65 MW in Dry Lake II, and due to the removal of machines, 2 MW in three wind farms, which are Locust Ridge II, South Chestnut and Leaning Juniper II;

- In Mexico the 100 MW of PIER II were added and 86 MW of the Santiago wind farm were commissioned, and

- In Greece, 4 MW of the Sarakatsaneika I wind farm were added.

Regarding ongoing and approved projects:

- In Spain, the construction of the wind farm of Cavar (111 MW), in Navarra, is going on.

- In the US, the construction of other projects with an aggregate capacity of more than 250 MW continues and another more than 500 MW are at their early construction stages also.

- In Brazil, adding to the approval in 2018 of the 15 projects in the state of Paraiba, totalling 472 MW, a total of another 12 projects, totalling 566.5 MW of wind energy, will be built in the state of Piauí.

B. Offshore wind energy

IBERDROLA Group has three offshore wind farms in operation totalling 964 MW: West of Duddon Sands in the United Kingdom, located in the Irish Sea, with an attributable installed capacity of 194 MW, Wikinger in Germany, 350 MW, and East Anglia 1, 420 MW.

Currently, offshore wind projects mainly in the United Kingdom, the United States, Germany and France are being developed.

- In the United Kingdom, the East Anglia projects in the North Sea. The East Anglia 1 (714 MW) project is under construction and 420 MW have already been commissioned.

- In the United States, with the acquisition of 50% of the company Vineyard Wind, owner of the rights to a wind farm off the coast of Massachusetts, with a generation potential of 3 GW. The wind farm will start its construction phase in 2019 and it is expected that 400 MW will come into operation by the end of 2021 and the remaining 400 MW by the second half of 2022. This way Vineyard Wind will become the first large scale US offshore wind farm.

- Also in the United States, with the award of the rights to develop another project under the name Kitty Hawk, off the coast of North Carolina, with a potential generation capacity of 2.5 GW.

- In Germany, in April 2018, IBERDROLA Group took part in the offshore wind tender and submitted offers for its projects Baltic Eagle, Wikinger Süd and Windanker. IBERDROLA Group was awarded 476 MW in Baltic Eagle and 10 MW in Wikinger Süd, whose commissioning is expected in 2023.

- In France, the offshore wind farm Saint-Brieuc, of 496 MW of capacity. The project has stated its geotechnical studies which are currently under way as the first construction milestone.

C. Hydroelectrical power

IBERDROLA Group has 836 MW of wind power. In 2019, 245 MW of the Brazilian plant Baixo Iguaçu were commissioned.

In Portugal, the works in the Tâmega hydroelectric power complex go on and Daivões (118 MW) and Gouvães (880 MW) are expected to be commissioned in 2021. In Alto Tâmega (160 MW) the excavation works are being finishing in order to start the concrete works in the dam next year.

D. Other technologies

The Renewables business has facilities of other renewable technologies in various countries whose breakdown is presented in the following table:

MW installed	2019	2018	MW change
Mini-hydraulic special regime	130	130	–
Mini-hydraulic ordinary regime	173	171	2
Photovoltaic	763	392	371
Spain	391	–	391
United States	96	116	(20)
Mexico	270	270	0
Greece	6	6	0
Total	**1,066**	**693**	**373**

These variations are due to the commissioning in Spain of the photovoltaic plant of Núñez de Balboa of 391 MW in Badajoz and the derecognition of 20 MW in the solar plant of Copper Crossing in the United States.

Regarding on-going projects, in Spain more than 400 MW of solar photovoltaic power are under construction in projects located mainly in Castilla-La Mancha, Castilla León and Extremadura.

3. LIQUIDITY AND EQUITY RESOURCES

3.1. Leverage

Gross financial debt at 31 December 2019 increased by Euros 4,172 million to 38,371 million compared to Euros 34,199 million at 31 December 2018, mainly as a result of the implementation of IFRS 16 (Euros 1,767 million) and the strong investment process the Group is undergoing. As a result, financial leverage rose to 44.8% compared to 43.7% for the previous year (see Note 20). For comparison purposes, if in 2019 IFRS 16 Leases had not been applied, leverage in 2019 would have been 43.76%.

Net adjusted debt (net financial debt minus the value of the maximum number of treasury shares potentially cumulative in the amount of Euros 602 million (Note 20), at 31 December 2019 reached Euros 37,769 million, up Euros 3,602 million from the Euros 34,149 million compared to December 2018.

3.2 Credit rating of IBERDROLA's senior debt

Agency ratings are:

Agency	Long-term [1]	Outlook
Moody´s	Baa1 (15/06/2012)	Stable (05/11/2012)
Fitch	BBB+ (02/08/2012)	Stable (25/03/2014)
Standard & Poor's	BBB+ (22/04/2016)	Stable (22/04/2016)

(1) The above ratings may be revised, suspended or withdrawn by the rating agency at any time.

3.3 Debt structure

At 31 December 2019 the Company's borrowings costs stood at 2.92% compared to 2.97% in the same period of the previous year (Note 27).

The debt structure by interest rate and currency is presented in Notes 4 and 27 of the Consolidated annual accounts.

In accordance with the policy of minimizing the financial risks of the Company, foreign currency risk has continued to be mitigated through the financing of international businesses in local currencies (Sterling Pound, Brazilian Real, US Dollar, etc.) or in their functional currencies (US dollar, in the case of Mexico).

IBERDROLA has a strong liquidity position at the end of 2019 exceeding Euros 14,300 million (Note 4).

IBERDROLA presents a comfortable profile of debt maturities, with more than six years of average debt life. IBERDROLA's debt maturity profile at the end of 2019 can be seen in Note 27 of the Consolidated annual accounts.

3.4. Working capital

Working capital increased in Euros 254 million from December 2018 mainly as a result of an increase in inventories (Euros 368 million) due to the construction of the evacuation line of East Anglia 1 OFTO (*Offshore Transmission Owner*).

	31.12.2019	31.12.2018	Ch
Assets held for sale	–	62	(62)
Nuclear fuel	306	273	33
Inventories	2,542	2,174	368
Commercial debtors and other accounts receivable	6,675	6,099	576
Other current financial investments	693	572	121
Asset derivative financial instruments [(1)]	156	225	(69)
Tax receivables and payables	825	756	69
CURRENT ASSETS [(1)]	**11,197**	**10,161**	**1,036**
Liabilities linked to assets held for sale	–	1	(1)
Provisions	660	580	80
Liability derivative financial instruments [(2)]	370	209	161
Trade payables, other current financial liabilities and other current liabilities	7,755	7,087	668
Tax receivables and payables	1,263	1,389	(126)
Current Liabilities	**10,048**	**9,266**	**782**
NETWORKING CAPITAL	**1,149**	**895**	**254**

[(1)] Not including cash and cash equivalents or debt derivative assets related to financial transactions (Note 20).
[(2)] Not including cash and cash equivalents or debt derivative liabilities related to financial transactions (Note 20).

4. MAIN RISKS AND UNCERTAINTIES

4.1 Risk management system

The IBERDROLA Group is exposed to various inherent risks in the different countries, industries and markets in which it operates and through the businesses it carries out, which could prevent it from achieving its objectives and executing its strategies successfully.

The Company's board of directors, aware of the importance of this matter, has undertaken to develop its capabilities to ensure that the risks relevant to all of the Group's activities and businesses are appropriately identified, measured, managed and controlled, and has established, through the Group's general risk control and management policy, the basic mechanisms and principles necessary for the appropriate management of risk-opportunity with a level of risk that enables it to:

- attain the strategic objectives formulated by the Group with controlled volatility,
- provide the maximum level of assurance to the shareholders,

- contribute to the attainment of the Sustainable Development Goals (SDGs) approved by the UN, with a special focus on goals seven and thirteen,
- protect the results and reputation of the Group,
- defend the interests of customers, shareholders, other groups interested in the progress of the Company, and society in general, and
- ensure corporate stability and financial strength in a sustained fashion over time.

In the implementation of the aforementioned commitment, the Board of Directors and its Executive Committee have the cooperation of the Audit and Risk Supervision Committee, which, as a consultative body, monitors and reports upon the appropriateness of the system for assessment and internal control of significant risks, acting in coordination with the audit committees existing at other subholding companies of the Group.

Every action aimed at controlling and mitigating risks will consider the following basic action principles:

a) Integrate the risk-opportunity vision into the Company's management, through a definition of the strategy and the risk appetite and the incorporation of this variable into strategic and operating decisions.

b) Segregate functions, at the operating level, between risk-taking areas and areas responsible for the analysis, control, and monitoring of such risks, ensuring an appropriate level of independence.

c) Guarantee the proper use of risk-hedging instruments and the maintenance of records thereof as required by applicable law.

d) Inform regulatory agencies and the principal external players, in a transparent fashion, regarding the risks facing the Group and the operation of the systems developed to monitor such risks, maintaining suitable channels that favour communication.

e) Ensure appropriate compliance with the corporate governance rules established by the Company through its Corporate Governance System and the update and continuous improvement of such system within the framework of the best international practices as to transparency and good governance, and implement the monitoring and measurement thereof.

f) Act at all times in compliance with the law and the Company's corporate governance system and, specifically, with due observance of the values established in the *Code of Ethics* and under the principles of zero tolerance for the commitment of illicit acts and fraud situations included in the *Prevention of Fraud and Crimes Policy*.

The *General Risk Control and Management Policy* and the basic principles underpinning it are implemented by means of a comprehensive risk control and management system, supported by a Corporate Risk Committee of the Group and based upon a proper definition and allocation of duties and responsibilities at the operating level and upon suitable supporting procedures, methodologies, and tools, including the following stages:

a) The establishment of a structure of policies, guidelines, and limits, as well at the corresponding mechanisms for the approval and implementation thereof, which effectively contribute to risk management being performed in accordance with the Company's risk appetite.

b) The ongoing identification of significant risks and threats based on their possible impact on key management objectives and the accounts (including contingent liabilities and other off-balance sheet risks).

c) The analysis of such risks, both at each corporate business or function and taking into account their combined effect on the Group as a whole.

d) The measurement and controlling of risks by following procedures and standards which are homogeneous and common to the Group as a whole.

e) The analysis of risks associated with new investments, as an essential element of decision-making based upon profitability/risk.

f) The maintenance of a system for internal controlling of compliance with policies, guidelines and limits, by means of appropriate procedures and systems, including the contingency plans needed to mitigate the impact of the materialisation of risks.

g) The periodic monitoring and control of profit and loss account risks in order to control the volatility of the annual income of the Group.

h) The ongoing evaluation of the suitability and efficiency of applying the system and the best practices and recommendations in the area of risks for eventual inclusion thereof in the model.

i) The audit by the Internal Compliance Division of the comprehensive risk control and management system.

In addition, the General Risk Control and Management Policy is further developed and supplemented through the policies listed below which are also subject to approval by the Company's Board of Directors:

a) Corporate risk policies:

- Corporate Credit Risk Policy.
- Corporate Market Risk Policy.
- Operational Risk Market Transactions Policy.
- Insurance Policy.
- Investment Policy.
- Financing and Financial Risk Policy.
- Treasury Share Policy.
- Risk Policy for Equity Interests in Listed Companies.
- Procurement Policy.
- Information Technology Policy.

- Cybersecurity Risk Policy.
- Health and Safety Risks Policy.
- Reputational Risk Framework Policy.

b) Risk policies and limits of the various businesses of the Group:

- Risk policy for the liberalised business of the IBERDROLA Group.
- Risk policy for the renewables business of the IBERDROLA Group.
- Risk policy for the network business of the IBERDROLA Group.
- Risk Policy for the Real Estate business of the IBERDROLA Group.

The *General Risk Control and Management Policy*, as well as a *Summary of the Corporate Risk Policies* and a *Summary of the Specific Risk Policies* for the various Group businesses, are available on the corporate website (www.iberdrola.com).

In order to align the risk impact with the established risk appetite, the Executive Committee of the Board of Directors, acting at the proposal of the business or corporate divisions involved and upon a prior report from the Group's Risk Committee, annually reviews and approves specific guidelines regarding the Group's risk limits.

Subholding companies are responsible for adopting the group's risk policies and specifying their application, approving the guidelines regarding specific risk limits, addressing the characteristics and unique features businesses in each country. They shall also implement the control systems required for their compliance.

Listed subholding companies and those with significant minority interests, by virtue of their own special autonomy framework have their own risk policies approved by the competent bodies, aligned with those of IBERDROLA group.

The risk factors to which the Group is generally subject are listed below:

a) Corporate Governance Risks: the Company assumes the need to safeguard the interests of the Company and the strategy of sustained maximisation of the economic value of the Company and its long-term success, in accordance with the Group's corporate interest, culture, and corporate vision, taking into account the legitimate public and private interests that converge in the conduct of all business activities, particularly those of the various stakeholders and communities and regions in which the Company and its employees act.

b) Market risks: defined as the exposure of the Group's results and equity to changes in market prices and variables, such as exchange rates, interest rates, commodity prices (electricity, gas, CO2 emission rights, other fuel, etc.), prices of financial assets and others.

c) Credit risks: defined as the possibility that a counterparty fails to perform its contractual obligations, thus causing an economic or financial loss to the Group. Counterparties can be final customers, counterparties in financial or energy markets, partners, suppliers, or contractors.

d) Business risks: defined as the uncertainty regarding the performance of key variables inherent to the business, such as the characteristics of demand, weather conditions, the strategies of different players, and others.

e) Political and Regulatory risks: defined as those arising from regulatory changes made by the various regulators, such as changes in compensation of regulated activities or in the required conditions of supply, or environmental o tax regulations, including risks related to political changes that could affect the legal security and to the legal framework applicable to the Group´s businesses in each jurisdiction, the nationalization or expropriation of assets, the operating licenses cancellation and the previous end of the contracts of the administration.

f) Operational risks: defined as those related to direct or indirect economic losses resulting from inadequate internal procedures, technical failures, human error, or as a consequence of certain external events, including the economic, social, environmental, and reputational impact, as well as legal and fraud risks.

g) Reputational risks: potential negative impact on the value of the Company resulting from the conduct of the Company that is below the expectations created among various stakeholders: shareholders, customers, media, analysts, Government, employees, and society in general.

The Audit and Risk Supervision Committee of the Board of Directors periodically monitors the evolution of the Company's risks:

- It reviews the Group's risk quarterly reports, which include monitoring compliance with risk limits and indicators and updated key risk maps, submitted by the Group's director of corporate risks.

- It coordinates and reviews risk reports sent periodically, at least semi-annually, by the audit and compliance committees of the main subsidiaries of the Group, being included the subholding companies of the main countries where the Group operates that, along with the Risk Corporate Director's appearances are used to prepare a risk report for the Board of Directors at least semi-annually.

For further details, see the section E "Control systems and risk management" of the Corporate Governance Report 2019 and the risks section of the Integrated report February 2020.

4.2. Credit risk

The IBERDROLA Group is exposed to the credit risk arising from the possibility that counterparties (customers, suppliers, financial institutions, partners, etc.) might fail to comply with contractual obligations.

Risk is properly managed and limited, depending on the type of transaction and the creditworthiness of counterparties. In particular, there is a *Corporate credit risk policy* setting the framework and action principles for a correct risk management, developed at business and country level (admission criteria, approval flows, authority levels, rating tools, exposure measurement methodologies, etc.) through procedures.

With regard to credit risk on trade receivables from electricity and gas trade in the liberalised area, the historical cost of defaults has remained moderate, below 1% of total turnover of this activity at global level.

4.3 Financial risks

4.3.1. Interest rate risk

The IBERDROLA Group is exposed to the risk of fluctuations in interest rates affecting cash flows and market value in respect of items in the balance sheet (debt and derivatives). In order to adequately manage and limit this risk, the IBERDROLA Group manages annually the proportion of fixed and variable debt and establishes the actions to be carried out throughout the year: new sources of financing (at a fixed, floating or indexed rate) and/or the use of interest rate derivatives.

Floating rate borrowings and cash placements are basically pegged to market rates (mainly Euribor, Libor-pound sterling, Libor-dollar and the CDI in the case of the debt of Brazilian subsidiaries).

Additionally, at 31 December 2019, the IBERDROLA Group has arranged derivatives to cover the interest rate risk of the future financing for a nominal amount of Euros 4,551,000 thousand, which help to mitigate the interest rate risk.

The debt structure at 31 December 2019, once considered the hedge provided by the derivatives traded, is included in the Note 4 of the Consolidated annual accounts.

4.3.2. Foreign currency risk

The exchange rate risk resulting from oscillations in currency rates compared to the reporting currency may take place under the following scenarios:

- Collections and payments for supplies, services or equipment acquisition in currencies other than operating currencies.
- Income and expenses incurred by certain foreign subsidiaries indexed to currencies other than operating currencies.
- Debt and financial expense denominated in currencies other than operating currencies.
- Profit or loss in consolidation of the foreign subsidiaries (mainly US dollar, Sterling Pound and Brazilian reals), since the Group's reporting currency is the Euro.
- Consolidated carrying amount of investments in foreign subsidiaries.
- Expense for taxes in Mexico because the functional currency (United States dollar) differs from the currency for calculation purposes of corporate taxes (Mexican peso).

The IBERDROLA Group reduces this risk by:

- Ensuring that all its economic flows are carried out in the currency of each Group company, provided that this is possible and economically viable and efficient, through the use of derivatives if not.
- As far as possible, this covers the risk of transfer of earnings scheduled for the current year, thereby limiting the ultimate impact on Group earnings.

- As far as possible, this covers the expense of the exchange rate risk in the Mexican corporate taxes, limiting the overall impact on the earnings of Mexico and of the Group.

- Mitigating the impact on the consolidated net asset value of a hypothetical depreciation of currencies due to Group's investment in foreign subsidiaries by maintaining foreign currency debt, as well as through financial derivatives.

The sensitivity of the consolidated profit and equity to changes in the dollar/euro, sterling pound /euro and Brazilian real/euro exchange rate are described in Note 4. The figures relating to exchange rates are included in Note 27 of the Consolidated annual accounts.

4.3.3. Liquidity risk

Exposure to adverse situations in the debt or capital markets or the IBERDROLA Group´s economic and financial situation can hinder or prevent the IBERDROLA Group from obtaining the financing required to properly carry on its business activities.

Group's liquidity policy is designed to ensure that it can meet its payment obligations without having to obtain financing under unfavourable terms. For this purpose, various management measures are used, such as the arrangement of committed credit facilities of sufficient amount, term and flexibility, diversification of the hedge of financing needs through access to different markets and geographical areas, and diversification of the maturities of the debt issued.

The balances for cash, liquid assets and available committed credit facilities are sufficient for meeting the liquidity needs for more than 18 months, not including the new financing facilities.

The figures relating to changes in the Company's debt are included in Notes 27 and 51 of the Consolidated annual accounts and additional information is presented in Note 4 of the Consolidated annual accounts.

4.3.4. Liquidity risk

IBERDROLA Group faces the risk of its financial situation getting worse and leading to a review downwards of the credit rating assigned by rating agencies, which may make financing more expensive or hinder it.

In order to mitigate this risk, IBERDROLA Group permanently follows up solvency and equity ratios most commonly followed by rating agencies as well as those risks that may have an impact on those ratios in order to anticipate or undertake actions aimed at correcting possible lack of compliance.

Moreover, communication is active with investors and rating agencies in order to explain the performance of financial magnitudes and their deviations, if any.

4.4. Country risk

The activities of the different businesses that the IBERDROLA Group developed are submitted, in greater or lesser extent depending on their characteristics, to various risks inherent to the country where they operate:

- Imposition of monetary limitations and other restrictions on the movement of capital.

- Changes in the trade environment and administrative policies.
- Economic crisis, political instability and social riots affecting operations.
- Nationalisation or expropriation of assets.
- Exchange rate fluctuations.
- Cancellation of operating licenses.
- Anticipated termination of Government contracts.
- Changes in tax rates in fees and taxes and/or new taxes.
- Other regulatory changes.

The results of our international subsidiaries, their market value and their contribution to the Group may be affected by such risks.

The IBERDROLA Group's main operations are concentrated in Spain, the United Kingdom, the United States, Brazil and Mexico, countries with low or moderate risk, whose credit ratings at 31 December 2019 are as follows:

Country	Moody´s	S&P	Fitch
Spain	Baa1	A	A-
United Kingdom	Aa2	AA	AA
United States	Aaa	AA+	AAA
Brazil	Ba2	BB-	BB-
Mexico	A3	BBB+	BBB

The IBERDROLA Group has a significant presence in countries such as Germany, France and Portugal. The presence in countries other than the ones mentioned above is not significant at Group level from an economic point of view.

Note 4 of these Consolidated annual accounts includes information on the potential impact of the Brexit on the IBERDROLA Group.

4.5 Activity risks for IBERDROLA Group's business

The Group has presence in the regulated businesses of electricity transmission and distribution in Spain, the United Kingdom, the United States (through AVANGRID) and Brazil (through NEOENERGIA). In the United States, the Group also has presence in the natural gas distribution sector.

IBERDROLA operates in the renewables industry sector carried out in Spain, the United States (through AVANGRID), the United Kingdom, Mexico and Brazil (through NEOENERGIA) and other countries.

Finally, the IBERDROLA Group maintains the Generation and Supply business, and operates in the thermal generation sector in Spain, Mexico and Brazil (through NEOENERGIA) and electricity and gas retail in Spain, the United Kingdom and to a lesser degree in Brazil (through NEOENERGIA), Italy, France, Germany, Ireland and the United States (not included in AVANGRID in the latter case).

Operating details shown in this section show the situation at 31 December 2019, unless stated otherwise. Sensitivities are shown in annual terms (following 12 months).

The strategy and investments for 2018-2022, which set the Group's growth lines, were presented to investors on 26 February 2019, is expected to be updated in May 2020.

Regulatory and political risks

Companies in the IBERDROLA Group are subject to laws and regulations concerning tariffs and other regulatory aspects of their activities in each of the countries in which they operate. The introduction of new laws and regulations or amendments to the already existing ones may have an adverse effect on the Group's operations annual results and economic value of businesses.

The following sections summarise the regulatory frameworks in force in the main markets where the Group operates, as well as the array of new regulatory measures approved in 2019 or expected to be developed in 2020.

A detailed description of the electricity and gas regulatory frameworks in the main counties where the Group operates is included in Annex II.

4. 5. 1. Networks business risk

The regulations of each country in which the IBERDROLA Group's network businesses operate establish regularly revised frameworks, guaranteeing that these businesses will receive reasonable and predictable returns. These frameworks include incentives and penalties for efficiency, service quality and, where applicable, for default management, which have a minor, immaterial impact overall. Any structural and significant changes to the aforementioned regulation may represent a risk for said businesses.

In general, the profitability of the IBERDROLA Group's network businesses is not exposed to demand risk, except for the Brazilian subsidiaries.

The IBERDROLA Group's network businesses in Spain and in the United Kingdom are not exposed to any market risk associated with energy prices.

The network businesses in Brazil and some of the businesses in the USA sell energy to regulated customers at a price determined by certain previously approved tariffs. In the case of a prudent procurement management and as established by the regulator, the regulatory frameworks in both countries guarantee sums will be collected in subsequent tariff readjustment reviews for possible purchase price deviations from those previously recognised in the tariff.

Given the above, in the case of extraordinary events (extreme drought in Brazil, catastrophic storms in the USA, etc.), occasional temporary imbalances between payments and collections may arise with an impact on the cash flows of some of these businesses and potentially on profits recognised under IFRS.

- ***Networks - Spain***

The present regulatory model is based on the Electricity Industry Law 24/2013 of 26 December 2013 and its development in the form of royal decrees and ministerial orders. The model is based in recognised historical investment (RAV at 31 December 2014) remunerating capital, depreciation and some operation and maintenance costs. In addition, each year RAV is increased with recognised investments made. Quality incentives and loses (technical and commercial) are added to this. Also, a retribution to other regulated activities required for the activity are also set, such as for example reading, subscription, structure, etc., not just to distribution.

On 20 November 2019 the retribution rate applicable in the upcoming six-year regulatory period 2020-2025 was set and published on the BOE (Official Spanish Gazette) (WACC 5.58%). On 19 December 2019 the applicable methodology was set and published on the BOE.

Some remuneration elements of the previous period still pending of review should be highlighted:

- Remunerations for 2017, 2018 and 2019 that are being applied are provisional since the final remunerations have not yet been published.

- Before the Spanish Supreme Court, a proceeding was initiated declaring it detrimental to the public interest which may entail a recalculation of the RAV used as reference.

- ***Networks – United Kingdom***

The group operates in the United Kingdom through its subsidiary Scottish Power Ltd and the following licences:

- SP Distribution PLC (SPD) and SP Manweb PLC (SPM).

- SP Transmission PLC (SPT).

The framework of remuneration for the electricity transmission and distribution activities in the UK is in accordance with a price control model using a recognised cost of capital (WACC), depreciation of assets and operating and maintenance costs plus an incentive which is obtained if management is better than the regulatory standard, and which the companies retain (in part) in the following tariff revision.

The current regulatory model for SPD and SPM is based on the RIIO ED1 framework, and on the RIIO T1 framework in the case of SPT. The latest tariff review for electricity distributors (RIIO ED1), including SPD and SPM, is valid from April 2015 to April 2023. The SPT review (RIIO T1) is valid from April 2013 to April 2021. Recognised ROE after tax (in real terms) is 6% for SPD and SPM, whereas for SPT it is 7%.

The regulator (OFGEM) also establishes incentives/penalties for safety, environmental impact, consumer satisfaction, social obligations, connections and quality, which may have an effect on the income statement.

In July 2018 the OFGEM published its preliminary report included some of the hypothesis proposed for the next regulatory revision, pointing at a preliminary ROE of 4.8% compared to the current 7.0%. For the end of 2020, OFGEM is expected to publish the final methodology and retribution rate.

- ***Networks - United States***

The IBERDROLA Group operates in the US through its listed subsidiary Avangrid, which in turn has the following subsidiary networks companies (which manage 2.2 million electricity supply points and 0.9 million natural gas supply points):

- New York State Electric & Gas (NYSEG), New York, with a 3-year Rate Case in force since 20 April 2016 (base ROE 9% for electricity distribution).

- Rochester Gas and Electric (RG&E), New York, with a 3-year Rate Case in force since 30 April 2016 (base ROE 9% for distribution Electricity).

  In 2019 the process to review NYSEG and RG&E rate case was launched. This process is expected to conclude at the beginning of 2020.

- Central Maine Power (CMP), Connecticut, whose annual rates are in force since 1 July 2014. They may be extended for its electricity distribution businesses (base ROE 9.45%) and transmission business (base ROE 10.57%). The ROE calculation method for the transmission business is under review by the FERC and an Order in that regard is expected in 2020.

  In October 2018, CMP, following the instructions provided by Maine's utilities regulatory commission, started a rate case review.

- United Illuminating (UI), Connecticut, with rates in force since 1 January 2017 for its electricity distribution business (base ROE 9.1%) and transmission business (base ROE 10.57%). The ROE calculation method for the transmission business is under review by the FERC and an Order in that regard is expected in 2020.

- As well as the following natural gas distribution companies: Maine Natural Gas Corporation (MNG), Connecticut Natural Gas (CNG), Southern Connecticut Gas (SCG) and Berkshire Gas (BG).

Companies carrying on regulated business in the US are exposed to risks associated with the regulations of a number of federal regulatory bodies (FERC, CFTC, DEC) and state commissions, responsible for establishing the regulatory frameworks of the companies regulated (tariffs and other conditions).

The distributors' tariff plans have been designed to reduce the risk to which business is exposed through mechanisms for deferral, reconciliation and provisions for costs. Regulated distributors pass on the costs of gas and electricity to end customers, thereby mitigating any impacts of fluctuations in demand.

- ***Networks - Brazil***

The IBERDROLA Group operates in the Brazil through its listed subsidiary Neonergia, which in turn has the following subsidiary network companies:

- Elektro Redes, S.A. (Elektro), operating in the states of Sao Paolo and Mato Grosso do Sul, with 2.7 million points of supply. Rates in force until August 2023 and WACC of 8.09%;

- Companhia de Eletricidade do Estado do Bahia (Coelba), operating in the state of Bahía, with 6 million supply points. Rates in force until April 2023 and WACC of 8.09%;

- Celpe Energetica de Pernambuco S.A. (Celpe), operating in the state of Pernambuco, with 3.7 million supplu points. Rates in force until April 2021 and WACC of 8.09%;

- Companhia Energética do Rio Grande do Norte (Cosern), operating in the state of Rio Grande do Norte, with 1.4 million supply points. Rates in force until April 2023 and WACC of 8.09%;

- Several transmission assets with their specific regulation.

The Brazilian regulatory framework is based on a system of price cap that is revised every four or five years, depending on each company's concession contract and is updated annually by the regulator based on predetermined parameters. COELBA and COSERN have a five-year term and CELPE and ELEKTRO have a four-year term.

Brazilian legislation applicable to regulated electricity distribution business establishes two types of costs: i) "Plot A", which includes the costs of energy, transmission and other obligations and regulatory charges, which can be recovered through tariffs ("pass through") as part of the conditions and limits imposed by ANEEL, and ii) "Plot B", which includes remuneration for investment and the costs of operation and maintenance (calculated using a reference model that compares all distribution companies in the country and determines efficient cost levels, which generates either an incentive or a risk for the investor).

ANEEL also acknowledges other smaller incentives to minimise default and impairment of quality and customer satisfaction that can affect the income statement.

Pursuant to current legislation, electricity distribution companies transfer the cost of supplying electricity to the end customer through the regulated tariff, provided the energy contracted is between 100% and 105% of the demand required.

4.5.2. Renewables business

The Group's Renewable business includes hydroelectric, wind (onshore and offshore) and photovoltaic generation, as well as storage (pumping and batteries) technologies.

The regulations of each country in which the Group operates establish regulatory frameworks aimed at promoting the development of renewable energies based on formulas which may include premiums, green certificates, tax or regulated tariff deductions, which allow investors to obtain sufficient and reasonable return. Any structural and significant changes to the aforementioned regulation may represent a risk for said businesses.

In addition to the aforementioned regulatory risk, the Group's renewable energy businesses may be exposed to a greater or lesser extent, among other, to source (hydraulic, wind and solar) risk and market risk:

- In the medium to long term, years with lower than average water and/or wind resources are offset by years with above-average overall resources.

- The risk of water resources in a given year basically affects the Renewables business in Spain, and to a lesser extent Brazil.

- The risk of wind resources in any given year affects the Renewable Energy Businesses of all countries in which the Group operates. At global level, the Group considers that the wind resource risk is mitigated by the large number of wind farms available and their geographical diversification.

– Management of market risk of the Renewables Businesses in Spain, the UK, Brazil and Mexico is transferred to the Generation and Retail Businesses of those countries so that it can be integrated into a single risk position. Management of market risk of the Renewables Business in the US is integrated within the business itself.

The Group has important renewable projects under construction and development in the different countries where it operates. In the particular case of offshore wind projects, it must be highlighted that they require large investments subject to complex proceedings and entail other risks such as long construction deadlines, operating difficulties and technology risks.

- ***Renewables – Spain***

The Group currently has an installed capacity of renewable energy in Spain of: 6,005 MW of wind power, 9,715 MW of hydroelectric plants, 500 MW of photovoltaic plants and 306 MW of mini hydroelectric plants.

The output of hydroelectrical plants not governed by RD 413/2014) is transferred to the Generation and Supply business for its marketing to end users and/or sale to the market. The lesser or greater availability of hydro resources has an impact on the marginal hour prices of the Spanish electricity system.

Despite having a large water storage capacity Spain, IBERDROLA Group's annual results depend significantly on the rainfall contributions. The changes in output from a dry year to a wet year with respect to the average value can be up to -4,000 GWh in a dry year and +5,000 GWh respectively in Spain, and the variability would be between an estimated Euros -150 million and Euros +190 million. In the mid and long-term dry years are offset by wet years.

The capacity installed by the Group before 2013 was subject to the Specific Retribution Regime in accordance with Law 24/2013 and RD 413/2014. Said regime, combining market income and a supplement per MRC, guarantees reasonable profitability before taxes to plants, which was set at 7.398%. At the end of 2019, RDL 17/2019, whereby the value of reasonable profitability was extended until 2031, was approved Facilities before 2004 had no retribution to investment. In accordance with RD 413/2014 i) at the end of each regulatory half-period of three years several retribution parameters for model facilities are revised, among them price estimates for the following three years, as well as past prices. To do so it is calculated if in the last three years the set limits (bands) have been exceeding and ii) the existing plants were segments based on several criteria such as commissioning year and size, and they are assigned standard CAPEX values, useful regulatory life, peak factor, O&M expenses and hours.

Those renewable plants commissioning after 2013 or which only receive income from market income (or PPA agreements), or to access the Specific Remuneration Regime previously described must participate in bids (which took place in 2016 and 2017).

With regards to wind output, as well as photovoltaic generation, they have also been transferred to the Generation and Supply business to be sold to end customers and/or the market.

- ***Renewables – United Kingdom***

The Group currently has an installed capacity of renewable energy in the UK of 1,906 MW in onshore wind farms and 194 MW in offshore wind farms, operational (West of Duddon Sands) and an interest of 60% in the offshore wind farm of East Anglia (420 MW installed at the end 2019), which is in the commissioning stage.

The onshore wind farms and West of Duddon Sands were developed under current "Renewables Obligation" legislation. Under such legislation, revenues are partially exposed to the risk of the market price for electricity in the UK, as the revenues obtained reflect the price of the energy produced and the sale of Renewables Obligation Certificates (ROCs).

UK regulations impose minimum ROC requirements per MWh sold on electricity suppliers, 10% more than the system envisages producing, and determine the price at which the rest must buy, which in practice amounts to a floor price equal to the price of the ROCs.

Renewable technology plants implemented from 1 April 2017 (those implemented at 12 May 2016 in the case of onshore wind farms) may avail of the new "Contract for Difference" (CfD) remuneration scheme, which eliminates market risk for 15 years. Such is the case of the East Anglia 1.

The fixed prices for these projects are established on a project-by-project basis through public tenders. The counterparty guaranteeing this price, "The Low Carbon Contracts Company", finances its potential payments by imposing a levy on suppliers in accordance with their market share, and therefore credit risk vis-à-vis the counterparty is practically zero.

- ***Renewables United States***

The IBERDROLA Group conducts its renewables business in the US through its listed company Avangrid, which has an installed capacity of 7,259 MW in onshore wind farms, 118 MW in hydroelectric plants and 143 MW in operational photovoltaic plants.

Approximately 71% of the energy produced is sold on fixed-price long-term contracts with third parties. If hedges of some type are considered, this percentage rises up to 79%. The remaining 21% of the energy produced is sold to the market in more or less short terms.

With electricity prices around USD 25MWh, a 5% change in prices could give rise to an impact of Euros ±6 million on operating results.

Avangrid has very relevant offshore wind project portfolio, among them Vineyard.

- ***Renewables Mexico***

In Mexico the business currently has an installed capacity of 595 MW in wind farms and 368 MWdc in solar plants, with two sale schemes: a) fixed-price sale to the CFE under a long-term contract (La venta III, 103 MW) and b) sale to third parties with a discount on the official price published by the CFE, under the self-supply regime or sale to the free market.

Mexican legislation requires electricity retailers in the free market to present Certificates of Clean Energy (CEL in the Spanish abbreviation) at the end of each year for a percentage which increases over time of their energy sales for the year. The Group's renewable production for the market in Mexico gives rise to these certificates, which are sold, at market prices, to the Group's Generation and Supply business.

- ***Renewables Brazil***

In Brazil the business, through Neonergia, currently has an installed capacity of 516 MW in onshore wind farms, all operating under long-term contracts (PPAs) with a fixed price for the country's distributors. Excesses and shortages in the production contracted with the distributor are settled over periods of four years, and excesses must be offered and shortages purchased at market prices.

Also in Brazil the Group has 3,031 MW in hydroelectric plants, of which 60% is sold to electricity distribution companies under PPAs.

- ***Renewables International***

In Germany, the Group has and operates the Wikinger offshore wind farm of 350 MW. Pursuant to German regulations, Wikinger plant will have a fixed price for the energy it produces over the first 12 years of operation on a CfD contract, similar to the aforementioned setup for East Anglia 1.

In other European countries, IBERDROLA Group currently has an onshore installed capacity of 609 MW in wind farms and 6 MW in photovoltaic facilities. Regulations in these countries make a distinction between two energy sale schemes: sales at the tariff (Portugal, Greece, Cyprus and Hungary), or sales at market price (Romania).

The Group has been selected, and is already developing, for several significant offshore wind farm projects in Europe, which are expected to be brought into operation throughout 2023-2024.

- Germany: Wikinger Süd (10 MW) and Baltic Eagle (476 MW).
- France: Saint Brieuc project, with an expected total capacity of 496 MW, in which the Group has a 70% stake in the promoting company.

4.5.3. Generation and Retail Businesses

The IBERDROLA Group has a wide array of thermal generation plants in Spain and Mexico, a single thermal plant in Brazil and another in the US. A significant number of the plants in Mexico and the Brazilian plant have long-term PPAs (power purchase agreements) with the CFE (Mexican state electricity company) and the electricity distributors Coelba and Cosern in Brazil respectively.

Management of the risk of the energy produced for the market by the Group's thermal and renewable plants and surplus production of plants with PPAs is transferred to the Energy Management unit of each country where the Group operates, taking as a reference the wholesale market prices.

The various Energy Management units supply electricity and gas to the Retail Business at wholesale market prices (hourly or forward) in accordance with the usual practices of each of the countries in which the Group operates, and manage the sale and purchase of surpluses and shortfalls.

The Retail Businesses sell energy to end customers at fixed or indexed prices, together with other services, at such terms as may be customary in the retail markets of the countries in which they operate (Spain, the UK, Mexico, Brazil, Italy, France, Germany, Ireland and the USA).

Main risks:

- Market prices for electricity, both wholesale and retail, are closely correlated with prices of fuel (oil and gas) and of the emission allowances needed to produce electricity.
- Spot prices in the wholesale electricity market exhibit marked volatility as a result of: 1) the volatility of spot prices of fuels and emission allowances, 2) fluctuating demand, 3) availability of wind or water and 4) possible operational problems in networks or power plants.

- Forward electricity prices are further influenced by projections of new generation plants coming on stream and of increases or decreases in future reserve capacity.

- In general terms: 1) margins of the generation business (thermal and renewable to market) are subject to the risk of the differential between the wholesale spot price and the cost of production, and 2) margins of the retail business are subject to i) the risk of the price differential between the wholesale spot market and forward retail prices, ii) the degree of competition among retailers and iii) the risk of possible regulatory intervention in the form of regulated tariffs, taxes or other obligations (i.e. Energy anti-poverty measures, maximum prices regulated in the UK, etc.).

The offsetting of risk positions between the generation business (thermal and renewable) and the retail business largely reduces the Group's market risk, in particular in Spain and Mexico. The sensitivities shown below cover the exposures of both activities.

- ***Liberalised and retail businesses in Spain***

In Spain the Group has 10,099 MW of installed capacity in conventional generation, of which 3,177 MW are of nuclear power, 5,695 MW of combined cycles, 353 MW co-generation and 874 MW coal.

Sales of the free-market retail electricity business in Spain amounted to nearly 49 TWh in 2019. Additionally, the Last Resort Tariff retail subsidiary supplied just over 7 TWh in 2019.

Commodities' price risk

Given current market conditions, the production price of the coal-fired power plants defines, to a large extent, the price of electricity in Spain since coal is the marginal technology necessary to cover electricity demand. Consequently, the price of coal conditions revenues from the other less expensive technologies which are used to cover demand. With electricity prices around Euros 52/MWh, a 5% change in prices could give rise to an impact of Euros ±13 million on operating results.

The price of CO_2 influences the cost of production in coal-fired power plants. With CO_2 prices of Euros 24 per tonne, a 5% change in the prices could give rise to an impact of Euros ±2 million on operating results.

In 2019, IBERDROLA Group sold its LNG sale/purchase activity, including long-term supply contracts in Spain and LNG contracts with third parties. From 2020 Iberdrola will supply gas at indexed prices to European markets. The uncertainty associated to the difference between purchase price and sale price to customers or price of gas consumed by combined cycle power plants is Euros ±20 million.

Demand risk

Given the current market condition, where price is primarily determined by the generation cost at coal-fired plants, which make up around 22% of the generation mix, demand fluctuations are not deemed to impact on marginal technology in the market. The impact on the market price of a 1% change in demand is therefore minimal, amounting to approximately Euros 0.25 per MWh.

A moderate drop in demand in Spain does not affect the scheduled output of the Group's nuclear, hydroelectric and wind power plants, since there is a mandatory electricity market in Spain guaranteeing the efficient dispatch of output from all technologies.

Nevertheless, there could be an impact if a drop in electricity demand entails an equivalent reduction in the Group's retail sales and consequent narrowing of margin. This is mitigated to some extent by increasing sales of own energy on the wholesale market. This same effect of loss of margin on retail sales is seen in demand for gas.

Taking both effects into account, it is estimated that a 1% fluctuation in demand would have an impact of around Euros ±11.9 million overall.

Nuclear plants risk

From the perspective of its impact on business results, the main risk arises from the combined cycle power plants outages (partially covered by a loss of profits insurance policy over and above an excess).

Nuclear power plants are also exposed to specific risks derived from the operation, storage and manipulation of radioactive materials. Constitutional Spanish law caps the liability of nuclear power plant operators in the event of a nuclear accident at Euros 700 million. This liability for a nuclear accident must be compulsorily insured by the operator of Spanish nuclear power plants. The IBERDROLA Group meets this obligation by taking out Nuclear Civil Liability insurance policies for each plant. However, Law 12/2011, of 27 May, concerning civil liability for nuclear damage or damage caused by radioactive materials, will increase the operator's liability ceiling and the consequent ceiling on mandatory insurance to Euros 1,200 million for nuclear power plants. The law will enter into force when all signatories of the Paris and Brussels Agreements ratify the 2004 Amendment Protocols, as established in these agreements.

In 2019 the Administration and nuclear generators have agreed a schedule closure plan for Spanish nuclear plants. The agreements provide guarantees on the recoverability of investments required until the last day of useful life of the plants and allows a rational safe operation of the plants until the end of the next decade.

- ***Liberalised and retail businesses in Mexico***

The Groups has 8,223 MW in combined cycle plants and 346 MW in cogeneration plants in Mexico.

Approval of the Energy Regulatory Commission's Agreement A/064/2018, which defines the methodology to determine the calculation and adjustment of the final tariff and the operations tariffs that will apply to the subsidiary production company CFE Suministrador de Servicios Básicos from 1 January 2019.

Commodities' price risk

Electricity generation at IBERDROLA Generación México is gas-intensive. Gas prices are therefore an essential component of this risk. In 2019, approximately 75% of the electricity generated in Mexico was sold under long-term sales agreements (to CFE and, to a lesser extent, other major industrial customers), whereby the risk associated with the price of gas used in generating this electricity is passed on.

The remaining energy is sold to customers (either under self-provision or the free market) at a price linked to the official tariffs published by CFE. The Group's competitiveness in this case relies on its obtaining a better input price for gas than the cost used to define the CFE's basic supply tariff. In the event of an adverse scenario (high cost of gas relative to other energy commodities), the impact would be slightly above Euros 12.5 million in the 95 percentile.

Demand risk

The structure of the agreements IBERDROLA has entered into in Mexico largely shields business results from electricity demand fluctuations. Revenues come mainly from plant availability and only the sales indexed to the official Mexican tariff are exposed to a certain extent to fluctuations in demand. Nonetheless, most of the plants have no firm sales commitments exceeding their production capacity and therefore a shift in demand would not have an impact on their operations or results as the electricity generated would be sold to another customer. For this reason, changes in electricity demand in Mexico therefore have no effect on results.

Operational risk

From the perspective of its impact on business results, the main risk arises from the combined cycle power plants outages (partially covered by a loss of profits insurance policy over and above an excess). In the case of the contracts with the CFE, non-availability leads to a penalty, whereas the contracts with private sector customers would oblige the Group to acquire the missing energy in the market.

- ***Generation and Supply businesses in Brazil***

The Generation business has a combined cycle power plant of 533 MW in Brazil (Pernambuco) at the end of 2019 with long-term sale agreements with Coelba and Celpe.

Renewable energy without PPA and thermal generation excess will be traded through the Group's retail company in the free market. With market prices in the area of R$ 205 MWh, a price fluctuation of 30% would affect the results by some Euros 2.5 million.

- ***Retail business in the United Kingdom and other countries***

Sales of the IBERDROLA Group's retail business in 2019 amounted to 20 TWh of electricity and 27 TWh of gas.

Following the entry into force of the Domestic Gas and Electricity Tariff Act 2018, OFGEM publishes on a half year basis the new maximum prices that suppliers may charge to end customers under the "Standard Variable Tariff". The desirability of maintaining this system of price caps will be reviewed in 2020; it may be extended to 2023.

The structure of the rates applied, both those defined freely and those fixed by the regulator, imply that the IBERDROLA Group's margin is affected by changes in demand. In the UK, the impact of temperature on energy demand is important, mainly for household customers who use gas to warm their homes. In this regard, it is estimated that on a warm year, the actual customers' demand would be 2.1% lower for electricity and 9.8% lower in gas compared to average values. This year's hot temperatures have had a negative impact on results amounting to Euros 44 million.

Other countries

IBERDROLA Group carries out or has started carrying out in 2019 retail activities in Italy, France, Germany, Ireland and the United States, although its dimension is not relevant with the Group's results.

- ***Unhedged energy transactions (discretionary trading)***

Discretionary trading of electricity, gas, emissions allowances and other fuels and associated products performed by some of the Group's businesses is residual and the overall risk thereof is mitigated using individual stop-loss limits, the aggregate sum of which may never exceed 2% of consolidated net profit forecast for the period, pursuant to the Market risk policy approved by IBERDROLA, S.A.'s Board of Directors.

IBERDROLA has reduced discretionary trading in recent years in line with the widespread move away from market speculation. In December 2018, the notional value of derivatives used in speculative trading (calculated in accordance with the criteria set forth in the European Market Infrastructure Regulation (EMIR)) was Euros 135 million for commodity derivatives. This value is much lower than the Euros 3,000 million threshold set for non-financial companies in the European regulation (EMIR).

4. 5. 4. Group's business operating risks

During all of the IBERDROLA Group’s activities, direct or indirect losses may arise as a result of inadequate internal procedures, technical failures, human error or external factors (such as climate factors).

The IBERDROLA Group is also exposed to the following operational risks, among others:

- Malfunctions, explosions, fire, toxic spillages or polluted emissions in gas and electricity distribution networks and in both traditional and renewable generating plants.
- Force majeure cases.
- Sabotage and/or terrorism.
- Operational risk of operations in markets.
- Physical security and cybersecurity.
- Operations in treasury and energy markets.
- System failures.
- Hazards at work and third-party accidents in own facilities.

Any of these risks could cause damage or destruction to the IBERDROLA Group's facilities and financial losses, as well as injuries to third parties or damage to the environment, along with the ensuing lawsuits, especially in the event of power outages caused by accidents at our distribution networks and possible penalties imposed by the authorities.

Although many of these risks are unpredictable, the IBERDROLA Group mitigates them by carrying out the necessary investments, implementing operation and maintenance procedures and programmes (supported by quality control systems), planning appropriate employee training, and taking out the required insurance covering both material damages and civil liability.

In relation to insurance cover, IBERDROLA Group has international insurance programmes to cover equity (insurance for material damage, machinery breakdowns, loss of profits, damage due to natural disasters and risks arising from construction work) and third-party liabilities (general public liability, liability for environmental risks, professional public liability, etc.).

However, this insurance does not completely eliminate operational risk, since it is not always possible, or it is not in its interest to pass such risk on to insurance companies. In addition, cover is always subject to certain limitations.

Given the configuration of the electricity sector's chain value, IBERDROLA Group's activities may be affected by failures in third-party infrastructures and equipment, as well as transmission networks, competitors' generation plants, communications networks, etc.

- ***Cybersecurity risks***

The IBERDROLA Group companies may be affected by threats and vulnerabilities in connection with information, control systems or information and communications systems used by the Group, or by any consequences of unauthorised access to or the use, disclosure, degradation, interruption, modification or destruction of information or information systems, including the consequences of acts of terrorism.

The main risks are:

- Risks related to Operations Technology (OT), such as IT and communications systems used to manage industrial operations (production, management and distribution of energy) or physical safety systems (fire protection, CCTV, alarm reception centres).

- Risks related to admin or customer interfaces (TI), in particular violation of information in hem, under the umbrella of General Data Protection Rules (GDPR) in Europe and other countries.

- Other cybersecurity risks having an impact on reputation.

The OT cyberinfrastructure of the thermal generation business and Renewables' large hydroelectrical power plants is set up to control and manage the operation of each plant from the Despacho Central de Generación (DCG) in Spain any other local generation dispatch office. The potential impact of a cyber-attack could put the generation and the safety of the whole country's electrical system at risk.

The operating management of the Group's Networks Business supports itself in cyber infrastructures to supervise and monitor physical electricity and gas transmission and distribution networks (with offices located in the Group's facilities) and the associated field devices. These devices may be located in IBERDROLA Group's facilities (substations, transformation centres, other) or in customer facilities (meters). The potential impact of a cyber-attack could put the energy supply to whole IBERDROLA Group's distribution areas and/or borderline areas operated by other suppliers at risk.

In the particular case of wind farms (onshore or offshore) and photovoltaic plants, said facilities are connected to Supervision, Control and Data Acquisition systems ("SCADA") that communicate with Control Centres (CORE), from which said facilities can be monitored and controlled remotely. The global impact of a cyber-attack would affect said remote control capacity, putting operating safety at risk.

These risks are managed in accordance with the basic principles defined in internal rules promoting the safe use of IT and communications systems and other cyber assets, reinforcing detection, prevention, defense and response abilities before possible attacks.

IBERDROLA Group currently has a specific insurance against cyber risks, under the terms allowed by the insurance market, which is revised and updated periodically in view of the quick evolution and wide variety of cyber risks.

The different Generation and Retail, Renewables and Networks businesses in the Group have appointed specific cyber security managers and defined plans and processes for their internal networks and cyber infrastructures, aligned with the Group's global framework, but adapted to their specific requirements (Industrial Control Systems of ICS, SCADA, Advanced Measuring Infrastructure or AMI, etc.).

IBERDROLA Group complies with local rules on critical infrastructures protection in the countries where it operates, which guarantees the highest level of protection against these type of threats. In the case of Spain, the nuclear plant of Cofrentes has the highest requirements in terms of physical and cyber security within the Group. It has its own Cybersecurity Plan, in order to comply with the Spanish Act on Critical Infrastructures (Act 8/11) and the Nuclear Safety Council, as well as its Additional Technical Guidelines (in Spanish, Instrucciones Técnicas Complementarias or ITC), and collaborates in the exchange of information through the Spanish cybersecurity plan.

From the commercial operation perspective, IBERDROLA Group has implemented a global model to guarantee compliance with all obligations in force in each country. In Europe, the Group is subject to the GDPR. The Personal Data Protection Policy is implemented in each Group subholding and is developed through local rules and procedures adapted to the relevant provisions in each country.

4.5.5 *Climate change risks*

IBERDROLA has a Policy against climate change (available from www.iberdrola.com) and is clearly committed to the investor community's growing interest in the risks of climate change, which is why we are working to implement the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) initiative of the Financial Stability Board.

The identification, analysis and management of risks resulting from climate change has been integrated, with a global focus, in the ERM (COSO) philosophy, under which IBERDROLA has oriented its risk management since last decade. The identification, analysis and management of risks is approached from a multidepartment perspective, in which both the Corporation and the Businesses take part.

The risks related to climate change require in certain cases strategic management. In this regard, the growth policy followed by Iberdrola throughout its recent history has proven to be a success story, given the strong bet on the development of renewable energies and flexible smart networks. In any case, the opportunities that for the Company arise from the decarbonisation of the global economy weigh more than its risks.

We are facing a systemic global risk. Companies, governments and individuals can reduce their emissions (mitigation) and/or adapt to the new future (resilience).

Climate change compromises several long-term risks which, to a greater or lesser extent are not new to the sector. Risks may be grouped in the following categories:

- Physical risks due to potential material impact on facilities due to the effects resulting from climate change (raise in temperatures, rise of sea level, variations in rainfall, increase both in frequency and intensity of extreme meteorological phenomena, etc.).

- Transition risks, linked to risks arising from global decarbonisation, such as regulatory, market price, technological, reputational, and demand changes, penalties and variations in demand, inter alia).

– Other risks, i.e. credit impairment of counterparties (suppliers, banks, etc.,), social phenomena (humanitarian crises, impact on crops and fishing, refugee crises, epidemics, etc.) and larger competition for financial resources.

It is worth mentioning that the impact of climate change, despite being perceivable already in the short-term (i.e. Higher intensity and frequency of climate events in certain geographical areas), are progressive and act over relatively long periods of time. This mainly implies that it will be the Group's future assets and not current assets the ones more severely impacted, since assets are progressively renewed when they reach the end of their useful life. Additionally, the following risk mitigation measures are to be highlighted:

- The design and specifications of new equipment will take into account more severe climate scenarios.
- The best technologies will allow to obtained more economic value for new projects.
- Taking this risk into consideration in new investments.
- The Group's accumulated experience on the management of climate events.
- Insurance cover.
- Diversification of assets (by geography, technology, age, etc.).

Regulated business

Given the geographical spread of our networks assets in Spain, the United Kingdom, the United States and Brazil, and in accordance with already existing studies, the potential increase in sea level in coast areas will have a reduced impact on the regulatory conditions of our Group's assets.

Increases in temperature and greater frequency of extreme weather events may imply a very moderate gradual increase in operation and maintenance costs (associated with various phenomena such as bigger technical losses and reduced useful life of assets) and in annual capital expenditure, although in perfectly manageable amounts given the multi-annual tariff revisions of these regulated businesses. Additionally, the investment and response plans already in force, accumulated experience and the design of networks (meshed) would act as mitigating factors.

In terms of risks of transition, we would highlight that of large-scale development of distributed generation, whose impact would be partly offset by the growing electrification of the economy (electric vehicles for example) and investment in smart grids.

Renewables business

The main risk is potential negative future performance of hydroelectric, solar and wind resources, the key elements having a financial impact on this activity. Added to the uncertainty associated with long-term global climate projections is the need to specify the impact on the geographical regions where our generating assets are located. Nowadays there are no conclusive reports by third parties enabling reasonable predictions on the potential positive or negative variation of said resources at assets level.

In the case of hydraulic resources, a potential decrease in annual rainfall average could lead to a negative impact on the output of hydraulic plants, especially visible in flow plants. Additionally, climate change could affect seasonal rainfall.

- In Spain, for illustrative purposes, a drop of 5% in production would have an estimated mid-term impact on gross margin (net of taxes and rights) of approximately Euros 20 million.

- In Spain, for example, a drop of 5% in production would have an estimated impact for the Group of Euros 10 million (as a result of its stake in Neonergia).

In terms of transition risks, potential cuts to remuneration to renewable energies and a drop in wholesale marginal market prices due to a higher renewable production should be noted. To face this risks, potential technology improvements which would predictably improve the performance of wind farms and solar plants in the future, the inclusion of climate change risks in the assessment of new investments and alternative ways to market sale (such as PPAs or tariff agreements) should be highlighted.

Generation and Supply businesses

The long-term impact of climate change on the thermal generation business is not expected to be material, since the Group's assets in this area will be substantially reduced in the next few decades as they reach the end of their useful life, and will essentially be concentrated in Mexico.

The impact on the pure retail business is considered minor, since any possible negative impacts deriving from efficiency measures and changes in temperature could be offset by the increased growth that the electrification of the economy is expected to produce.

By way of conclusion, and in accordance with the forecast effects alluded to and the mitigating factors to hand, we estimate that the physical risks of climate change will not have a disastrous or lasting impact on the Group's consolidated figures, the Group being resilient overall, and in any case the opportunities deriving from the decarbonisation of the global economy (growth in renewables, investment in integrating smart grids, electrification of transport, etc.) outweigh the risks. In terms of transitional risks, the Group's current positioning, as a result of its focus as an investor on energy from renewable sources and networks, places it in a position of leadership to face these risks.

Apart from this we should highlight the fact that the Group continues to make progress with in-depth climate analysis with a view to improving its forecasting and establishing the most appropriate measures in order to adapt.

For further information on this risk, please refer to the Integrated Report of February 2020, as well as the Sustainability 2019.

4.6 Legal and tax risks

The IBERDROLA Group companies are part of a certain in-court and out-of-court disputes within the ordinary course of their activities, the final result of which, in general, is uncertain. An adverse result, or an out-of-court resolution thereof or other proceedings in the future could have a material adverse effect on our business, financial situation, operating results and cash flows. However, the Group's legal advisers consider that the outcome of the aforementioned disputes will not have a significant effect.

Notes 33 and 44 of the Consolidated annual accounts include a more detailed description of the most significant matters.

4.7 Other IBERDROLA Group risks

The Group has policies and procedures to monitor and mitigate these risks to which it is subject, under the supervision of the Board of Directors, the support of its different Committees and the management of the appropriate corporate divisions.

The comprehensive risk control and management system therefore observes the continuous follow-up and detection of emerging risks and risks of not a strict financial nature which the investors' community has been monitoring in the last years, such as environmental aspects, the impact on society and on the Group's corporate governance ("ESG"). The impacts said risks may have, which are conveniently reported both internally and externally, are of a varied nature, both in economic terms and reputational terms.

In terms of fraud and corruption risks, IBERDROLA Group has a Compliance system consisting of a set of substantive rules, formal procedures and material actions aimed at guaranteeing its intervention in compliance with ethical principles and the applicable legal provisions, preventing, avoiding and mitigating risks resulting from irregular, unethical or illegal behaviours from IBERDROLA Group's professionals within the organisation. Bodies and divisions which have been directly assigned their execution and development are also part of said system.

As part of the Compliance System the Code of Ethics (applicable to all Group's professionals, directors and supplies) and the Compliance Unit, an internal permanent collegiate body, linked to the Sustainable Development Committee within IBERDROLA' Board of Directors, disseminating a preventive culture based on the principle of zero tolerance to illegal or irregular behaviours, stand out. The system has been developed following the best domestic and international practices in terms of compliance, fraud prevention and fight against corruption.

For greater detail on these risks, please check the Sustainability Report 2019, as well as the Integrated Report February 2020 and the Annual Corporate governance report 2019.

Among the Policies approved by the Board, the following stand out:

<u>Environmental, social and corporate governance risks ("ESG")</u>

- Environmental policy, General sustainable development policy, Policy against climate change.
- Human resources framework policy, Health and safety risks policy and Equal opportunities and life-work balance policy.
- General Corporate Governance Policy, Board of Directors Diversity and Member Selection Policy, Senior Management Remuneration Policy.
- Stakeholder Relations Policy and Policy on Respect for Human Rights.

<u>Fraud and corruption risks</u>

- Anti-corruption and anti-fraud policy
- Crime prevention policy
- Code of Ethics

- Ethical mailboxes

Reputation risk

- Reputational risk framework policy.

Other sources of uncertainty

The risks associated to pension plans are analysed in Note 25 of these financial statements.

Note 44 shows the detail of contingent liabilities.

4.8. Risks materialised during the year

See section E.5 of the corporate governance report for 2019.

5. SIGNIFICANT SUBSEQUENT EVENTS TO YEAR END

Events after the reporting period are described in Note 51 to the annual accounts.

6. RESEARCH AND DEVELOPMENT ACTIVITIES

IBERDROLA is today the Utility of the future due to its innovative strategy, extended to all its businesses and activity fields. Thanks to a constant commitment to innovation, Iberdrola is the most innovative Spanish utility, the second at European level and the third at worldwide level, in accordance with the European Commission's classification. This position was reached thanks to the talent, experience and effort of 34,000 people in more than 40 countries.

In 2019, IBERDROLA invested more than Euros 280 million to R+D+i activities, up 5% compared to the previous year. IBERDROLA Group's R+D+i are based on five pillars:

- **Disruptive technologies** that are increasingly efficient, sustainable and respectful of the environment, enabling the functioning of facilities and processes to be optimised

- **Competitive new products and services** that meet customers' needs with a greater degree of personalisation of contents and offers.

- **Digitisation and automation** in all business and processes, introducing new technologies such as blockchain, big data, IoT, virtual reality, artificial intelligence, etc., at all company levels.

- **Innovation with start-ups, entrepreneurs and suppliers** with the goal of developing new disruptive business models, favouring the exchange of know-how and having a driving effect on collaborators.

- **Culture of innovation and talent.** Iberdrola fosters a culture of innovation by means of knowledge transfer, attracting talent and promoting the entrepreneurial spirit. Within the Universities Programme, several initiatives are developed in the academic word, such as Chairs, R&D projects, training of students, in-house training and young entrepreneurs.

For recognition purposes, in 2019 the Spanish Ministry of Science, Innovation and Universities granted the National Innovation award, in the Innovating trajectory category, to the IBERDROLA Group's Chairman, Ignacio Galán.

Some of the most notable innovative initiatives, classified by broad area, are:

6.1 Renewable energies

In 2019, Innovation activities in Renewables have focused primarily on:

- Efficiency improvements in wind farms, photovoltaic plants and hydroelectric facilities. The European project ENERXICO has started. Its aim is to adapt flows dynamic models to future exascale supercomputers. The projects following projects have continued being developed: ROMEO, to improve operating and maintenance cost efficiency of wind farms; ASPA, to develop new models and tools for the early detection of defects based on AI/big data techniques, and Doctor PV, to reduce the costs in photovoltaic plants. The YO SOY INNOVADOR (I AM AN INNOVATOR) initiative has been launches, to promote internal and external challenges, and we have continued working on the *Renewables Digital Evolution Plan (2018-2022*), and the *Renewables Accelerator* project, to promote new ideas fostering efficiency increase and global competitiveness in renewable energies.

- In the field of hydroelectric power, the projects HIDRODEMAND, for implementing operating efficiencies, and HIDROSMART, for developing new technologies to operate Watersheds Operating Centres (COCs, in Spanish) are to be highlighted.

- Regarding innovation in offshore wind projects, the construction of the East Anglia One offshore wind farm in the United Kingdom is being completed. There several initiatives such as the development of tools to model and foresee movements in the sea bed have been carried out. The proceedings for constructing East Anglia Hub, grouping three projects with a total installed capacity of 3,100 MW, in the upcoming years have been initiated. *East Anglia One North*, *East Anglia Two* and *East Anglia Three*. In the Baltic Sea, the upcoming construction of the Baltic Eagle offshore wind farm stands out, for which a new design of monopiles is being done given the circumstances of the sea bed. In the offshore wind farm of Saint Brieuc a new innovative onshore pilons projects is being carried out. It will serve to increase efficiency during its future installation in the sea. In Wikinger Sud, the installation of a new type of jackets is been assessed to reduce installation times and costs. Last, the FLAGSHIP project is worth highlighting. It is an initiative within the *Programa H2020*, to design, manufacture and operate a new floating half-immerses platform in Norwegian waters.

6.2. Clean generation technologies

During 2019, efforts in the area of generation focused on operating efficiency and flexibility, reducing environmental impact, and the improvement of plant safety.

- In the nuclear field, the completion of the OPD project stands out, thanks to which an open phase detection system for start-up transformers in nuclear power stations has been successfully developed

- In the thermal generation field, the OCTAVE project has been completed. It is continuation of the ambitious open phase detection system for start-up transformers in nuclear power stations. The initial goals set in terms of flexibility have been successfully met and have contributed to the integration of intermittent renewable generation in the energy mix. Moreover, the REDEMIS project has commenced to improve environmental performance at start-up and shut-down phases of the plant and in variations of load of combined cycles.

6.3. Retail Area - New projects and services

Innovation is essential in retail activity, in order to offer customers the products and services best suited to their needs. Thus in 2019 IBERDROLA launched the following:

- New initiatives to boost the customer experience.

  A new app has been launched in Spain with a more innovative modular design, easier and more intuitive to use, and Bizum has been implemented as a payment method. In the apps for Italy, France and Portugal several functionalities have been added, such as the management of the fixed rate, the self-reading of electricity and gas, wire payments, etc. In addition, the web site has been restructured and now has a more innovative design, offering customers an excellent experience despite the device from which they access it and the information they want to check.

- New products and functionalities

  In 2019 an innovative product for home energy management has been launched: the Iberdrola Smart Assistant (*Asistente Smart Iberdrola*), which allows to disaggregate the consumption of household appliances.

  Regarding Smart Home, this year a new product has been launch to manage heat and cold air conditioning and the sale of smart led lights has been promoted. We have continued developing the product Energy Wallet, through which customers may select the renewable generation plant from which they receive their supply from a list of wind and hydroelectric al plants available.

  In relation to the self-consumption solution for distributed generation, Smart Solar, in 2019, the product was launched in Italy and its product functionalities have continued to been improved in Spain and Portugal. Now, customers may monitor generation, self-consumption and the injection to the grid of their solar panels.

  As part of the Smart Mobility, the roll-out of charging stations, integrating third-party equipment (interoperability), accessible through the Iberdrola Public Charge App (*App Recarga Pública Iberdrola*) stands out. On the other hand, the Smart functionalities of home charging equipment have been integrated in the Iberdrola Customers App (*App de Iberdrola Clientes*), so user may manage their home charging points from the app. In Brazil and the United Kingdom there are several on-going initiatives to foster the roll-out of electrical vehicles (new charging stations, 100% renewable rates, etc.).

Moreover, IBERDROLA takes part in R+D+i projects in the field of electric mobility, such as REMOURBAN, developing a public charging network in the city of Valladolid, or the CIRVE project in which Iberdrola assists with the development of rapid-recharge infrastructure corridors for electric cars, to boost electric mobility and connect Spain to France and Portugal and the interoperability among charging stations of different companies. Moreover, IBERDROLA takes part in a work group to create a state interoperability platform of public charging stations.

6.4. Smart grids

The Group's R+D+i activities in electrical energy distribution is specially aimed at improving customer services, maintaining and extending the smart digital grid model, and advancing towards a larger integration of renewables in the grid, electrical vehicles and storage systems, both in Spain and abroad.

- In Europe, the project COORDINET has given its first steps. Several agents in the electricity sector involved in the electricity sector chain value take part it in in order to offer a favourable framework to facilitate the participation of all agents. Furthermore, in 2019, the European Commission approved the project ATELIER, whose purpose is to develop Positive Energy Districts (PED) in eight European cities, Bilbao being among them.

- In Spain, the execution of the LAYCA project has gone on. This project, which received the Quality Innovation Award, develops a system to locate breakdowns and characterise failures of medium voltage networks. Additionally, the roll-out of a new system to inspect aerial lines in Spain developed by LIDAR project has been completed.

- In the United Kingdom, the launch of Comunidades de Cero Carbono stands out. It is the first detailed work plan to show how local communities may have a role in attaining zero emissions. The campaign was started in Liverpool and will be extended to other areas with different energy needs like Edinburgh and Glasgow or the rural communities of Angleshey and Cheshire.

- In Brazil, innovation projects are leading in five main directions: smart grids, quality and reliability of the grid, safety in facilities, recoverability of energy and sustainability. Among the initiatives carried out the project DSO Atibaia stands out. It is expected to install a new automation system, smart meters and a telecommunications network, and the Transmission Grids project, where new mixes, fibres, structures and digital solutions will be explored.

- In the United States, the project ARIES stands out. It offers a solution to assess damages during weather events using LiDAR technology. It will significantly reduce diagnosis time and offer better customer service. As part of the Energy Smart Community programme, several fast load pilot projects for electric vehicles are being carried out, as well as battery storage projects for the grid.

- Regarding Iberdrola Innovation Middle East, a technological centre IBERDROLA has in Qatar, several R+D+i projects with a high level of digitisation and great retail potential have been implement in different areas: smart grids, integration of renewables and energy management.

6.5. IBERDROLA Ventures – PERSEO

Iberdrola Ventures – PERSEO is IBERDROLA's start-up programme created in 2008 to foster creation and develop a dynamic start up and entrepreneurship ecosystem in the electricity sector. The programme focuses on technologies and business models through greater electrification and decarbonisation of the economy. From its inception, more than Euros 65 million have been invested in energy start-ups worldwide. Among the main milestones achieves in 2019, the following stand out:

- The recognition by the European Commission within the Start-up Europe Partnership initiative, including IBERDROLA among the top 12 European companies that work best with start-ups for the third year in a row. IBERDROLA was also handed the special award Start-up Procurement Award.

- More than 15 pilot projects with start-ups in technological areas such as IA, Big Data, IoT, robotics and Blockchain, aiming at improving both asset planning and management and optimising operation and maintenance. The Iberdrola Challenges programme has been launch to attract innovative solutions that may be applied in IBERDROLA to face the company's challenges.

- The investment in Wallbox, dedicated to developing electric mobility solutions, and Balantia, developing solutions for improvement in the field of energy efficiency. These investments entail an important contribution towards IBERDROLA's support in the fields of electric mobility and energy efficiency.

7. ACQUISITION AND DISPOSAL OF TREASURY SHARES

The Group's treasury share policy establishes the following:

Treasury share transactions are considered those transactions carried out by the Company, whether directly or through any of the Group's companies, the object of which are Company shares, as well as financial instruments or agreements of any type, traded or not in the stock market or other organised secondary markets, which grant the right to acquire from, or the underlying security of which are, Company shares.

Treasury share transactions will always have legitimate purposes, such as, among others, to provide investors with liquidity and sufficient depth in the trading of Company shares, to execute treasury share purchase programmes approved by the Board of Directors or General Shareholders' Meeting resolutions, to fulfil legitimate commitments undertaken in advance or any other acceptable purposes in accordance with applicable regulations. Under no circumstances shall the purpose of the treasury share transaction be to interfere with the free establishment of prices. In particular, any conduct referred to in article 83.ter.1 of the Securities Market Law and article 2 of the Royal Decree 1333/2005, of 11 November, implementing the Securities Market Law related to matters of market abuse.

The Group's treasury share transactions will not be carried out, under any circumstances, based on insider information.

Treasury shares will be managed providing full transparency as regards relationships with market supervisors and regulatory organisations.

Note 20 of the Consolidated annual accounts presents the movements of IBERDROLA's shares in the Group companies' portfolios in the last years. Likewise, other information on transactions in 2019 and 2018 is presented in the following chart:

Treasury Stock	No. of shares	thousands of Euros	Thousands of Euros treasury shares cost	Average price (euros)	Total shares	% of capital
Balance at 01.01.2018	**75,710,149**	**56,782**	**507,175**	6.70	**6,317,515,000**	**1.20**
Additions	266,442,793	199,832	1,672,087	6.28	–	–
Capital reduction	(198,374,000)	(148,781)	(1,245,420)	6.28	–	–
Iberdrola scrip dividend (1)	5,117	4	–	–	–	–
Iberdrola scrip dividend (2)	–	–	(11,044)	–	–	–
Disposals (3)	(7,798,715)	(5,849)	(49,733)	6.38	–	–
Balance at 31.12.2018	**135,985,344**	**101,988**	**873,065**	6.42	**6,397,629,000**	**2.13**
Additions	172,369,618	129,277	1,402,123	8.13	–	–
Capital reduction	(280,457,000)	(210,343)	(2,015,182)	7.19	–	–
Iberdrola scrip dividend (1)	3,039,564	2,280	–	–	–	–
Disposals (3)	(6,561,151)	(4,921)	(42,141)	6.42	–	–
Balance at 31.12.2019	**24,376,375**	**18,281**	**217,865**	**8.94**	**6,362,072,000**	**0.38**

(1) Shares received.
(2) Free of charges allocation rights disposed.
(3) Includes awards to employees.

Treasury shares of Scottish Power	No. of shares	thousands of Euros	Thousands of Euros treasury shares cost	Average price (euros)	Total shares	% of capital
01.01.2018	**1,156,863**	**868**	**8,417**	7.28	**6,317,515,000**	**0.02**
Additions	362,108	272	2,393	6.61	–	–
Iberdrola scrip dividend (1)	144,747	109	–	–	–	–
Disposals (3)	(613,079)	(460)	(2,734)	4.46	–	–
31.12.2018	**1,050,639**	**789**	**8,076**	7.69	**6,397,629,000**	**0.02**
Additions	256,592	192	2,193	8.55	–	–
Iberdrola scrip dividend (1)	110,714	83	–	–	–	–
Disposals (3)	(504,226)	(378)	(2,330)	4.62	–	–
31.12.2019	**913,719**	**686**	**7,939**	**8.69**	**6,362,072,000**	**0.01**

During 2019 and 2018, treasury shares held by the IBERDROLA Group were below the legal limit.

Finally, the conditions and time periods of the current mandate of the Board of Directors to acquire or transfer treasury shares are detailed below.

At their General Meeting held on 13 April 2018, the shareholders expressly agreed to delegate powers to the board of directors, with powers of substitution, pursuant to the provisions of the Spanish Companies Act, to carry out derivative acquisition of shares in Iberdrola, S.A. under the following conditions:

- Acquisitions may be made directly by Company or indirectly through their subsidiary companies under the same terms and conditions as this agreement. The subsidiary companies which develop regulated activities as prescribed in Law 24/2013 of 26 December on the Electricity Sector and Law 34/1988 of 7 Octoberon the Hydrocarbon Sector.

- Acquisitions may be made by purchase transactions, swaps or any other form permitted by law.

- Acquisitions may be made up, at all times, to the maximum legal threshold.

- Such acquisitions may not be made at a price higher than the market price or lower than the par value of the share.

- This authorization is granted for a maximum period of five years since the adoption of the agreement.

- As a result of the acquisition of shares, including those in which the Company or the person acted on its own name and behalf but on behalf of the Company it had previously required and already had in stock, resulting net equity could not be reduced under its share capital plus unavailable legal or statutory reserved, as provided in section 146.1.b) of the Spanish Companies Act.

Shares acquired under these powers can be transferred or cancelled or used for the compensation systems as provided for in paragraph 3.a) in section 146.1 of the Spanish Companies Act. They may also be used to develop programmes that encourage participation in the Company's share capital such as the dividend reinvestment plan, loyalty bonuses and other similar instruments.

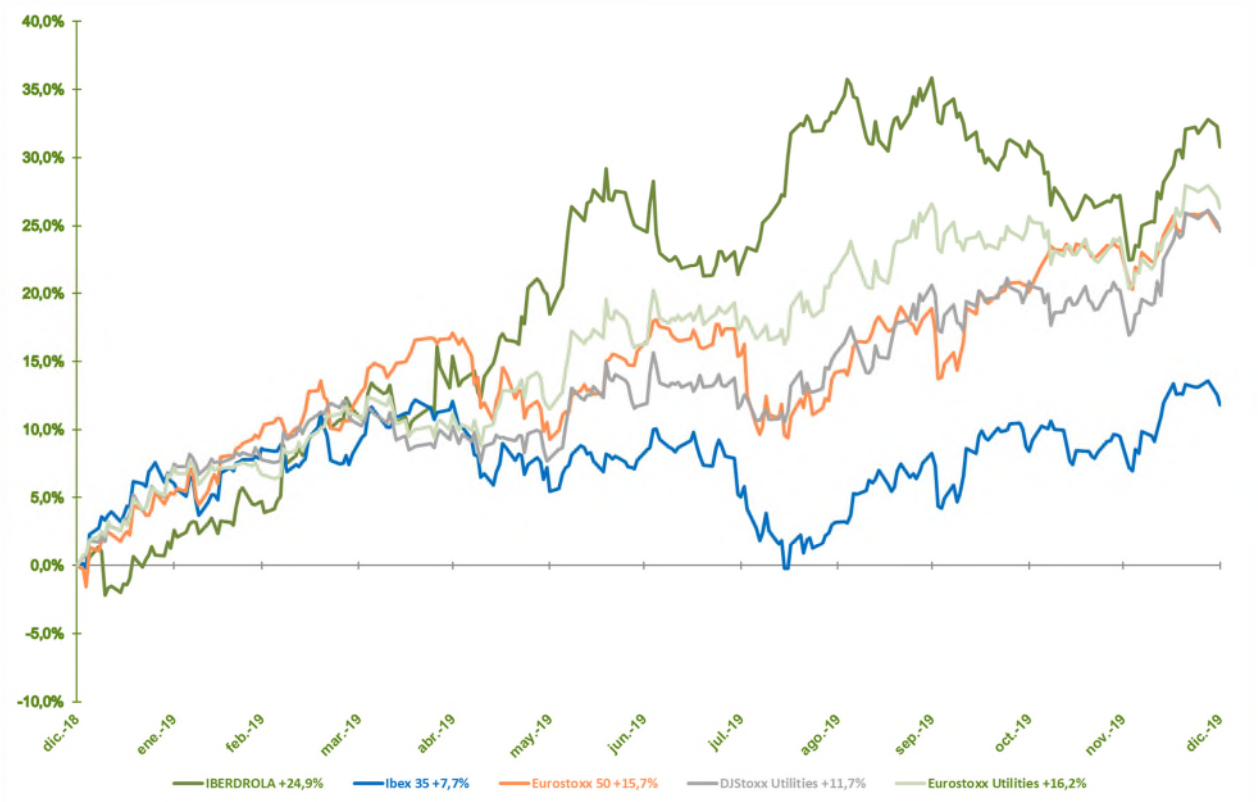
– Stock market data

		2019	2018
Stock market capitalisation (1)	Millions of Euros	58,404	44,899
Earnings per share continuing operations	Euros	0.534	0.455
P.E.R. (share price at year end/profit per share)	Times	17.190	15.420
Price / Carrying amount (capitalisation on carrying amount at year end) (2)	Times	1.550	1.227

(1) 6,362,072,000 and 6,397,629,000 shares at 31 December 2019 and 2018, respectively.
(2) Capitalisation at 31 December 2019 (58,404) / Parent company equity (37,678). Capitalisation at 31 December 2018 (44,899) / Parent company equity (36,582).

– The IBERDROLA share

Stock market performance of IBERDROLA compared to the indexes:



	2019	2018
Number of shares outstanding	6,362,072,000	6,397,629,000
Share price at period end	9.18	7.02
Average share price for the year	8.42	6.43
Average daily volume	16,320,416	18,167,584
Maximum volume (19/01/2018 - 06/04/2017)	57,528,271	62,436,659
Minimum volume (24/12/2018 - 28/08/2017)	2,303,761	4,680,119
Shareholder remuneration (Euros)	0.356	0.331
Gross interim dividend (29/01/2019 - 29/01/2018) (1)	0.151	0.140
Gross complementary dividend (01/08/2019 - and 25/07/2018) (2)	0.200	0.186
Attendance fees	0.005	0.005
Shareholders' profitability (3)	3.88%	4.72%

(1) Purchase price of rights guaranteed by IBERDROLA in 2018 equivalent to interim dividend in accordance with "Iberdrola flexible remuneration" in 2019.

(2) Complementary dividend Iberdrola flexible remuneration (Iberdrola retribución flexible).

(3) Complementary dividend and attendance bonus for attending the General Shareholders' Meeting/share price at period end.

8. OTHER INFORMATION

8.1 Non-financial information and diversity

The statement on non-financial information, referred to in sections 262 of the Companies Act and 49 of the Code of Commerce, are presented in a separate report titles Statement of non-financial information. The consolidated sustainability report for IBERDROLA, S.A., and its subsidiary companies for 2019, expressly indicates the information contained there is part of IBERDROLA Group's consolidated directors' report. This document will be verified by an external verification services supplies and will be subject to the same requirements in terms of approval, deposit and publication as the consolidated management report.

8.2. IBERDROLA Foundation

In 2019, the Group allocated Euros 10,309 thousand to financing the various foundations.

The main recipient of the funding was Iberdrola Foundation, which received Euros 6,904 thousand. Information on its goals and activities is available at: www.fundacioniberdrola.org. IBERDROLA Foundation is a private, non-profit, cultural foundation, founded by the Company. Its mission is to develop initiatives which effectively contribute to improving the quality of life of the people in the regions and countries where the Group acts, especially in the areAt energy sustainability, art and culture, as well as solidarity and social initiatives. The foundation may act independently to achieve its goals and is fully functional and autonomous. Without prejudice to its collaboration with other entities, Iberdrola Foundation coordinates and executes the Group's corporate social responsibility strategy, so that it is in line with the purpose for which it was created and as assigned there to by the Board of Directors.

Iberdrola Foundation coordinates its welfare work in the United Kingdom through the Scottish Power Foundation, which was granted Euros 1,332 thousand. In the United States, this work is carried out through the Avangrid Foundation, allocating Euros 1,031 thousand. In Brazilthrough the Instituto Iberdrola Brasil, earnmarking Euros 498 thousand. In Mexico, through the Fundación Iberdrola México, receiving Euros 544 thousand.

ANNUAL CORPORATE GOVERNANCE REPORT 2019

ANNUAL CORPORATE GOVERNANCE REPORT OF LISTED COMPANIES

ISSUER IDENTIFICATION

YEAR-END DATE: 31/12/2019

Tax Identification No. (C.I.F.) A-48010615

Company Name: IBERDROLA, S.A.

Registered Office: Plaza Euskadi número 5
48009 Bilbao - Biscay - Spain

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ANNUAL CORPORATE GOVERNANCE REPORT OF LISTED COMPANIES

A CAPITAL STRUCTURE

A.1 Complete the table below with details of the share capital of the company:

Date of last change	Share capital (Euros)	Number of shares	Number of voting rights
25/07/2019	4,771,554,000.00	6,362,072,000	6,362,072,000

Remarks
On 30 January 2020, the share capital was increased to 4,840,194,000.00 euros, represented by 6,453,592,000 ordinary shares having a nominal value of 0.75 euro each, belonging to a single class and series, which are fully subscribed and paid up.

Please state whether there are different classes of shares with different associated rights:

Yes □ **No X**

Class	Number of shares	Par value	Number of votes	Associated rights

Remarks
All shares are of the same class and carry the same rights.

A.2 Please provide details of the company's significant direct and indirect shareholders at year end, excluding any directors:

Name of shareholder	% of shares carrying voting rights		% of voting rights through financial instruments		% of total voting rights
	Direct	Indirect	Direct	Indirect	
BLACKROCK, INC,	0.00	5.10	0.00	0.06	5.16
NORGES BANK	3.43	0.00	0.00	0.00	3.43
QATAR INVESTMENT AUTHORITY	0.00	8.69	0.00	0.00	8.69

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Remarks
Data at 31/12/2019.

Breakdown of the indirect holding:

Name of indirect shareholder	Name of direct shareholder	% of shares carrying voting rights	% of voting rights through financial instruments	% of total voting rights
BLACKROCK INC	BLACKROCK GROUP	5.10	0.06	5.16
QATAR INVESTMENT AUTHORITY	QATAR HOLDING LUXEMBOURG II, S.A R.L.	8.69	0.00	8.69

Remarks
According to available information, the approximate breakdown of the interests in the share capital by type of shareholder is as follows: - Foreign investors 69.70% - Domestic entities 7.74% - Domestic retail investors 22.56%

State the most significant shareholder structure changes during the year:

Name of shareholder	Date of transaction	Description of transaction
NORGES BANK	08/01/2019	Its interest has decreased to below 3%
NORGES BANK	16/01/2019	Its interest has increased to above 3%
NORGES BANK	17/01/2019	Its interest has decreased to below 3%
NORGES BANK	18/01/2019	Its interest has increased to above 3%

Most significant movements
The sources of the information provided are the notices sent by the shareholders to the CNMV and to the Company itself, the information contained in their respective annual reports and press releases, and the information that the Company obtains from Iberclear.

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Pursuant to the provisions of section 23.1 of Royal Decree 1362/2007 of 19 October, further developing Law 24/1988 of 28 July on the Securities Market, in connection with the transparency requirements relating to the information on issuers whose securities have been admitted to trading on an official secondary market or other regulated market in the European Union, it is deemed that the holder of a significant interest is a shareholder controlling at least 3% of voting rights.

On 7 January 2020, the Qatar Investment Authority reported that Qatar Holding Luxembourg II, S.à r.l transferred its direct interest in the company to Qatar Holding LLC, both entities being controlled by Qatar Investment Authority.

On 7 January 2020, Norges Bank reported that its percentage voting rights in the Company decreased to below 3%.

On 14 January 2020, Norges Bank reported that its percentage voting rights in the Company increased to above 3% on 13 January 2020.

A.3 In the following tables, list the members of the Board of Directors (hereinafter "directors") with voting rights in the company:

Name of director	% of shares carrying voting rights		% of voting rights through financial instruments		% of total voting rights	% of total voting rights that can be transmitted through financial instruments	
	Direct	Indirect	Direct	Indirect		Direct	Indirect
MR JOSÉ IGNACIO SÁNCHEZ GALÁN	0.11	0.06	0.03	0.00	0.20	0.00	0.00
MS INÉS MACHO STADLER	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MR IÑIGO VÍCTOR DE ORIOL IBARRA	0.02	0.00	0.00	0.00	0.02	0.00	0.00
MS SAMANTHA BARBER	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MS MARÍA HELENA ANTOLÍN RAYBAUD	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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MS GEORGINA KESSEL MARTÍNEZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MS DENISE MARY HOLT	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MR JOSÉ WALFREDO FERNÁNDEZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MR MANUEL MOREU MUNAIZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MR XABIER SAGREDO ORMAZA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MR JUAN MANUEL GONZÁLEZ SERNA	0.00	0.01	0.00	0.00	0.01	0.00	0.00
MR FRANCISCO MARTÍNEZ CÓRCOLES	0.01	0.00	0.01	0.00	0.01	0.00	0.00
MR ANTHONY L. GARDNER	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MS SARA DE LA RICA GOIRICELAYA	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Total percentage of voting rights held by the Board of Directors	0.24

Remarks
The data reflected in this section is at the date of approval of this report. Pursuant to the provisions of the 2017-2019 Strategic Bonus approved at the General Shareholders' Meeting, the chairman & CEO may receive up to a maximum of 1,900,000 shares based on the performance evaluation for the 2017-2019 period, which, if awarded will be paid in three equal parts in 2020, 2021 and 2022. Furthermore, pursuant to the provisions of the 2017-2019 Strategic Bonus, the Business CEO may receive up to a maximum of 300,000 shares based on the performance evaluation for the 2017-2019 period, which, if awarded will be paid in three equal parts in 2020, 2021 and 2022. Each of the deliveries of shares is subject to confirmation by the Board of Directors, after a report from the Remuneration Committee, that the

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circumstances on which the performance evaluation was based remain in effect. As at the date of this Report, the Remuneration Committee has not yet evaluated performance during the 2017-2019 period.

Breakdown of the indirect holding:

Name of director	Name of direct shareholder	% of shares carrying voting rights	% of voting rights through financial instruments	% of total voting rights	% of voting rights that can be transmitted through financial instruments
MR JOSÉ IGNACIO SÁNCHEZ GALÁN	Royal Park 2000, S.L.	0.06	0.00	0.06	0.00
MR JUAN MANUEL GONZÁLEZ SERNA	Grupo Siro Corporativo, S.L.	0.01	0.00	0.01	0.00

A.4 If applicable, state any family, commercial, contractual or corporate relationships that exist among significant shareholders to the extent that they are known to the company, unless they are insignificant or arise in the ordinary course of business, except those that are reported in Section A.6:

Name of related party	Nature of relationship	Brief description
No data		

A.5 If applicable, state any commercial, contractual or corporate relationships that exist between significant shareholders and the company and/or group, unless they are insignificant or arise in the ordinary course of business:

Name of related party	Nature of relationship	Brief description
No data		

A.6 Describe the relationships, unless insignificant for the two parties, that exist between significant shareholders or shareholders represented on the Board and directors, or their representatives in the case of legal-person directors.

Explain, as the case may be, how the significant shareholders are represented. Specifically, state those directors appointed to represent significant shareholders, those whose appointment was proposed by significant shareholders and/or companies in its group, specifying the nature of such relationships or ties. In particular, mention the existence, identity and post of directors, or their

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representatives, as the case may be, of the listed company, who are, in turn, members of the Board of Directors or their representatives of companies that hold significant shareholdings in the listed company or in group companies of these significant shareholders.

Name or company name of related director or representative	Name or company name of related significant shareholder	Company name of the group company of the significant shareholder	Description of relationship/post
No data			

Remarks
There are no directors appointed on behalf of significant shareholders or directors connected thereto or proposed by them for appointment.

A.7 State whether the company has been notified of any shareholders' agreements that may affect it, in accordance with Articles 530 and 531 of the Ley de Sociedades de Capital ("Corporate Enterprises Act" or "LSC"). If so, describe these agreements and list the party shareholders:

Yes □ **No X**

State whether the company is aware of any concerted actions among its shareholders. If so, provide a brief description:

Yes □ **No X**

If any of the aforementioned agreements or concerted actions have been modified or terminated during the year, please specify expressly:

A.8 State whether any individual or company exercises or may exercise control over the company in accordance with Article 5 of the Ley de Mercados de Valores ("Spanish Securities Market Act" or "LMV"). If so, please identify them:

Yes □ **No X**

A.9 Complete the following table with details of the company's treasury shares:

At the close of the year:

Number of direct shares	Number of indirect shares (*)	Total percentage of share capital
24,376,375		0.38

(*) through:

Name of direct shareholder	Number of direct shares

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No data	

Explain any significant changes during the year:

Explain significant changes
The Company sent to the CNMV three updates to its treasury share position in 2019 as a result of a change in the number of voting rights arising from corporate transactions: • On 5 February 2019 notices were provided of direct acquisitions of a total of 3,617,643 shares (representing 0.055% of voting rights on that date), coinciding with the increase in capital resulting from the "Iberdrola Flexible Remuneration" programme. • On 26 June 2019 notices were provided of direct acquisitions of a total of 235,024 shares (representing 0.004% of voting rights on that date), coinciding with the reduction in capital; and • On 2 August 2019 notices were provided of direct acquisitions of a total of 379,515 shares (representing 0.006% of voting rights on that date), coinciding with the increase in capital resulting from the "Iberdrola Flexible Remuneration" programme. During financial year 2019 the Company also provided two more notices arising from consecutive direct acquisitions of own shares due to said acquisitions exceeding 1% of voting rights since the preceding notice: • On 22 June 2019 notices were provided of direct acquisitions of a total of 66,286,268 shares (representing 1.017% of voting rights on that date). • On 17 June 2019 notices were provided of direct acquisitions of a total of 81,529,569 shares (representing 1.250% of voting rights on that date). • In addition, on 18 February 2020 the Company notified the CNMV of direct acquisitions of own shares in the total amount of 75,462,635 shares (1.169%).

A.10 Provide a detailed description of the conditions and terms of the authority given to the Board of Directors to issue, repurchase, or dispose of treasury shares.

The shareholders acting at the General Shareholders' Meeting held on 13 April 2018 resolved to expressly authorise the Board of Directors, with the power of substitution, pursuant to the Companies Act (*Ley de Sociedades de Capital*), to carry out the derivative acquisition of shares of Iberdrola on the following terms:

a) Purchases may be made by Iberdrola directly, or indirectly through its subsidiaries. Subsidiaries carrying out regulated activities are excluded pursuant to the provisions of the Electricity Industry Act (*Ley del Sector Eléctrico*) and the Hydrocarbons Act (*Ley de Hidrocarburos*).
b) Purchases will be made using purchase/sale or swap transactions or any other means allowed by law.
c) Purchases may be made up to the maximum sum permitted by law (i.e. 10% of the share capital).
d) Purchases may not be made at a higher price than that quoted on the Stock Exchange or at a price lower than the share's nominal value.
e) The authorisation was granted for a period not to exceed five years as from the approval of the resolution.

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f) As a result of the acquisition of shares, including those that the Company or the person acting in their own name but on behalf of the Company has previously acquired and held in treasury, the resulting shareholders' equity cannot decrease to below the amount of the share capital plus the restricted reserves required under law or the by-laws.

The shares, if any, purchased as a result of the aforementioned authorisation could be used for either transfer or retirement or could be applied to the remuneration systems provided for in the Companies Act; added to the foregoing alternatives was the possible development of programmes fostering the acquisition of interests in the Company, such as, for example, dividend reinvestment plans, loyalty bonuses or similar instruments.

Furthermore, at the General Shareholders' Meeting held on 8 April 2016, the shareholders resolved to authorise the Board of Directors to increase share capital upon the terms and within the limits set forth in section 297.1.b) of the Companies Act, with the power to exclude preemptive rights, limited to a maximum nominal amount of 20% of the share capital.

A.11 Estimated working capital:

	%
Estimated working capital	82.13

A.12 State whether there are any restrictions (article of associations, legislative or of any other nature) placed on the transfer of shares and/or any restrictions on voting rights. In particular, state the existence of any type of restriction that may inhibit a takeover attempt of the company through acquisition of its shares on the market, and those regimes for the prior authorisation or notification that may be applicable, under sector regulations, to acquisitions or transfers of the company's financial instruments.

Yes X **No □**

Description of restrictions
Those having an interest equal to or greater than 3% of the capital or voting rights of two or more companies that have the status of principal operator in certain markets or sectors (including the generation and supply of electricity) may not exercise rights in excess of such percentage in more than one entity. Article 29.2 of the By-Laws provides that no shareholder may cast a number of votes greater than those corresponding to shares representing 10% of the share capital. According to article 28, a shareholder may not exercise their right to vote at the General Shareholders' Meeting if the resolution to be approved is intended to: (a) relieve the shareholder of an obligation or grant the shareholder a right; (b) provide the shareholder with any kind of financial assistance, including the provision of guarantees in favour thereof; or (c) release the shareholder, if a director, from obligations arising from the duty of loyalty as provided by law.

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Article 50 of the By-Laws provides that the by-law restrictions against the exercise of voting rights by shareholders affected by conflicts of interest established in article 28 above and the limitation on the maximum number of votes that may be cast by a single shareholder contained in sections 2 and 4 of article 29 above shall be deprived of effect upon the occurrence of certain circumstances in the case of a takeover bid.
Furthermore, section 527 of the Companies Act provides that at listed companies (sociedades anónimas cotizadas), the by-law provisions that directly or indirectly set, as a general rule, the maximum number of votes that may be cast by a single shareholder, by the companies belonging to the same group or by those acting in concert with the foregoing shall be of no effect when, following a takeover bid, the bidder has reached a percentage that is equal to or greater than 70% of the voting share capital, unless such bidder is not subject to equivalent breakthrough measures or has not adopted them.
Pursuant to U.S. law, due to the business carried out by Avangrid, Inc. (a company belonging to the Iberdrola group) in that country, the acquisition of an interest giving rise to the holding of 10% or more of the share capital of Iberdrola will be subject to the prior approval of certain U.S. regulatory authorities.

A.13 State if the shareholders have resolved at a meeting to adopt measures to neutralise a take-over bid pursuant to the provisions of Act 6/2007.

Yes □ **No X**

If so, please explain the measures approved and the terms under which such limitations would cease to apply:

A.14 State if the company has issued shares that are not traded on a regulated EU market.

Yes □ **No X**

If so, please list each type of share and the rights and obligations conferred on each.

B GENERAL SHAREHOLDERS' MEETING

B.1 State whether there are any differences between the quorum established by the LSC for General Shareholders' Meetings and those set by the company and if so, describe them in detail:

Yes X **No □**

	% quorum different from that contained in Article 193 LSC for general matters	% quorum different from that contained in Article 194 LSC for special resolutions

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Quorum required at 1st call	0.00	66.67
Quorum required at 2nd call	0.00	60.00

Description of differences
Article 21.2 of the By-Laws increases the quorum required to hold a valid meeting "in order to adopt resolutions regarding a change in the object of the Company, transformation, total split-off, dissolution of the Company, and the amendment of this section 2", in which case "shareholders representing two-thirds of subscribed share capital with voting rights must be in attendance at the first call to the General Shareholders' Meeting, and shareholders representing sixty per cent of such share capital must be in attendance at the second call".

B.2 State whether there are any differences in the company's manner of adopting corporate resolutions and the manner for adopting corporate resolutions described by the LSC and, if so, explain:

Yes X **No □**

	Qualified majority different from that established in Article 201.2 LSC for Article 194.1 LSC matters	**Other matters requiring a qualified majority**
% established by the company for adoption of resolutions	75.00	75.00

Describe the differences
Article 52 of the By-Laws provides that all resolutions intended to eliminate or amend the provisions contained in title IV (breakthrough of restrictions in the event of takeover bids), in article 28 (conflicts of interest), and in sections 2 to 4 of article 29 (limitation upon the maximum number of votes that a shareholder may cast) shall require the affirmative vote of three-fourths (3/4) of the share capital present in person or by proxy at a General Shareholders' Meeting.

B.3. State the rules for amending the company's Articles of Association. In particular, state the majorities required for amendment of the Articles of Association and any provisions in place to protect shareholders' rights in the event of amendments to the Articles of Association.

In addition to the provisions of section 285 *et seq.* of the Companies Act, the By-Laws of Iberdrola contain articles 21.2 (qualified quorum) and 52 (qualified majority) mentioned in sections B.1 and B.2 above.

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B.4 Give details of attendance at General Shareholders' Meetings held during the year of this report and the two previous years:

	Attendance data				
			% distance voting		
Date of General Meeting	**% physically present**	**% present by proxy**	**Electronic voting**	**Other**	**Total**
31/03/2017	0.40	71.92	0.17	4.71	77.20
Of which, free float:	0.32	60.43	0.17	4.71	65.63
13/04/2018	0.33	71.44	0.27	4.05	76.09
Of which, free float:	0.23	62.90	0.27	4.05	67.45
29/03/2019	9.00	61.40	0.33	3.39	74.12
Of which, free float:	0.55	61.17	0.33	3.39	65.44

Remarks
The "Other" column reflects the percentage of share capital of all absentee votes issued at each Meeting through depositaries and custodians, cards received at shareholder information desks, cards received by post and the telephone channel (started in 2018). Adding all votes and proxies received through the corporate website, electronic participation reached a percentage of share capital equal to 0.82% in 2017, 1.03% in 2018 and 1.11% in 2019. Free float percentages have been calculated by dividing the shares represented in person and by proxy less those belonging to significant shareholders and directors participating at each Meeting, according to the information available in the list of attendees, by the total shares outstanding as at the date of the Meeting. For these purposes, significant interests deposited in omnibus accounts (not opened in the name of the owners of such interests) are not subtracted from the shares present in person or by proxy, except in cases in which the significant shareholder notified the Company of the shareholder's participation in the Meeting.

B.5 State whether any point on the agenda of the General Shareholders' Meetings during the year has not been approved by the shareholders for any reason.

Yes □ **No X**

B.6 State if the Articles of Association contain any restrictions requiring a minimum number of shares to attend General Shareholders' Meetings, or on distance voting:

Yes □ **No X**

B.7 State whether it has been established that certain decisions other than those established by law exist that entail an acquisition, disposal or contribution to another company of essential assets or other similar corporate transactions that must be subject to the approval of the General Shareholders' Meeting.

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Yes X **No □**

Explain the decisions that must be subject to the General Shareholders' Meeting, other than those established by law
Sections s), t) and u) of article 17 of the By-Laws provide that the shareholders acting at a General Shareholders' Meeting will decide the following issues, among others: s) The transfer to controlled entities of core activities that were previously carried out by the Company itself, while maintaining full control thereof. t) The acquisition, transfer or contribution of key assets from or to another company. u) The approval of transactions having an effect equivalent to liquidation of the Company.

B.8 State the address and manner of access to the page on the company website where one may find information on corporate governance and other information regarding General Shareholders' Meetings that must be made available to shareholders through the company website.

https://www.iberdrola.com/corporate-governance

C COMPANY ADMINISTRATIVE STRUCTURE

C.1 Board of Directors

C.1.1 Maximum and minimum number of directors established in the Articles of Association and the number set by the general meeting:

Maximum number of directors	14
Minimum number of directors	9
Number of directors set by the general meeting	14

Remarks

C.1.2 Please complete the following table on directors:

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Name of director	Representative	Director category	Position on the Board	Date first appointed to Board	Last re-election date	Method of selection to Board
Mr José Ignacio Sánchez Galán		Executive	Chairman & CEO	21/05/2001	29/03/2019	Resolution of General Shareholders' Meeting
Ms Inés Macho Stadler		Other external	Vice Chair	07/06/2006	08/04/2016	Resolution of General Shareholders' Meeting
Mr Íñigo Víctor de Oriol Ibarra		Other external	Director	26/04/2006	08/04/2016	Resolution of General Shareholders' Meeting
Ms Samantha Barber		Independent	Director	31/07/2008	08/04/2016	Resolution of General Shareholders' Meeting
Ms María Helena Antolín Raybaud		Independent	Director	26/03/2010	29/03/2019	Resolution of General Shareholders' Meeting
Ms Georgina Kessel Martínez		Independent	Director	23/04/2013	13/04/2018	Resolution of General Shareholders' Meeting
Ms Denise Mary Holt		Independent	Director	24/06/2014	29/03/2019	Resolution of General Shareholders' Meeting
Mr José Walfredo Fernández		Independent	Director	17/02/2015	29/03/2019	Resolution of General Shareholders' Meeting
Mr Manuel Moreu Munaiz		Independent	Director	17/02/2015	29/03/2019	Resolution of General Shareholders' Meeting
Mr Xabier Sagredo Ormaza		Independent	Director	08/04/2016	29/03/2019	Resolution of General Shareholders' Meeting
Mr Juan Manuel		Independent	Lead Independent	31/03/2017	31/03/2017	Resolution of General

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González Serna			Director (independent)			Shareholders' Meeting
Mr Francisco Martínez Córcoles		Executive	Director	31/03/2017	31/03/2017	Resolution of General Shareholders' Meeting
Mr Anthony L. Gardner		Independent	Director	13/04/2018	13/04/2018	Resolution of General Shareholders' Meeting
Ms Sara de la Rica Goiricelaya		Independent	Director	29/03/2019	29/03/2019	Resolution of General Shareholders' Meeting

Total number of directors	14

State if any directors, whether through resignation, dismissal or any other reason, have left the Board during the period subject to this report:

Name of director	Director type at time of leaving	Date of last appointment	Date director left	Specialised committees of which he/she was a member	Indicate whether the director left before the end of the term
Mr Ángel Jesús Acebes Paniagua	Independent	27/03/2015	28/03/2019	Executive Committee and Appointments Committee	No

Reason for leaving and other remarks
End of term.

C.1.3 Complete the following tables regarding the members of the Board and their categories:

EXECUTIVE DIRECTORS

Name of director	Post in organisational chart of the company	Profile

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Mr José Ignacio Sánchez Galán	Chairman & CEO	Salamanca, Spain, 1950. <u>Other current positions and professional activities</u> He is the chairman of the boards of directors of the country subholding companies of the Iberdrola group in the United Kingdom (Scottish Power Ltd.), the United States (Avangrid, Inc., a NYSE-listed company) and Brazil (Neoenergia, S.A., a company listed on the BOVESPA in Brazil). He is a member of the group of top utility executives of the World Economic Forum (Davos), which he has chaired, and of the Steering Committee of the European Round Table of Industrialists and of the J.P. Morgan International Council. <u>Academic training</u> He graduated as an Industrial Engineer from the Technical Engineering School of Universidad Pontificia Comillas (Madrid). He has received honorary doctorate degrees from the universities of Salamanca, Edinburgh, and Strathclyde (Glasgow). He has been on the faculty of Escuela Técnica Superior de Ingeniería (ICAI), and is currently a visiting professor at the University of Strathclyde, chairman of the Social Council of the University of Salamanca, a member of the Dean's Advisory Council of the Massachusetts Institute of Technology (MIT) and a trustee of the Comillas-ICAI University Foundation. <u>Noteworthy experience in the energy and industrial engineering sector</u> He has served as chief operating officer of Industria de Turbo Propulsores, S.A. (ITP) and as chairman of the European aerospace consortium Eurojet, headquartered in Germany. He has also held various positions at Sociedad Española del Acumulador Tudor, S.A. (now, Exide Group), engaged in the manufacture and sale of batteries.

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		Noteworthy experience in other industries He has been chief executive officer of Airtel Móvil, S.A. (now, Vodafone España, S.A.U.) and a member of the Supervisory Board of Nutreco Holding N.V., a listed company in The Netherlands, active in the food industry. Other information Amongst other recognitions, in 2019 he was selected as one of the five best-performing CEOs in the world and the top in the utilities sector by Harvard Business Review, and he was recognised by Bloomberg as one of the 30 most influential leaders in the fight against climate change. That year he also received the National Innovation and Design Award in the Innovative Career category from the Spanish Ministry of Science, Innovation and Universities, an Honourable Mention for his professional career from the Colegio Oficial de Ingenieros Industriales de Madrid, and the designation of Universal Spaniard by Fundación Independiente. In 2018 he was appointed as an Honorary Member of the Spanish Institute of Engineering. In 2017 he was named Best Chief Executive Officer (CEO) within the utilities category (for the eleventh time) by the Institutional Investor Research Group. In 2014 he was distinguished by Queen Elizabeth II with the title Commander of the Most Excellent Order of the British Empire and received the international Responsible Capitalism award from the First Group. In 2011 he was named Best CEO of European utilities and of Spanish listed companies in investors relations, according to the Thomson Extel Survey. In 2008 he was named Business Leader of the Year by the Spain-U.S. Chamber of

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		Commerce and was awarded the 2008 International Economy Prize by Fundación Cristóbal Gabarrón. In 2006 he was named Best CEO of the Year at the Platts Global Energy Awards. He was given the Award for Best CEO in Investor Relations by IR Magazine for three years in a row (2003-2005).
Mr Francisco Martínez Córcoles	Business CEO	Alicante, Spain, 1956. <u>Other current positions and professional activities</u> He is the Business CEO of the Iberdrola group, chair of Iberdrola España, S.A. and of Iberdrola Energía Internacional, S.A.U. and a member of the board of the country subholding company in Mexico, Iberdrola México, S.A. de C.V. He is also a member of Merit of the National Association of Engineers of the Escuela Técnica Superior de Ingeniería (ICAI). <u>Academic training</u> Industrial Engineer specialising in Electricity from the ICAI (Universidad Pontificia Comillas, Madrid) and Master in Business Management from IESE Business School (Universidad de Navarra). <u>Noteworthy experience in the energy and industrial engineering sector</u> He worked at Compañía Sevillana de Electricidad, S.A. before joining Hidroeléctrica Española, S.A. and (after the merger with Iberduero, S.A.) Iberdrola, S.A., where he has been director of the Production Market, director of the Wholesale Energy Markets Business Unit, and general director of the Liberalised Energy business of the Group, with overall responsibility for all of the Wholesale, Retail and Energy Management businesses of the Iberdrola group. In June 2014 he was appointed Business CEO of the Iberdrola group, with overall

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		responsibility for all of the group's businesses throughout the world. He has also held the position of chair of Elektro Holding, S.A., of Iberdrola Generación, S.A.U., of Iberdrola Generación México, S.A. de C.V. and of Scottish Power Generation Holdings Ltd. and has been a member of the board of Compañía Operadora del Mercado Eléctrico Español, S.A., Elcogas, S.A. and Iberdrola Ingeniería y Construcción, S.A.U. He was also a member of the Board of Directors of the Spanish Electric Industry Association (*Asociación Española de la Industria Eléctrica*) (UNESA). <u>Noteworthy experience in other industries</u> He began his professional career at the Systems Division of Arthur Andersen. He has been a member of the advisory board of the International University of Bremen (Germany) and vice president of the Energy and Natural Resources Committee of the Spanish Institute of Engineering. <u>Other information</u> He was awarded the XVII Annual Javier Benjumea Prize of the National Association of Engineers of ICAI Technical Engineering School and the Gold Medal of the Spanish Nuclear Society.

Total number of executive directors	2
Percentage of the Board	14.29

PROPRIETARY DIRECTORS

Name of director	Name or company name of the significant shareholder represented or that has proposed their appointment	Profile
No data		

INDEPENDENT DIRECTORS

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Name of director	
Ms Samantha Barber	Dunfermline, Scotland, 1969. Other current positions and professional activities She is the chair of Scottish Ensemble, member of the Board of Scottish Water and chair of its Remuneration Committee, mentor member of Critical Eye, and member of the GlobalScot Network and of the Advisory Board for the Imperial College London MBA. She also performs advisory and business coaching work. She is Vice Chair of the 2020 Group on Climate Change. Academic training Bachelor of Arts in Applied Foreign Languages and European Politics from the University of Northumbria, Newcastle (England) and Post-Graduate degree in EU Law from the University of Nancy (France). Noteworthy experience in the energy and industrial engineering sector She has been a member of the Advisory Council of Scottish Power Ltd. following the integration of the Scottish company into the Iberdrola group. Noteworthy experience in other industries She has been a consultant within the European Parliament, where she provided support to the Economic and Monetary Affairs Committee, a board member of Business for Scotland, and the chief executive of Scottish Business in the Community. She has also been a member of the Advisory Board of Breakthrough Breast Cancer and of the Board of Directors of Right Track Scotland, an organisation dedicated to advancing educational, training and employment opportunities for youths at risk of social exclusion. Other information She was chosen as one of the “Top 100 Women to Watch” according to the FTSE list and Cranfield University, and was a finalist and earned second place in the annual Director of the Year Awards 2012 of IoD Scotland NED.

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Ms María Helena Antolín Raybaud	Toulon, France, 1966. Other current positions and professional activities She is vice-chair of the Board of Directors and member of the Management Committee of Grupo Antolín Irausa, S.A. She is also the president of the Spanish Association of Automotive Equipment and Component Manufacturers (*Asociación Española de Fabricantes de Equipos y Componentes para Automoción*) (Sernauto), vice president of the Excellence in Management Club (*Club de Excelencia en la Gestión*), a member of the Advisory Board of Sabadell Urquijo Banca Privada, a member of the Executive Committee of the Spanish Confederation of Business Organisations (*Confederación Española de Organizaciones Empresariales*) (CEOE), a board member of France Foreign Trade (*Comercio Exterior de Francia*), Spain section, and a member of the Plenary Committee of the Chamber of Commerce of Spain. Academic training Degree in International Business and Business Administration from Eckerd College, St. Petersburg, Florida (United States of America), and a Master of Business Administration from Anglia University, Cambridge (United Kingdom) and from Escuela Politécnica de Valencia (Spain). Noteworthy experience in the energy and industrial engineering sector She has served as an external independent director of Iberdrola Renovables, S.A. and a member of its Related-Party Transactions Committee. She has been in charge of the corporate Industrial and Strategy Divisions of Grupo Antolín Irausa, S.A., where she has also been a director of Human Resources and the head of Total Quality for the Group.
Ms Georgina Kessel Martínez	Mexico City, Mexico, 1950. Other current positions and professional activities She is an independent director of Fresnillo plc and of Grupo Financiero Scotiabank Inverlat, S.A. de C.V., as well as the chair of the latter's Audit Committee, a partner of Spectron E&I and a member of the Business Board of Universidad de las Américas Puebla (UDLAP). Academic training

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	Holder of a degree in Economics from Instituto Tecnológico Autónomo de México and of a Master's and Doctor's degree in Economics from Columbia University (New York). <u>Noteworthy experience in the energy and industrial engineering sector</u> She has been chair of the Audit and Risk Supervision Committee of Iberdrola, S.A., chair of the Energy Regulatory Commission (*Comisión Reguladora de Energía*) and Energy Secretary of the Government of Mexico. She has also been chair of the Board of Directors of Pemex (Petróleos Mexicanos) and of the Board of Directors of the Federal Electricity Commission (*Comisión Federal de Electricidad*) (CFE). She has participated in the Energy Council of the World Economic Forum and in the United Nations Organization Secretary General's advisory group (Sustainable Energy for All). <u>Noteworthy experience in other industries</u> She has been an adviser to the chair of the Federal Competition Commission (*Comisión Federal de Competencia*), head of the Quasi-Autonomous Non-Governmental Organisations Investment and Divestment Unit (*Unidad de Inversiones y Desincorporación de Entidades Paraestatales*) of the Office of the Secretary of Finance and Public Credit of Mexico, general manager of the National Mint of Mexico (*Casa de Moneda de México*), member of the boards of Nacional Financiera (Nafinsa) and of Banco Nacional de Comercio Exterior (Bancomext), and general manager of Banco Nacional de Obras y Servicios Públicos. In the academic field, she has been a professor in the Economics Department of Instituto Tecnológico Autónomo de México, deputy chair of the course towards a Degree in Economics, and chair of the Alumni Association. She has also been holder of the Quintana Chair for Research in International Trade and is the author of many papers and specialised articles.
Ms Denise Mary Holt	Vienna, Austria, 1949. <u>Other current positions and professional activities</u> She is an independent director and member of the Audit Committee of HSBC Bank plc, chair of the Board of the University of Sussex and President of Cañada Blanch Centre for Contemporary Studies of the London School of Economics and Political Science (LSE).

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	Academic training Degrees in Spanish philology, French philology and political sciences from the University of Bristol and Doctor of Laws from the same university (England, United Kingdom). Noteworthy experience in the energy and industrial engineering sector She has been a director of Scottish Power Renewable Energy Ltd. and of Scottish Power Energy Networks Holdings Ltd. Noteworthy experience in other industries In her diplomatic career, she has been first secretary of the Embassy of the United Kingdom in Brazil, director of Human Resources, of Migration and of the Overseas Territories at the UK Foreign and Commonwealth Office, and ambassador of the United Kingdom to Mexico, Spain and Andorra. For her contribution to the British diplomatic service, she was elevated to Dame Commander of the Order of St Michael and St George (DCMG). She has also been chair and an independent director of Mark & Spencer Financial Services, Ltd., an independent director and member of the Risk Committee of HSBC Bank plc, an independent director and member of the Quality and Safety and Remuneration Committees of the Board of Directors of Nuffeld Health, chair of the Anglo-Spanish Society and of the Institute of Latin American Studies at the University of London, and has chaired the Nominations Committee of the Alzheimer's Society.
Mr José Walfredo Fernández	Cienfuegos, Cuba, 1955. Other current positions and professional activities He is a partner of Gibson, Dunn & Crutcher and a member of the board of directors of the Council of the Americas and the Center for American Progress. Academic training Degree in History from Dartmouth College (New Hampshire, United States of America), and Juris Doctor from Columbia University (New York, United States of America). Noteworthy experience in the energy and industrial engineering sector

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	He has been Assistant Secretary of State for Economic, Energy and Business Affairs for the United States of America. He has also been an independent director of Iberdrola USA, Inc. <u>Noteworthy experience in other industries</u> He has served on the boards of Dartmouth College, NPR Station WBGO-FM, the Middle East Institute and Ballet Hispánico of New York and of non-governmental institutions such as Acción Internacional. He has also been the State Department's representative on the Committee on Foreign Investment in the United States. <u>Other information</u> He was named one of the "World's Leading Lawyers" by Chambers Global for his M&A work, an "Expert" by the International Financial Law Review, one of the "World's Leading Privatization Lawyers" by Euromoney, and "Embajador de la Marca España" (Ambassador of the Spain Brand).
Mr Manuel Moreu Munaiz	Pontevedra, Spain, 1953. <u>Other current positions and professional activities</u> He is president of the Seaplace, S.L., sole director of H.I. de Iberia Ingeniería y Proyectos, S.L. and of Howard Ingeniería y Desarrollo, S.L., a director of Tubacex, S.A. and a member of the Spanish Committee of Lloyd's Register EMEA. He is a professor of the Master's Programme in Oil at Universidad Politécnica de Madrid (ETSIM), of the Maritime Master's Programme of Instituto Marítimo Español and of Universidad Pontificia Comillas. <u>Academic training</u> Doctorate in naval engineering from Escuela Técnica Superior de Ingenieros Navales (ETSIN) of the Universidad Politécnica de Madrid, and Master's degree in Oceanic Engineering from the Massachusetts Institute of Technology (MIT). <u>Noteworthy experience in the energy and industrial engineering sector</u> He has been a member of the Corporate Social Responsibility Committee of Iberdrola, S.A., of the Board of Directors of Iberdrola Renovables, S.A., and a director and member of the

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	Audit and Compliance Committee of Gamesa Corporación Tecnológica, S.A. (now Siemens Gamesa Renewable Energy, S.A.). Noteworthy experience in other industries He has been a member of the board of Metalships and Docks, S.A., Neumáticas de Vigo, S.A. and Rodman Polyships, S.A., dean of the Colegio Oficial de Ingenieros Navales y Oceánicos de Madrid y de España, president of the Spanish Institute of Engineering, and a professor of the Escuela Técnica Superior de Ingenieros Navales of the Universidad Politécnica de Madrid and for the Repsol's Masters programme in oil.
Mr Xabier Sagredo Ormaza	Portugalete, Spain, 1972. Other current positions and professional activities He is chair of the Board of Trustees of Bilbao Bizkaia Kutxa Fundación Bancaria-Bilbao Bizkaia Kutxa Banku Fundazioa, of BBK Fundazioa and of Fundación Eragintza. He is also a trustee of Biocruces Sanitary Research Institute, of the Bilbao Museum of Fines Arts and of the Guggenheim Foundation, at which he also serves as member of the Executive Committee. He is a member of the Board of Directors of the Orkestra Basque Institute of Competitiveness and of the Management Council of Universidad de Deusto, and is a visiting professor at various institutions. Academic training Degree in Economics and Business from Universidad del País Vasco, with a major in Finance, and holder of postgraduate degrees in various areas. Noteworthy experience in the energy and industrial engineering sector He has been a director of Iberdrola Generación, S.A. (Sociedad Unipersonal) and a member of its Audit and Compliance Committee. He was a director of Iberdrola Distribución Eléctrica, S.A. (Sociedad Unipersonal), at which he has held the position of chair of the Audit and Compliance Committee. Noteworthy experience in other industries He has been the director of the Expansion and Assets area of the credit institution Ipar Kutxa, managing director of the

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	concessionaire Transitia and a member of the Board of the Bilbao Port Authority. In addition, he has been chair and vice-chair of the Board of Directors of Caja de Ahorros Bilbao Bizkaia Kutxa, Aurrezki Kutxa eta Bahitetxea (BBK), and chair of its Audit Committee.
Mr Juan Manuel González Serna	Madrid, Spain, 1955. <u>Other current positions and professional activities</u> He is the chairman of Ceralto Spain Foods, S.A., the parent company of the Siro Group, a business group in the food sector, and a member of the Governing Board of the Spanish Commercial Coding Association (*Asociación Española de Codificación Comercial*) (AECOC). He is a founding trustee and chairman of Fundación Grupo SIRO as well as a member of the Executive Committee and trustee of Fundación SERES, an honorary member of the General Assembly of the Spanish Paralympics Committee, a trustee of the Fundación Casa Ducal de Medinaceli, and honorary president of Empresa Familiar de Castilla y León. <u>Academic training</u> Degree in Law, Economics and Business Studies from the Instituto Católico de Administración y Dirección de Empresas (ICADE) of Universidad Pontificia Comillas (Madrid) and Masters in Business Administration (MBA) from the Escuela de Dirección del Instituto de Estudios Superiores de la Empresa de la Universidad de Navarra (IESE Business School) in Barcelona. <u>Noteworthy experience in the energy and industrial engineering sector</u> He has been an independent director of Iberdrola España, S.A. (Sociedad Unipersonal) and of Iberdrola Renovables, S.A., as well as chair of the Appointments and Remuneration Committee of the latter company. <u>Noteworthy experience in other industries</u> Apart from the food sector, he also has extensive experience in the finance, venture capital and health sectors. He is a member of the advisory board of Rabobank in Spain and Europe and has been a member of the board of Banco Urquijo Sabadell Banca Privada, S.A. and of Sociedad para el Desarrollo Industrial de Castilla y León, Sociedad de Capital Riesgo, S.A. (SODICAL, now Ade Capital Social, Sociedad de Capital Riesgo de Régimen Común, S.A.).

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	He is also a member of the board of directors of the HM Hospitales Group.
Mr Anthony L. Gardner	Washington D.C., United States of America, 1963. <u>Other current positions and professional activities</u> He is a member of the board of directors of Brookfield Business Partners LP, senior adviser at the consulting firm Brunswick Group, LLP and senior counsel in the law firm Sidley Austin LLP, where he works in the International Trade and Privacy and Cybersecurity areas. He is also an adviser to the Bill and Melinda Gates Foundation and a member of the advisory boards of the Centre for European Reform, the German Marshall Fund and the European Policy Centre. <u>Academic training</u> He studied Government at Harvard University and International Relations at the University of Oxford. He holds a Juris Doctor degree from Columbia Law School and a Masters in Finance from London Business School. <u>Noteworthy experience in the energy and industrial engineering sector</u> He was an independent director of Scottish Power, Ltd and a member of that company's Audit and Compliance Committee. <u>Noteworthy experience in other industries</u> He was the US ambassador to the European Union from 2014 to 2017. Prior to that appointment, for six years he was the managing director at Palamon Capital Partners, a private equity firm based in London. He was also the director of one of the finance departments of Bank of America and of GE Capital, as well as director in the international acquisitions group of GE International. He has also worked as an attorney at international law firms in London, Paris, New York and Brussels. He has dedicated more than twenty years of his career to US-European affairs, as a government official, lawyer and investor. As Director for European Affairs on the National Security Council (1994-1995), he worked closely with the US Mission to the European Union to launch the Transatlantic Free Trade Agreement. He previously worked with the Treuhandanstalt (German Privatisation Ministry) in Berlin, with the Stock Exchange Operations Committee in Paris and as secondee for the European Commission in Brussels.

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	Other information He is the author of "A New Era in US-EU Relations? The Clinton Administration and the New Transatlantic Agenda" and numerous articles on EU affairs.
Ms Sara de la Rica Goiricelaya	Bilbao, Spain, 1963. Other current positions and professional activities She is director of Fundación ISEAK (Initiative for socio-economic analysis and knowledge), a member of the Scientific Advisory Board of Fundación Gadea, of the Scientific Committee of the Basque Institute for the Evaluation of the Educational System (IVEI-ISEI), an honorary member of the Spanish Economics Association (*Asociación Española de Economía*). She is an associate researcher for CreAM (Centre for Research and Analysis of Migration - London) and IZA (Institute for the Study of the Labour Market - Bonn). She is also a member of the Board of Directors of Basquetour, Turismoaren Euskal Agentzia, Agencia Vasca de Turismo, S.A., the government-owned company of the Department of Tourism, Trade and Consumption of the Basque Government, created to lead the promotion and implementation of the competitiveness strategy of Basque tourism. Academic training PhD in Economics from the University of the Basque Country and a professor at this institution. She has dedicated a large portion of her professional life to the study of and search for solutions on issues such as immigration, the labour market, gender equality and poverty. Noteworthy experience in the energy and industrial engineering sector She has been an independent director of Iberdrola España, S.A.U. Noteworthy experience in other industries She has been president of the European Society for Population Economics and a member of its Executive Committee, chair of the Committee on the Situation of Women in Economics (COSME), and a member of the Economic and Social Council (CES). She has also been the secretary of the Spanish Economics Association (AEE).

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	She has worked on editorial boards and/or research project review boards. <u>Other information</u> In 2018 she was given the "2018 Basque Economist Award" (*Ekonomistak Saria* 2018) by the Basque Association of Economists (*Colegio Vasco de Economistas*). She regularly publishes academic articles in domestic and international magazines dealing with economic subjects, mainly related to labour, and participates in conferences and seminars and supervises graduate students in their dissertations.

Number of independent directors	10
Percentage of the Board	71.43

State whether any independent director receives from the company or any company in the group any amount or benefit other than compensation as a director, or has or has had a business relationship with the company or any company in the group during the past year, whether in his or her own name or as a significant shareholder, director or senior executive of a company that has or has had such a relationship.
In this case, include a statement by the Board explaining why it believes that the director in question can perform his or her duties as an independent director.

Name of director	Description of the relationship	Statement of the Board
No data		

OTHER EXTERNAL DIRECTORS

Name of director	Reason	Company, director or shareholder to whom the director is related	Profile
Ms Inés Macho Stadler	More than 12 years have passed since appointment.	IBERDROLA	Bilbao, Spain, 1959. <u>Other current positions and professional activities</u> She is a professor of Economics in the Economics and Economic History Department of Universidad Autónoma de Barcelona and a professor of the

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			Barcelona Graduate School of Economics. She is also an honorary member of the European Economic Association and of the Spanish Economic Association (*Asociación Española de Economía*) as well as a member-elect of The Academy of Europe. <u>Academic training</u> Degree in Economics from the University of the Basque Country. She has a Master's degree in Economics from l'École des Hautes Études en Sciences Sociales, and a doctorate in Economics (Ph.D.) from the same academic institution and from l'École Nationale de la Statistique et de l'Administration Économique (ENSAE) (Paris, France). Noteworthy experience in the energy and industrial engineering sector She has served as lead independent director (*consejera coordinadora*) of Iberdrola, S.A. <u>Noteworthy experience in the energy and industrial economy sector</u> She has been a member of the International Scientific Advisory Committee of the Basque Centre for Climate Change (bc3) and has served as chair of the Scientific Committee of the 2011 Conference of the Spanish Association for Energy Economics (*Asociación Española para la Economía Energética*). <u>Noteworthy experience in other industries</u> She has been president of the Spanish Economic Association, coordinator of the National Agency for Quality Evaluation and Accreditation (*Agencia Nacional de Evaluación y Prospectiva*), and representative at the European Science Foundation, as well as a

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			member-elect of the Council of the European Economic Association and a member of the Executive Committee of the European Association for Research in Industrial Economics. She has been a member of the Advisory Board of the Research Service of Caja de Ahorros y Pensiones de Barcelona, "la Caixa". She has taught at universities in Germany, Belgium, Brazil, Denmark, France, Portugal and Spain.
Mr Íñigo Víctor de Oriol Ibarra	More than 12 years have passed since appointment.	IBERDROLA	Madrid, Spain, 1962. Academic training Bachelor of Arts in International Business from Schiller International University (Madrid), a graduate of the Executive Corporate Management Programme of IESE Business School, and Certified European Financial Analyst (CEFA) from Instituto Español de Analistas Financieros. Noteworthy experience in the energy and industrial engineering sector He has been chair of Electricidad de La Paz, S.A. (Bolivia), of Empresa de Luz y Fuerza Eléctrica de Oruro, S.A. (Bolivia), and of Iberoamericana de Energía Ibener, S.A. (Chile), as well as a member of the board of Neoenergia, S.A. (Brazil), of Empresa Eléctrica de Guatemala, S.A. and of Empresa de Alumbrado Eléctrico de Ceuta, S.A. He has also been a director of Corporate Governance for the Americas, director of Management Control at Amara, S.A., and a financial analyst in the Financial Division and the International Division of Iberdrola, S.A. Noteworthy experience in other industries He has been chair of Empresa de Servicios Sanitarios de Los Lagos, S.A. (ESSAL) in Chile.

Total number of other external directors	2
Percentage of the Board	14.29

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State any changes in status that have occurred during the period for each director:

Name of director	Date of change	Previous Status	Current status
Mr Xabier Sagredo Ormaza	29/03/2019	Other external	Independent

Remarks
The shareholders acting at the General Shareholders' Meeting held on 29 March 2019 ratified his interim appointment (co-option) and re-elected him as an independent director.

C.1.4 Complete the following table with information relating to the number of female directors at the close of the past 4 years, as well as the category of each:

	Number of female directors				% of directors for each category			
	Financial Year 2019	Financial Year 2018	Financial Year 2017	Financial Year 2016	Financial Year 2019	Financial Year 2018	Financial Year 2017	Financial Year 2016
Executive	-	-	-	-	0.00	0.00	0.00	0.00
Proprietary	-	-	-	-	0.00	0.00	0.00	0.00
Independent	5	4	5	5	50	44	50	50
Other external	1	1			50	50	0.00	0.00
Total:	6	5	5	5	42.86	35.71	35.71	35.71

C.1.5 State whether the company has diversity policies in relation to the Board of Directors of the company on such questions as age, gender, disability and training and professional experience. Small and medium-sized enterprises, in accordance with the definition set out in the Accounts Audit Act, will have to report at least the policy they have implemented in relation to gender diversity.

Yes X **No □** **Partial policies □**

Should this be the case, describe these diversity policies, their objectives, the measures and way in which they have been applied and their results over the year. Also state the specific measures adopted by the Board of Directors and the appointments and remuneration committee to achieve a balanced and diverse presence of directors.

In the event that the company does not apply a diversity policy, explain the reasons why.

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Description of policies, objectives, measures and how they have been implemented, including results achieved
The Company's Corporate Governance System, and particularly the *Board of Directors Diversity and Member Selection Policy*, provides that any type of bias entailing any kind of discrimination, including for reasons of gender, ethnic origin, age or disability, shall be avoided in the candidate selection process. In particular, it provides that any bias that hinders the appointment of female directors and that might impede achieving the Company's goal that the number of female directors continues to account for at least thirty per cent of the total number of members of the Board of Directors in the year 2020, shall be avoided. The *Regulations of the Appointments Committee* give this committee the duty to ensure compliance with the above-described goal. Six of the fourteen members of the Board of Directors are currently women. One of them holds the position of vice chair of the Board of Directors and another two chair two of the four consultative committees. On 7 June 2006 the Board of Directors appointed Ms Inés Macho Stadler as independent director on an interim basis to fill a vacancy; such appointment was ratified by the shareholders at the General Shareholders' Meeting held on 29 March 2007. On 22 September 2009 Ms Inés Macho Stadler was appointed as independent director with special powers (*consejera independiente especialmente facultada*), the name of which was later changed to lead independent director (*consejera coordinadora*), in which position she was replaced by Mr Juan Manuel González Serna by resolution of the Board of Directors on 21 June 2018 upon Ms Stadler losing the status of independent director required for this position. Ms Inés Macho Stadler was appointed vice chair of the Board of Directors on this same date. On 31 July 2008 the Board of Directors resolved to appoint Ms Samantha Barber as an independent director on an interim basis to fill a vacancy; such appointment was ratified by the shareholders at the General Shareholders' Meeting held on 20 March 2009. Ms Barber has also chaired the Sustainable Development Committee since 24 April 2012. The shareholders at the General Shareholders' Meeting held on 26 March 2010 approved the appointment of Ms María Helena Antolín Raybaud, with the classification of external independent director. On 23 April 2013, Iberdrola's Board of Directors approved the interim appointment of Ms Georgina Kessel Martinez as an external independent director, which appointment was subsequently ratified by the shareholders at the General Shareholders' Meeting held on 28 March 2014. Ms Kessel Martínez was appointed chair of the Audit and Risk Supervision Committee on 17 February 2015, which position has been held by the director Mr Xabier Sagredo Ormaza since 19 February 2019.

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On 24 June 2014, the Board of Directors approved the interim appointment of Ms Denise Mary Holt as an external independent director. This appointment was ratified by the shareholders at the General Shareholders' Meeting held on 27 March 2015.

The Appointments and Remuneration Committee was split into two separate committees on 25 March 2015. The appointment of Ms María Helena Antolín Raybaud and of Ms Inés Macho Stadler as chairs of the Appointments Committee and the Remuneration Committee, respectively, was approved for these purposes. Ms Antolín continues to be the chair of the Appointments Committee while the Remuneration Committee has been chaired by Mr Juan Manuel González Serna since 21 June 2018.

The shareholders acting at the General Shareholders' Meeting held on 29 March 2019 approved the appointment of Ms Sara de la Rica Goiricelaya in order to fill the vacancy occurring due to the end of the term of Mr Ángel Jesús Acebes Paniagua.

At 31 December 2019 the women represented 50% of the external directors on the Board of Directors.

C.1.6 Describe the means, if any, agreed upon by the appointments committee to ensure that selection procedures do not contain hidden biases which impede the selection of female directors and that the company deliberately seeks and includes women who meet the target professional profile among potential candidates and which makes it possible to achieve a balance between men and women:

Explanation of means
The Board of Directors Diversity and Member Selection Policy ensures that the proposed appointments of directors are based on a prior analysis of the needs of the Board of Directors. In particular, the candidates must be respectable and qualified persons, widely recognised for their expertise, competence, experience, qualifications, training, availability and commitment to their duties. In particular, they must be irreproachable professionals, whose conduct and professional track record is aligned with the principles set forth in the Code of Ethics and with the corporate values contained in the Purpose and Values of the Iberdrola group. In the selection of candidates, it also endeavours to ensure a diverse and balanced composition of the Board of Directors overall, such that decision-making is enriched and multiple viewpoints are contributed to the discussion of the matters within its purview. To this end, the selection process shall promote a search for candidates with knowledge and experience in the main countries and sectors in which the group does or will do business. The directors must also have sufficient knowledge of the Spanish and English languages to be able to perform their duties.

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In turn, the *Regulations of the Appointments Committee* give this committee the responsibility of ensuring that when new vacancies are filled or new directors are appointed, the selection procedures are free from any implied bias entailing any kind of discrimination and, in particular, from any bias that might hinder the selection of female directors.

In the event that there are few or no female directors in spite of any measures adopted, please explain the reasons that justify such a situation:

Explanation of reasons
Not applicable.

C.1.7 Describe the conclusions of the appointments committee regarding verification of compliance with the selection policy for directors; in particular, as it relates to the goal of ensuring that the number of female directors represents at least 30% of the total membership of the Board of Directors by the year 2020.

The Appointments Committee believes that Iberdrola is developing the *Board of Directors Diversity and Member Selection Policy* in a fully consistent manner and that the objectives for 2020 were met significantly in advance, as shown in section C.1.4 of this Report.

C.1.8 If applicable, please explain the reasons for the appointment of any proprietary directors at the request of shareholders with less than a 3% equity interest:

Name of shareholder	Reason
No data	

State whether the Board has failed to meet any formal requests for membership from shareholders whose equity interest is equal to or higher than that of others at whose request proprietary directors have been appointed. If this is the case, please explain why the aforementioned requests were not met:

Yes □ **No X**

C.1.9 State the powers delegated by the Board of Directors, as the case may be, to directors or Board committees:

Name of director or committee	Brief description
Mr José Ignacio Sánchez Galán	The chairman & CEO, as an individual decision-making body, has all the

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	powers that may be delegated under the law and the By-Laws.
Executive Committee	All the powers inherent to the Board of Directors, except for those powers that may not be delegated pursuant to law or the Corporate Governance System.

C.1.10 Identify any members of the Board who are also directors, representatives of directors or officers in other companies in the group of which the listed company is a member:

Name of director	Name of group member	Position	Does the director have executive powers?
Mr José Ignacio Sánchez Galán	SCOTTISH POWER LTD.	Chair	No
Mr José Ignacio Sánchez Galán	AVANGRID, INC.	Chair	No
Mr José Ignacio Sánchez Galán	NEOENERGIA, S.A.	Chair	No
Mr Francisco Martínez Córcoles	IBERDROLA ESPAÑA, S.A.U.	Chair	No
Mr Francisco Martínez Córcoles	IBERDROLA MÉXICO, S.A. DE C.V.	Director	No
Mr Francisco Martínez Córcoles	IBERDROLA ENERGÍA INTERNACIONAL, S.A.U.	Chair	No

C.1.11 List any directors or representatives of legal person-directors of your company who are members of the Board of Directors of other companies listed on official securities markets other than group companies, and have communicated that status to the Company:

Name of director	Name of listed company	Position
MS GEORGINA KESSEL MARTÍNEZ	GRUPO FINANCIERO SCOTIABANK INVERLAT, S.A. DE C.V.	Director
MS GEORGINA KESSEL MARTÍNEZ	FRESNILLO, PLC	Director
MS DENISE MARY HOLT	HSBC BANK, PLC	Director

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MR MANUEL MOREU MUNAIZ	TUBACEX, S.A.	Director
MR ANTHONY L. GARDNER	BROOKFIELD BUSINESS PARTNERS, LP.	Director

C.1.12 State whether the company has established rules on the number of boards on which its directors may hold seats, providing details if applicable, identifying, where appropriate, where this is regulated:

Yes X **No □**

Explanation of the rules and identification of the document where this is regulated
Pursuant to the Regulations of the Board of Directors, individuals or legal entities serving as directors in more than five companies, of which no more than three may have shares trading on domestic or foreign stock exchanges, may not be appointed as directors. Positions within holding companies are excluded from the calculation. Furthermore, companies belonging to the same group shall be deemed to be a single company.

C.1.13 State total remuneration received by the Board of Directors:

Board remuneration in financial year (thousand euros)	18,186
Amount of vested pension interests for current members (thousand euros)	
Amount of vested pension interests for former members (thousand euros)	

Remarks
This amount includes the remuneration received (5,562 thousand euros) by all of their directors for their performance as such during financial year 2019 (fixed remuneration, attendance fees and other items) as well as salaries, annual variable remuneration and the shares received by the executive directors in payment of the third period of the 2014-2016 Strategic Bonus, all of which is duly described in the Annual Director Remuneration Report.

C.1.14 Identify senior management staff who are not executive directors and their total remuneration accrued during the year:

Name	Position
Mr José Sainz Armada	Chief Financial Officer (CFO)
Mr Juan Carlos Rebollo Liceaga	Corporation Administration and Control Director
Mr Pedro Azagra Blázquez	Corporate Development Director
Mr Santiago Martínez Garrido	Director of Legal Services

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Ms Sonsoles Rubio Reinoso	Internal Audit Director
Mr Xabier Viteri Solaun	Director of the Renewable Energy Business
Mr Armando Martínez Martínez	Director of the Networks Business
Mr Aitor Moso Raigoso	Director of the Liberalised Business
Mr Asís Canales Abaitua	Director of Procurement and Insurance

Total senior management remuneration (thousand euros)	19,520
Remarks	
The amount of the fixed and variable remuneration of the officers of the Iberdrola group (147 people) was 48,537 thousand euros. This figure does not include the shares delivered for the third and final payment of the 2014-2016 Strategic Bonus.	

C.1.15 State whether the Board rules were amended during the year

Yes x **No □**

Description of changes
Within the process of ongoing review of Iberdrola's Corporate Governance System, apart from certain technical improvements, there have been amendments of the *Regulations of the Board of Directors* in order to reflect the recommendations included in the National Securities Market Commission's *Technical Guide 1/2019 on Nomination and Remuneration Committees*.

C.1.16 Specify the procedures for selection, appointment, re-election and removal of directors: the competent bodies, steps to follow and criteria applied in each procedure.

1. APPOINTMENT AND RE-ELECTION OF DIRECTORS

The appointment, re-election, and removal of directors is within the purview of the shareholders at the General Shareholders' Meeting.

Vacancies that occur may be filled by the Board of Directors on an interim basis until the next General Shareholders' Meeting.

The Appointments Committee must advise the Board of Directors regarding the most appropriate configuration thereof and of its committees as regards size and equilibrium among the various classes of directors existing at any time. This is in

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any event based on the conditions that candidates for director must meet pursuant to the Board of Directors Diversity and Member Selection Policy.

The following may not be appointed as directors or as individuals representing a corporate director:

a) Domestic or foreign companies competing with the Company in the energy industry or other industries, or the directors or senior officers thereof, or such persons, if any, as are proposed by them in their capacity as shareholders.
b) Individuals or legal entities serving as directors in more than five companies, of which no more than three may have shares trading on domestic or foreign stock exchanges. Positions within holding companies are excluded from the calculation. Furthermore, companies belonging to the same group shall be deemed to be a single company.
c) Persons who, during the two years prior to their appointment, have occupied high-level positions in Spanish government administrations that are incompatible with the simultaneous performance of the duties of a director of a listed company under Spanish national or autonomous community law, or positions of responsibility with entities regulating the energy industry, the securities markets or other industries in which the group operates.
d) Individuals or legal entities that are under any other circumstance of disqualification or prohibition governed by provisions of a general nature, including those that have interests in any way opposed to those of the Company or the group.

The Board of Directors and the Appointments Committee, within the scope of their powers, shall endeavour to ensure that the candidates proposed are respectable and qualified persons, widely recognised for their expertise, competence, experience, qualifications, training, availability, and commitment to their duties.

It falls upon the Appointments Committee to propose the independent directors, as well as to report upon the proposals relating to the other classes of directors.

If the Board of Directors deviates from the proposals and reports of the Appointments Committee, it shall give reasons for so acting and shall record such reasons in the minutes.

2. REMOVAL OF DIRECTORS

Directors shall serve in their position for a term of four years, so long as the shareholders acting at the General Shareholders' Meeting do not resolve to remove them and they do not resign from their position.

The Appointments Committee shall inform the Board of Directors regarding proposed removals due to breach of the duties inherent to the position of director

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or due to a director becoming affected by supervening circumstances of mandatory resignation or withdrawal. It may also propose the removal of directors in the event of disqualification, structural conflict of interest or any other reason for resignation or cessation of office, pursuant to law or the Corporate Governance System.

The Board of Directors may propose the removal of an independent director before the passage of the period provided for in the By-Laws only upon sufficient grounds, evaluated by the Board of Directors after a report from the Appointments Committee, or as a consequence of takeover bids, mergers or other similar corporate transactions resulting in a significant change in the structure of the Company's share capital, as recommended by the Good Governance Code of Listed Companies.

C.1.17 Explain how the annual evaluation of the Board has given rise to significant changes in its internal organisation and to procedures applicable to its activities:

Description of changes
The Iberdrola group has an ongoing commitment to the development of its corporate governance. Along these lines, Iberdrola evaluates the operation of its governance bodies on an annual basis, and based on the conclusions obtained, identifies the principal areas of work for the coming year. The Regulations of the Board of Directors were amended in March 2019 in order to reflect the recommendations included in the National Securities Market Commission's *Technical Guide 1/2019 on Nomination and Remuneration Committees.* More than 90% of the work areas defined in the evaluation process from the prior year were met during 2019. Other milestones that took place during financial year 2019 include the following: Composition of the governance bodies: - Continuation of the process of regular and staggered renewal of the Board of Directors with the appointment of Ms Sara de la Rica Goiricelaya, increasing the number of women to approximately 43% of the total number of members on the Board of Directors. Development of competencies: - Definition of the Purpose and update of the Values of the Iberdrola group. - Review of alternatives for comprehensive analysis of the group's risks (combined assurance). - Expansion of the competencies of the Appointments Committee. - Expansion of the competencies of the Remuneration Committee.

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Operation: - Half-yearly review of the annual work plan of the consultative committees. - Digitisation of the orientation programme on the directors' website and adaptation to the technical guides published by the CNMV.

Describe the evaluation process and the areas evaluated by the Board of Directors with the help, if any, of external advisors, regarding the function and composition of the board and its committees and any other area or aspect that has been evaluated.

Description of the evaluation process and evaluated areas
The Appointments Committee will coordinate the evaluation of the operation of the Board of Directors and of the committees thereof on an annual basis, and will submit to the full board the results of said evaluation together with a proposed action plan or with recommendations to correct any potential detected deficiencies or to improve the operation of the Board of Directors or the committees thereof. The evaluation of the chairman & CEO will be led by the lead independent director. The process of evaluation of the Board of Directors, its committees, the chairman & CEO and each of the other directors of the Company will include the following aspects: (i) the operation and quality of the work of the Board of Directors and its committees; (ii) the size, composition and diversity of the Board of Directors and of its committees; (iii) the performance of duties by the chairman of the Board of Directors & CEO; (iv) the performance and contribution of each director, paying special attention to those responsible for the various committees; (v) the frequency and duration of the meetings; (vi) the contents of the agenda and the sufficiency of the time dedicated to dealing with the various issues based on the importance thereof; (vii) the quality of the information received; (viii) the broadness and openness of debates, avoiding group-think; and (ix) whether the decision-making process within the Board of Directors or any of its committees was dominated or strongly influenced by a member or a small group of members. The evaluation for financial year 2019 used PricewaterhouseCoopers Asesores de Negocios, S.L. (PwC) as an external adviser in the process. The scope of the process in 2019 included the evaluation of the Board of Directors, of its committees, of the chairman & CEO and of each of the other directors of the Company from the viewpoint of the following dimensions of the study: (i) compliance with internal rules and with the *Good Governance Code of Listed Companies*, (ii) monitoring of corporate governance trends, and (iii) analysis of achievement of potential areas of progress defined in evaluations from prior years. More than 370 indicators of good practices with verifiable evidence were used. All of this was supplemented with interviews of the directors by the lead independent director in line with the recommendations of the

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Good Governance Code of Listed Companies and of *Technical Guide 1/2019 on Nomination and Remuneration Committees* published by the National Securities Market Commission.
The process concluded with a Continuous Improvement Plan, with indicators that are evaluated for compliance the following financial year. The conclusions of the evaluation process reflect compliance with practically all of the indicators, with an alignment of more than 95% in the application of the latest international trends and in the development of the areas for improvement identified during prior financial years.
The Continuous Improvement Plan 2020 deriving from the 2019 evaluation process focuses on advancing in the following areas, among others:

- Monitoring of the changes made to be made to the recommendations of the *Good Governance Code of Listed Companies.*
- Deepening the supervision of critical issues like climate change, the energy transition and emerging risks.
- Continued improvement of training and initial orientation plans, including new issues and new formats.

On 24 February 2020 the Board of Directors approved the results of the evaluation of financial year 2019 and the Continuous Improvement Plan for financial year 2020.

C.1.18 Describe, in those years in which the external advisor has participated, the business relationships that the external advisor or any group company maintains with the company or any company in its group.

Iberdrola has been assisted by an outside consultant for the last ten years. In 2019 PwC's business relations with the Iberdrola group worldwide were approximately 23 million euros (a large portion of this figure is due to the recent outsourcing of tax services by Avangrid, Inc.).
The total amount of billing by PwC for consulting services provided to the Board of Directors and the Office of the Secretary thereof in 2019 was 373,000 euros.

C.1.19 State the situations in which directors are required to resign.

Directors must submit their resignation from the position and formally resign from their position upon the occurrence of any of the instances of disqualification, lack of competence, structural and permanent conflict of interest or prohibition against performing the duties of director provided by law or Iberdrola's Corporate Governance System.

In this connection, the Regulations of the Board of Directors provide that the directors must submit their resignation to the Board of Directors in the following cases:

a) When, due to supervening circumstances, they are involved in any circumstance of disqualification or prohibition provided by law or

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the Corporate Governance System.

b) When, as a result of any acts or conduct attributable to the director, serious damage is caused to the value or reputation of the Company or there is a risk of criminal liability for the Company or any of the companies of the group.

c) When they cease to deserve the respectability or to have the capability, expertise, competence, availability or commitment to their duties required to be a director of the Company.
In particular, when the activities carried out by the director, or the companies directly or indirectly controlled by the director, or the individuals or legal entities that are shareholders of or related to any of them, or the individual representing a corporate director, may compromise the competence of the director.

d) When they are seriously reprimanded by the Board of Directors because they have breached any of their duties as directors, by resolution adopted by a two-thirds majority of the directors.

e) When their continuance in office on the Board of Directors may for any reason, either directly, indirectly, or through persons related thereto, jeopardise the faithful and diligent performance of their duties in furtherance of the corporate interest.

f) When the reasons why the director was appointed cease to exist and, in particular, in the case of proprietary directors, when the shareholder or shareholders who proposed, requested, or decided the appointment thereof totally or partially sell or transfer their equity interest, with the result that such equity interest ceases to be significant or sufficient to justify the appointment.

g) When an independent director unexpectedly falls under supervening circumstances that prevent the director from being considered as such pursuant to the provisions of law.

The resignation provisions set forth under f) and g) above shall not apply when, after a report from the Appointments Committee, the Board of Directors believes that there are reasons that justify the director's continuance in office, without prejudice to the effect that the new supervening circumstances may have on the classification of the director.

C.1.20 Are qualified majorities other than those established by law required for any specific decision?

Yes X **No □**

If so, please describe any differences.

Description of differences
The Regulations of the Board of Directors require a majority of at least two-thirds of the directors present at the meeting in person or by proxy to approve the amendment thereof. The Regulations of the Board of Directors also state that directors must tender their resignation to the Board of Directors if they are seriously reprimanded thereby because they have breached any of their duties as directors, by resolution adopted by a two-thirds majority of the directors.

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C.1.21 Explain whether there are any specific requirements, other than those relating to directors, to be appointed as chairman of the Board of Directors.

Yes □ **No X**

C.1.22 State whether the Articles of Association or the Board Rules establish any limit as to the age of directors:

Yes □ **No X**

Remarks
The Regulations of the Board of Directors provide that the standards to take into account for selecting candidates for the position of director shall include, by way of guidance only, the appropriateness of the directors generally not exceeding the age of seventy years. Each of the non-executive directors has undertaken to tender their resignation to the Board of Directors at the first meeting it holds after they reach seventy years of age.

C.1.23 State whether the Articles of Association or the Board Rules establish any term limits for independent directors or other more stringent requirements in addition to those established by law:

Yes □ **No X**

C.1.24 State whether the Articles of Association or Board Rules establish specific rules for granting proxies to other directors at Board meetings, how they are to be delegated and, in particular, the maximum number of proxies that a director may have, as well as if there is any limit regarding the category of director to whom a proxy may be granted beyond the limitations imposed by law. If so, please briefly describe the rules.

Pursuant to the *By-Laws*, all of the directors may cast their vote and give their proxy in favour of another director, provided, however, that non-executive directors may only do so in favour of another non-executive director. The *Regulations of the Board of Directors* require that directors attend the meetings of the Board of Directors and when they cannot do so personally they must grant their proxy to another director, to whom they must give the appropriate instructions. Directors may not grant a proxy in connection with matters in respect of which they have any conflict of interest. The proxy granted shall be a special proxy for the Board meeting in question and may be communicated by any means allowing for the receipt thereof. There is no maximum number of proxies provided per director.

C.1.25 State the number of meetings held by the Board of Directors during the year, and if applicable, the number of times the Board met without the chairman present. Meetings where the chairman sent specific proxy instructions are to be counted as attended.

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Number of Board meetings	8
Number of Board meetings without the chairman	0

State the number of meetings held by the coordinating director with the other directors, where there was neither attendance nor representation of any executive director:

Number of meetings	1

Remarks
Pursuant to the provisions of art. 45 of the By-Laws, the lead independent director coordinates, meets with and reflects the concerns of the non-executive directors, and also directs the periodic evaluation of the chairman of the Board of Directors and leads any process for the succession thereof. In the exercise of these powers, the lead independent director has held meetings with all of the non-executive directors, which meetings dealt with the evaluation of the chairman & CEO as well as initiatives to improve the performance of each of the directors.

Please specify the number of meetings held by each committee of the Board during the year:

Number of meetings held by the Executive Committee	15
Number of meetings held by the Audit and Risk Supervision Committee	12
Number of meetings held by the Appointments Committee	9
Number of meetings held by the Remuneration Committee	7
Number of meetings held by the Sustainable Development Committee	9

C.1.26 State the number of meetings held by the Board of Directors during the year and information regarding the attendance of its members:

Number of meetings with the attendance of at least 80% of the directors	8
% personal attendance of total votes during the year	98.21
Number of meetings with all directors attending in person or by proxy with specific instructions	8
% of votes cast in person and by proxy with specific instructions of all votes cast during the year	100.00

Remarks

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The attendance of each and every one of the directors at the meetings of the Board of Directors and its committees during financial year 2019 is detailed in the Annex to this Report.

C.1.27 State if the individual and consolidated financial statements submitted to the Board for preparation were previously certified:

Yes X **No □**

Identify, if applicable, the person/s who certified the individual and consolidated financial statements of the company for preparation by the Board:

Name	Position
Mr José Ignacio Sánchez Galán	Chairman & CEO
Mr José Sainz Armada	CFO
Mr Daniel Alcaín López	Corporation Administration and Control Director

Remarks
The Iberdrola group has established a certification process by which those responsible for financial information in the different areas of the Company certify that: (i) the financial information they deliver to Iberdrola for purposes of consolidation does not contain any material errors or omissions and provides a fair view of the results and the financial condition within their area of responsibility, and (ii) they are responsible for establishing the Internal Control Over Financial Reporting (ICFR) system within their area of responsibility and have found, upon evaluation, that the system is effective. The text of these certifications is inspired by the form of certification established in section 302 of the U.S. Sarbanes-Oxley Act. The culmination of the process is a joint certification that the chairman & CEO, the CFO and the Corporation Administration and Control Director submit to the Board of Directors. The process is carried out by means of electronic signature in a software application which manages the areas of responsibility and time periods and which serves as a repository of all the documentation generated, allowing for periodic review by the supervision and control bodies of the group.

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C.1.28 Explain any measures established by the Board of Directors to prevent the individual and consolidated financial statements prepared by the Board from being submitted to the General Shareholders' Meeting with a qualified audit opinion.

The *Regulations of the Audit and Risk Supervision Committee* provide that it shall have the following duties, among others:

- Supervise (on an ongoing basis and specifically at the request of the Board of Directors) the process of preparing and presenting regulated financial information relating to the Company, both individual and consolidated with its subsidiaries, reviewing compliance with legal requirements, the proper delimitation of the scope of consolidation and the correct application of accounting standards, and submit recommendations or proposals to the Board of Directors to safeguard the integrity thereof.
- Supervise the clarity and integrity of the economic/financial information regarding the Company and its group and, based on available sources of internal information (including reports from the Internal Audit Area, reports from other areas or departments, or the analysis and opinion of the Company's management team itself) and external information (including reports from experts or information received from the statutory auditor), reach its own conclusion as to whether the Company has properly applied the accounting policies.
- Establish appropriate relationships with the statutory auditor to receive information regarding matters that might entail a threat to the independence thereof, for examination by the committee, and any other information related to the development of the audit procedure, as well as such other communications as are provided for in the laws on statutory audit and in other legal provisions on auditing.
- The committee must receive written confirmation from the statutory auditors on an annual basis of their independence in relation to the Company or entities directly or indirectly related thereto, as well as a detailed breakdown of information on additional services of any kind provided to and the corresponding fees received from such entities by such statutory auditors or by persons or entities related thereto, pursuant to the legal provisions governing the auditing of accounts.
- On an annual basis, prior to the audit report, issue a report containing an opinion on whether the independence of the statutory auditors is compromised, which shall be made available to the shareholders upon the terms set forth in the *Regulations for the General Shareholders' Meeting*. This report shall contain a reasoned assessment of the provision of each and every one of the additional services other than the legal audit referred to in the preceding point, considered individually and as a whole, and in relation to the rules on independence or the legal provisions regarding the statutory audit.
- Report in advance to the Board of Directors regarding the financial information that the Company must disclose on a regular basis because of its status as a listed company; the committee shall make sure that the interim statements are prepared in accordance with the same accounting standards as the annual accounts and, for such purpose, it shall consider the appropriateness of a limited review by the statutory auditor.
- Review the contents of the audit reports on the accounts and of the reports on the limited review of interim accounts, if any, as well as other

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mandatory reports to be prepared by the statutory auditor, prior to the issuance thereof, in order to avoid qualified reports.

- Assess the results of each audit of accounts and supervise the response of the members of senior management to the recommendations made therein.
- Act as a channel of communication between the Board of Directors and the statutory auditors, causing them to hold an annual meeting with the Board of Directors to report thereto on the work performed and the accounting status and risks of the Company.
- Evaluate any proposal made by the members of senior management regarding changes in accounting practices.
- Obtain information on significant adjustments identified by the statutory auditor or that result from revisions made by the Internal Audit Area and the position of the management team regarding said adjustments.
- Timely and properly attend to, answer and take into account any requests sent thereto by the National Securities Market Commission during the current financial year or in prior years, ensuring that the same types of incidents previously identified in said requests are not repeated in the financial statements.

In turn, the *Regulations of the Board of Directors* provide that:

- The Board of Directors shall meet with the statutory auditors at least once per year in order to receive information regarding the work performed and regarding the accounting status and risks of the Company.
- The Board of Directors shall use its best efforts to definitively prepare the accounts such that there is no room for qualifications by the statutory auditors. However, if the Board of Directors believes that its opinion must prevail, it shall provide a public explanation of the content and scope of the discrepancy.

Pursuant to the above-cited rules, the Audit and Risk Supervision Committee reports on the economic/financial information of the Company throughout the financial year and prior to the approval thereof by the Board of Directors and its submission to the National Securities Market Commission (*Comisión Nacional del Mercado de Valores*). The reports of the committee, which the chair thereof presents to the full Board of Directors, are mainly intended to disclose such aspects, if any, as may give rise to qualifications in the audit report of Iberdrola and its consolidated group, making the appropriate recommendations to avoid any such qualifications.

Accordingly, the committee submitted to the Board of Directors the following reports regarding the annual and half-yearly financial reports and the *Interim Management Statements* of the Company for financial year 2019:

- Report dated 23 April 2019 on the *Interim Management Statement* for the first quarter of 2019.
- Report dated 22 July 2019 on the economic/financial information for the first half of 2019.
- Report dated 28 October 2019 on the *Interim Management Statement* for the third quarter of 2019.
- Report dated 24 February 2020 regarding the annual accounts of Iberdrola and its consolidated group for financial year 2019.

As disclosed in the information about Iberdrola posted on the website of the National Securities Market Commission (www.cnmv.es), the audit reports on the individual and consolidated annual accounts prepared by the Board of Directors have historically been issued without qualifications.

C.1.29 Is the secretary of the Board also a director?

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Yes □ **No** x

If the secretary is not a director, please complete the following table:

Name of the secretary	**Representative**
Mr Julián Martínez-Simancas Sánchez	

C.1.30 State, if any, the concrete measures established by the entity to ensure the independence of its external auditors, financial analysts, investment banks, and rating agencies, including how legal provisions have been implemented in practice.

MECHANISMS TO PRESERVE THE INDEPENDENCE OF THE AUDITOR.

The *Regulations of the Audit and Risk Supervision Committee* and the *Statutory Auditor Contracting and Relations Policy*, included within the Company's Corporate Governance System, provide that:

- The relations of the committee with the statutory auditor of the Company shall respect the independence thereof, in accordance with the provisions of the Corporate Governance System.
- The Audit and Risk Supervision Committee must discuss with the statutory auditor any circumstance that might give rise to a threat to the independence thereof and evaluate the effectiveness of the protective measures adopted, as well as understand and evaluate the set of relationships between the Iberdrola group and the statutory auditor and its network that entail the provision of non-audit services or any other type of relationship.
- The committee shall ask the statutory auditor to provide an annual certification of independence of the firm as a whole and of the members of the team participating in the process of auditing the annual accounts of the Iberdrola group from the Company or entities directly or indirectly connected thereto, as well as a detailed breakdown of information regarding additional services (other than auditing) of any kind provided by the statutory auditor or by persons connected thereto, pursuant to the law on statutory audit. In addition, the statutory auditor shall include in such certification a statement in which it reports on compliance with the application of the internal procedures of quality assurance and protection of independence that have been implemented.
- The statutory auditor shall provide to the committee annual information regarding the profiles and the track record of the persons making up the audit teams of the Company and of the Iberdrola group, stating the changes in the composition of such teams compared to the immediately preceding financial year.
- On an annual basis and prior to the issuance of the audit report, the committee shall issue a report setting forth an opinion on the independence of the statutory auditor. This

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report must contain an assessment of the possible impact on the independence of the statutory auditor of each and every one of the additional services (other than the legal audit) of any kind provided by the statutory auditor or by persons connected thereto, considered individually and as a whole.

- The committee shall monitor the quality assurance and independence safeguarding internal procedures implemented by the statutory auditor.
- The committee shall not submit a proposal to the Board of Directors, and the Board of Directors shall not submit a proposal to the shareholders at the General Shareholders' Meeting, for appointment as statutory auditor of firms for which it has evidence that they are affected by any circumstance of lack of independence, prohibition or disqualification pursuant to the legal provisions governing the audit of accounts, and in any event if the fees that the Company intends to pay it for any and all services are greater than five percent of its total domestic income during the last financial year.
- The committee shall receive information on the hiring by any of the companies of the Iberdrola group of professionals coming from the statutory auditor.

The Audit and Risk Supervision Committee has also established a restrictive policy on the non-audit services by the statutory auditor to the Iberdrola group that can be authorised. Likewise, pursuant to the *Regulations of the Audit and Risk Supervision Committee*, in order for the committee to authorise the provision of said services, it must assess whether the audit firm is the most appropriate firm to provide them based on its knowledge and experience, and in this case shall analyse: (i) the nature thereof and the circumstances and context in which it occurs, (ii) the status, position or influence of the provider of the service and other relations thereof with the Company; (iii) the effects thereof; and (iv) whether said services could threaten the independence of the auditor and, if applicable, the establishment of measures eliminating or reducing these threats to a level that does not compromise the independence thereof.

As regards financial year 2019:

- Iberdrola's statutory auditor, "KPMG Auditores, S.L." ("**KPMG**") appeared on fifteen occasions before the Audit and Risk Supervision Committee and on one occasion before the Board of Directors to report on various matters relating to the audit process. During these appearances, the statutory auditor did not report issues that might put its independence at risk.
- On 18 February 2019 KPMG sent to the committee written confirmation of its independence with regard to the audit of the economic/financial information for financial year 2018.
- On 16 July 2019 KPMG sent to the committee written confirmation of its independence with regard to the limited review of the economic/financial information as at 30 June 2019.

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- On 19 February 2020 KPMG sent to the committee written confirmation of its independence with regard to the audit of the economic/financial information for financial year 2019.
- In the letters described above, the statutory auditor represents that it has implemented internal policies and procedures designed to reasonably ensure that KPMG and its personnel maintain their independence when so required by applicable legal provisions.
- The hiring of the statutory auditor for services other than auditing is approved in advance by the committee. Furthermore, prior to approval thereof, the director of Internal Audit, and if necessary the audit committee and internal audit division of the group company receiving the services, must state that the provision thereof does not generate threats to the independence of the statutory auditor. In requests for services directed by the committee, the statutory auditor must confirm that there are no restrictions on independence for the performance of the work in question.
- In its statement of independence of 24 February 2020, KPMG reported that it had no evidence that any member of the teams participating in the audit of the financial statements for financial year 2019 had joined as an employee of Iberdrola or of its related companies.
- On 24 February 2020 the committee submitted its report to the Board of Directors regarding the independence of the Company's statutory auditor. The committee concluded that the statutory auditor performed its audit work with independence from Iberdrola or entities related thereto.

MECHANISMS TO PRESERVE THE INDEPENDENCE OF FINANCIAL ANALYSTS, INVESTMENT BANKS, AND RATING AGENCIES.

The principles which form the basis of the relations of the Company with financial analysts, investment banks, and rating agencies are contained in the *Policy regarding Communication and Contacts with Shareholders, Institutional Investors and Proxy Advisors* and are transparency, non-discrimination, truthfulness, and trustworthiness of the information supplied.

The Finance and Resources Division, through the Investor Relations and Communication Division, manages their requests for information and requests submitted by institutional or retail investors (in the case of retail investors, through the Office of the Shareholder). The Finance and Resources Division gives mandates to investment banks. The Corporate Development Division gives the appropriate advisory mandates to investment banks within the scope of its activities, in coordination with the Finance and Resources Division.

The independence of financial analysts is protected by the Investor Relations and Communications Division, which ensures the objective, fair, and non-discriminatory treatment thereof.

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To actualise the principles of transparency and non-discrimination, always in strict compliance with regulations regarding the securities market, the Company has a number of communication channels: - Personalised assistance for analysts, investors and rating agencies. - Publication of the information relating to quarterly results and other specific events, such as those relating to the submission of the Business Prospects or to corporate transactions. - E-mail through the corporate website (accionistas@iberdrola.com) and a toll-free line for shareholders (+34 900 100 019). - In-person and broadcasted presentations. - Release of announcements and news. Visits to Company facilities.

C.1.31 State whether the company changed its external auditor during the year. If so, please identify the incoming and outgoing auditor:

Yes □ **No** x

If there were any disagreements with the outgoing auditor, please provide an explanation:

Yes □ **No** x

C.1.32 State whether the audit firm provides any non-audit services to the company and/or its Group and, if so, the fees paid and the corresponding percentage of total fees invoiced to the company and/or Group:

Yes ☐ **No** X

C.1.33 State whether the auditors' report on the financial statements for the preceding year contains a qualified opinion or reservations. If so, please explain the reasons given to the shareholders at the General Meeting by the chairman of the audit committee to explain the content and extent of the aforementioned qualified opinion or reservations.

Yes □ **No** X

C.1.34 State the number of consecutive years the current audit firm has been auditing the financial statements of the company and/or group. Furthermore, state the number of years audited by the current audit firm as a percentage of the total number of years that the financial statements have been audited:

	Individual	**Consolidated**
Number of consecutive years	3	3

	Individual	**Consolidated**

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Number of years audited by the current audit firm/number of fiscal years the company or its group has been audited (by %)	11.11%	11.11%

C.1.35 State whether there is a procedure whereby directors have the information necessary to prepare the meetings of the governing bodies with sufficient time and provide details if applicable:

Yes x **No □**

Explanation of procedure
The *Regulations of the Board of Directors* provide that the required support shall be provided for new directors to become rapidly and adequately acquainted with the Company and its group, such that they can actively perform their duties as such and, if so appointed, as members of any of the committees of the Board of Directors as from their appointment as such. To this end, an *Orientation Programme* shall be made available to them through the directors' website. They shall also be provided with the information needed to perform their duties, and access to training materials and sessions that allow them to continuously update their knowledge shall be encouraged. The regulations of the consultative committees also provide that they shall have a periodic training plan that ensures the refreshment of knowledge relating to the purview of each of them. In order to improve their knowledge of the group, presentations are made to the directors regarding the businesses thereof. In addition, a portion of each meeting of the Board of Directors tends to be dedicated to a presentation on economic, legal or political/social issues of importance to the group. The directors have access to a specific application, the directors' website, that facilitates performance of their duties and the exercise of their right to receive information. This website includes information deemed appropriate for preparation of the meetings of the Board of Directors and the committees thereof in accordance with the agenda, as well as the *Orientation Programme* and the training materials intended for the directors and presentations made to the Board of Directors. In addition, the directors are given access through the directors' website to the minutes of the meetings of the Board of Directors and the committees thereof, as well as to any other information that the Board of Directors approves or that the chairman or the secretary of the Board of Directors deems appropriate to include.

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Pursuant to the Regulations of the Board of Directors, there shall be an inclusion on the directors' website of such information as is deemed appropriate for preparation of the meetings of the Board of Directors and the committees thereof, in accordance with the agenda included in the calls to meeting.

In addition, the Regulations of the Board of Directors provide that a director is specifically required to properly prepare the meetings of the Board of Directors and, if applicable, the meetings of the Executive Committee or of the committees of which the director is a member, for which purposes the director must diligently become apprised of the running of the Company and the matters to be discussed at such meetings.

C.1.36 State whether the company has established rules whereby directors must provide information regarding and, if applicable, resign, in circumstances that may damage the company's standing and reputation. If so, provide details:

Yes x **No □**

Explain the rules
The *Regulations of the Board of Directors* set out the obligations and duties of the directors, including, as an expression of the duty of loyalty, the duty to submit their resignation to the Board of Directors in the event that supervening circumstances mean they are involved in an instance of disqualification or prohibition, loss of suitability, respectability, capability, expertise, competence, availability or commitment to their duties required to be a director and the other instances provided for in the Company's Corporate Governance System. As provided by the Regulations of the Board of Directors, the director must inform the Company of any judicial, administrative or other proceedings instituted against the director which, because of their significance or characteristics, may seriously reflect upon the reputation of the Company. In particular, every director must inform the Company, through the secretary of the Board of Directors, in the event that the director is subject to an investigation, is arrested, or an order for the commencement of an oral criminal trial is issued against the director for the commission of any crime, and of the occurrence of any significant procedural steps in such proceedings. In such instance, the Board of Directors shall review this circumstance as soon as practicable and, following a report of the Appointments Committee, shall adopt the decisions it deems fit taking into account the interests of the Company.

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In addition, the director must inform the Company of any fact or event that may be relevant to the holding of office as a director.

Directors must also submit their resignation to the Board of Directors and formally resign from their position in the events set forth in the Regulations of this body, particularly:

a) When, due to supervening circumstances, they are involved in any circumstance of disqualification or prohibition provided by law or the Corporate Governance System.
b) When, as a result of any acts or conduct attributable to the director, serious damage is caused to the value or reputation of the Company or there is a risk of criminal liability for the Company or any of the companies of the Group.
c) When they cease to deserve the respectability or to have the capability, expertise, competence, availability, or commitment to their duties required to be a director of the Company.
   In particular, when the activities carried out by the director, or the companies directly or indirectly controlled by the director, or the individuals or legal entities that are shareholders of or related to any of them, or the individual representing a corporate director, may compromise the competence of the director.
d) When they are seriously reprimanded by the Board of Directors because they have breached any of their duties as directors, by resolution adopted by a two-thirds majority of the directors.
e) When their continuance in office on the Board of Directors may for any reason, either directly, indirectly, or through persons related thereto, jeopardise the faithful and diligent performance of their duties in furtherance of the corporate interest.
f) When the reasons why the director was appointed cease to exist and, in particular, in the case of proprietary directors, when the shareholder or shareholders who proposed, requested, or decided the appointment thereof totally or partially sell or transfer their equity interest, with the result that such equity interest ceases to be significant or sufficient to justify the appointment.
g) When an independent director unexpectedly falls under supervening circumstances that prevent the director from being considered as such pursuant to the provisions of law.

In any of the aforementioned instances, the Board of Directors shall request the director to resign from such position and, if applicable, shall propose the director's removal from office to the shareholders at the General Shareholders' Meeting.

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By way of exception, the resignation provisions set forth in letters f) and g) above shall not apply if the Board of Directors believes that there are reasons that justify the director's continuance in office, after a report of the Appointments Committee, without prejudice to the effect that the new supervening circumstances may have on the classification of the director.

C.1.37 State whether any member of the Board of Directors has notified the company that he or she has been tried or notified that legal proceedings have been filed against him or her, for any offences described in Article 213 of the LSC:

Yes **No X**

State whether the Board of Directors has examined the case. If so, explain in detail the decision taken as to whether the director in question should continue in his or her post or, if applicable, describe any actions taken by the Board up to the date of this report, or which it intends to take.

Yes □ **No X**

C.1.38 Detail any material agreements entered into by the company that come into force, are modified or are terminated in the event of a change in control of the company following a public takeover bid, and their effects.

Not applicable.

C.1.39 Identify individually for directors, and generally in other cases, and provide detail of any agreements made between the company and its directors, officers or employees providing severance payments or golden parachutes in the event of resignation or unfair dismissal or termination of employment due to a takeover bid or any other type of transaction.

Number of beneficiaries	28
Type of beneficiary	**Description of agreement**
Executive directors and officers	1. EXECUTIVE DIRECTORS Pursuant to the provisions of his contract, the chairman & CEO has the right to receive a severance payment in the event of termination of his relationship with the Company, provided that such termination is not the consequence of a breach attributable thereto or exclusively due to his own decision to withdraw. The amount of the severance payment is three times annual

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	salary. Since 2011, contracts with new executive directors and with senior management include maximum severance pay equal to two times annual salary in the event of termination of their relationship with the Company, provided that termination of the relationship is not the result of a breach attributable thereto or solely due to a voluntary decision thereof. This is the system applicable to the Business CEO, who was appointed by the shareholders at the General Shareholders' Meeting held on 31 March 2017. Furthermore, in consideration for the executive directors' non-compete commitment for a period of between one and two years, they shall be entitled to severance pay equal to the remuneration for such period. 2. OFFICERS Some employment contracts with officers of Iberdrola include specific severance clauses. The purpose of such clauses is to obtain an effective and sufficient level of loyalty for the management of the Company and thus avoid a loss of experience and knowledge that might jeopardise the achievement of strategic objectives, more so for positions deemed to decisively contribute to the creation of value due to the responsibilities entailed thereby. The amount of the severance pay is determined based on length of service and the reasons for the officer's withdrawal from office, up to a maximum of five times annual salary. Notwithstanding the foregoing, the Senior Management Remuneration Policy provides since 2011 that the limit on the amount of the severance pay under new contracts with the members of senior management shall be two times their annual salary.

State if these contracts have been communicated to and/or approved by management bodies of the company or of the Group. If they have, specify the procedures, events and nature of the bodies responsible for their approval or for communicating this:

	Board of Directors	**General Shareholders' Meeting**
Body authorising the severance clauses	X	

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	YES	NO
Are these clauses notified to the General Shareholders' Meeting?	X	

C.2 **Committees of the Board of Directors**

C.2.1 Provide details of all committees of the Board of Directors, their membership, and the proportion of executive, proprietary, independent and other external directors that comprise them:

EXECUTIVE COMMITTEE

Name	Position	Category
Mr José Ignacio Sánchez Galán	Chair	Executive
Ms Inés Macho Stadler	Member	Other external
Mr Manuel Moreu Munaiz	Member	Independent
Ms Samantha Barber	Member	Independent

% of executive directors	25
% of independent directors	50
% of other external directors	25

Explain the duties exercised by this committee, other than those that have already been described in Section C.1.10, and describe the rules and procedures it follows for its organisation and function. For each one of these functions, briefly describe its most important actions during the year and how it has exercised in practice each of the functions attributed thereto by law, the Articles of Association or other corporate resolutions.

The Executive Committee is assigned all the powers of the Board of Directors, except for those powers that may not be delegated pursuant to legal or by-law restrictions. The chairman of the Board of Directors and the chief executive officer, if any, are members in all cases. The secretary of the Board of Directors acts as secretary of the Committee.

The Executive Committee shall meet as many times as deemed necessary by the chair thereof. It shall also meet when so requested by a minimum of two of the directors forming part thereof.

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Resolutions of the Committee shall be adopted by absolute majority of its members who are present at the meeting in person or by proxy.

The duties of this Committee consist of making proposals to the Board of Directors regarding strategic decisions, investments and divestitures that are significant for the Company or the group, assessing their conformity to the current budget and strategic plans and analysing and monitoring business risks. It also provides assistance to the Board of Directors in the ongoing supervision of compliance with the principles governing the organisation and the coordination of the group and the strategic goals thereof.

The most relevant activities performed by this Committee during financial year 2019 are described in the *Activities Report of the Board of Directors and of the Committees thereof 2019*, available at www.iberdrola.com.

AUDIT AND RISK SUPERVISION COMMITTEE

Name	Position	Category
Mr Xabier Sagredo Ormaza	Chair	Independent
Ms Denise Mary Holt	Member	Independent
Ms Georgina Kessel Martínez	Member	Independent
Mr José Walfredo Fernández	Member	Independent

% of independent directors	100

Explain the duties exercised by this committee, describe the rules and procedures it follows for its organisation and function. For each one of these functions, briefly describe its most important actions during the year and how it has exercise in practice each of the functions attributed thereto by law, in the Articles of Association or other corporate resolutions.

The Audit and Risk Supervision Committee is an internal informational and consultative body.

The Audit and Risk Supervision Committee shall be composed of a minimum of three and a maximum of five directors appointed by the Board of Directors upon a proposal of the Appointments Committee from among the non-executive directors who are not members of the Executive Committee. A majority of its members shall be independent,

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and at least one of them shall be appointed taking into account the knowledge and experience thereof in the areas of accounting, audit and risk management.

Without prejudice to the foregoing, the Board of Directors and the Appointments Committee shall endeavour to ensure that all members of the Audit and Risk Supervision Committee, and especially the chair thereof, have the expertise, qualifications and experience appropriate for the duties they are called upon to perform in the area of accounting, auditing or risk management, that at least one of them has experience in information technology, and that as a whole the members of the Audit and Risk Supervision Committee have relevant technical knowledge in the finance and internal control area, as well as in relation to the energy sector.

The Board of Directors shall appoint a chair of the Committee from among the independent directors forming part thereof, as well as its secretary, who need not be a director.

The members of the Audit and Risk Supervision Committee shall be appointed for a maximum term of four years and may be re-elected on one or more occasions for terms of the same maximum length. The chair shall hold office for a maximum period of four years, after which period the director who has held office as such may not be re-elected until the passage of at least one year from ceasing to act as such.

A valid quorum shall be established with the attendance at the meeting, in person or by proxy, of a majority of its members, and resolutions shall be adopted by an absolute majority of votes of the members present at the meeting in person or by proxy.

The duties of the Committee are provided and are further developed in the Regulations of the Board of Directors, as well as in the Regulations of the Audit and Risk Supervision Committee.

The most relevant activities performed by this Committee during financial year 2019 are described in the *Activities Report of the Board of Directors and of the Committees thereof 2019*, available at www.iberdrola.com.

Identify the directors who are member of the audit committee and have been appointed taking into account their knowledge and experience in accounting or audit matters, or both, and state the date that the Chairperson of this committee was appointed.

Name of directors with experience	Mr Xabier Sagredo Ormaza and Ms Georgina Kessel Martínez
Date of appointment of the chairperson	19/02/2019

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APPOINTMENTS COMMITTEE

Name	Position	Category
Ms María Helena Antolín Raybaud	Chair	Independent
Mr Íñigo Víctor de Oriol Ibarra	Member	Other external
Mr Anthony L. Gardner	Member	Independent

% of independent directors	66.67
% of other external directors	33.33

Explain the duties exercised by this committee, describe the rules and procedures it follows for its organisation and function. For each one of these functions, briefly describe its most important actions during the year and how it has exercise in practice each of the functions attributed thereto by law, in the Articles of Association or other corporate resolutions.

The Appointments Committee is an internal informational and consultative body.

The Committee shall be composed of a minimum of three and a maximum of five directors appointed by the Board of Directors from among the non-executive directors.

A majority of the members of the Appointments Committee must be classified as independent. The Board also appoints the chair thereof from among the independent directors forming part thereof, as well as its secretary, who need not be a director.

The Board of Directors shall endeavour to ensure that the members of the Committee have such expertise, qualifications and experience as are required by the duties they are called upon to perform, particularly in the following areas: corporate governance, strategic human resources analysis and evaluation, selection of directors and management personnel, and performance of senior management duties.

The members of the Appointments Committee shall be appointed for a maximum term of four years and may be re-elected on one or more occasions for terms of the same maximum length.

A valid quorum shall be established with the attendance at the meeting, in person or by proxy, of a majority of its members, and

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resolutions shall be adopted by an absolute majority of votes of the members present at the meeting in person or by proxy.

The duties of the Committee are further developed in the Regulations of the Board of Directors, as well as in the Regulations of the Appointments Committee.

The most relevant activities performed by this Committee during financial year 2019 are described in the *Activities Report of the Board of Directors and of the Committees thereof 2019*, available at www.iberdrola.com.

REMUNERATION COMMITTEE

Name	Position	Category
Mr Juan Manuel González Serna	Chair	Independent
Ms Inés Macho Stadler	Member	Other external
Mr Manuel Moreu Munaiz	Member	Independent

% of independent directors	66.67
% of other external directors	33.33

Explain the duties exercised by this committee, describe the rules and procedures it follows for its organisation and function. For each one of these functions, briefly describe its most important actions during the year and how it has exercised in practice each of the functions attributed thereto by law, the Articles of Association or other corporate resolutions.

The Remuneration Committee is an internal informational and consultative body.

The Committee shall be composed of a minimum of three and a maximum of five directors appointed by the Board of Directors upon a proposal of the Appointments Committee, from among the non-executive directors. A majority of the members of the Remuneration Committee must be classified as independent. The Board also appoints the chair thereof from among the independent directors forming part thereof, as well as its secretary, who need not be a director.

The Board of Directors shall endeavour to ensure that the members of the Committee have such expertise, qualifications and experience as are required by the duties they are called upon to perform, and particularly regarding corporate governance, policy design and remuneration plans for directors and senior management.

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The members of the Remuneration Committee shall be appointed for a maximum term of four years and may be re-elected on one or more occasions for terms of the same maximum length.

A valid quorum shall be established with the attendance at the meeting, in person or by proxy, of a majority of its members, and resolutions shall be adopted by an absolute majority of votes of the members present at the meeting in person or by proxy.

The duties of the Committee are further developed in the Regulations of the Board of Directors, as well as in the Regulations of the Remuneration Committee.

The most relevant activities performed by this Committee during financial year 2019 are described in the *Activities Report of the Board of Directors and of the Committees thereof 2019*, available at www.iberdrola.com.

SUSTAINABLE DEVELOPMENT COMMITTEE

Name	Position	Category
Ms Samantha Barber	Chair	Independent
Mr Íñigo Víctor de Oriol Ibarra	Member	Other external
Ms Sara de la Rica Goiricelaya	Member	Independent

% of independent directors	66.67
% of other external directors	33.33

Explain the duties exercised by this committee, describe the rules and procedures it follows for its organisation and function. For each one of these functions, briefly describe its most important actions during the year and how it has exercised in practice each of the functions attributed thereto by law, the Articles of Association or other corporate resolutions.

The Sustainable Development Committee is an internal informational and consultative body.

The Committee shall be composed of a minimum of three and a maximum of five directors appointed by the Board of Directors upon a proposal of the Appointments Committee, from among the non-executive directors.

A majority of the members of the Sustainable Development Committee must be classified as independent. The Board of Directors

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shall appoint a chair of the Committee from among the members forming part thereof, as well as its secretary, who need not be a director.

The members of the Sustainable Development Committee shall be appointed for a maximum term of four years and may be re-elected on one or more occasions for terms of the same maximum length.

A valid quorum shall be established with the attendance at the meeting, in person or by proxy, of a majority of its members, and resolutions shall be adopted by an absolute majority of votes of the members present at the meeting in person or by proxy.

The duties of the Committee are set out in the Regulations of the Board of Directors, as well as in the Regulations of the Sustainable Development Committee.

The most relevant activities performed by this Committee during financial year 2019 are described in the *Activities Report of the Board of Directors and of the Committees thereof 2019*, available at www.iberdrola.com.

C.2.2 Complete the following table with information regarding the number of female directors who were members of Board committees at the close of the past four years:

	Number of female directors			
	FY 2019 Number %	FY 2018 Number %	FY 2017 Number %	FY 2016 Number %
Executive Committee	2/50	2/40	2/40	1/20
Audit and Risk Supervision Committee	2/50	2/50	2/50	2/50
Appointments Committee	1/33.33	1/33.33	1/33.33	1/33.33
Remuneration Committee	1/33.33	1/33.33	1/33.33	1/33.33
Sustainable Development Committee	2/66.67	1/33.33	1/33.33	1/33.33

C.2.3 State, where applicable, the existence of any regulations governing Board committees, where these regulations may be found, and any amendments

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made to them during the year. Also state whether any annual reports on the activities of each committee have been voluntarily prepared.

Each of the committees has its own regulations, available at www.iberdrola.com, where one can also find the Activities Report of the Board of Directors and of the Committees thereof.

Within the process of ongoing review of the Corporate Governance System, apart from technical improvements, there have been amendments of the Regulations of the Appointments Committee and of the Remuneration Committee in order to reflect the recommendations included in the National Securities Market Commission's Technical Guide 1/2019 on Nomination and Remuneration Committees.

D RELATED-PARTY AND INTRAGROUP TRANSACTIONS

D.1 Describe, if applicable, the procedure and competent bodies for approval of related-party and intragroup transactions.

Article 48 of the Regulations of the Board of Directors provides that:

1. Any transaction by the Company or the companies forming part of its group with directors, with shareholders that directly or indirectly own a shareholding interest that is equal to or greater than that legally regarded as significant at any time or that have proposed or caused the appointment of any of the directors of the Company, or with the respective related persons ("Related-Party Transactions"), shall be subject to the approval of the Board of Directors, or in urgent cases, of the Executive Committee, following a report from the Appointments Committee.
2. In the event that authorisation has been granted by the Executive Committee due to the urgency of the matter, the Executive Committee shall give notice thereof to the Board of Directors at its next meeting in order for it to be ratified.
3. The authorisation of Related-Party Transactions must be approved by the shareholders at the General Shareholders' Meeting in the instances provided by law, and particularly if it relates to a transaction having a value of more than ten per cent of the corporate assets.
4. As an exception, Related-Party Transactions with any of the listed companies of the group (as is the case of Avangrid, Inc. and Neoenergia, S.A.) or with the subsidiaries thereof shall not be subject to the rules on Related-Party Transactions, provided that they have corporate governance rules similar to those of the Company.
5. The execution of a Related-Party Transaction puts the director engaging in said transaction or who is related to the person engaging in the transaction in a conflict of interest, for which reason the provisions of the Regulations of the Board of Directors in this area shall apply, to the extent applicable. This particularly includes the duties of communication and abstention.

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6. The Board of Directors, through the Appointments Committee, shall ensure that Related-Party Transactions are carried out under arm's length conditions and with due observance of the principle of equal treatment of shareholders in the same situation. In the case of transactions to be carried out by companies of the Group, the scope of authorisation of the Board of Directors, or that of the Executive Committee, if applicable, referred to in the preceding sections, shall be limited to the verification of compliance with such particulars.

7. In the case of customary and recurring Related-Party Transactions in the ordinary course of business, it shall be sufficient for the Board of Directors to give prior generic approval of the kind of transaction and of the conditions for performance thereof, following a report from the Appointments Committee.

8. If a Related-Party Transaction entails the successive performance of different transactions, of which the second and subsequent transactions are mere acts of execution of the first transaction, the provisions of article 48 of the *Regulations of the Board of Directors* shall only apply to the first transaction carried out.

9. The authorisation shall not be required in connection with transactions that simultaneously satisfy the following three conditions: that they are conducted under contracts whose terms and conditions are standardised and apply on an across-the-board basis to a large number of customers; that they are conducted at prices or rates established generally by the party acting as supplier of the goods or services in question, and that the amount thereof does not exceed one per cent of the consolidated annual income of the Group.

10. The Company shall report Related-Party Transactions in the Half-Yearly Financial Report and in the Annual Corporate Governance Report, in the cases and to the extent provided by law. Likewise, the Company shall include in the notes accompanying the annual accounts information regarding the transactions by the Company or by the companies of the Group with the directors and with those persons who act for the account of the latter when such transactions are conducted other than in the ordinary course of the Company's business or other than under normal arm's length conditions.

    To this end, the directors must give written notice to the secretary of the Board of Directors, on a semi-annual basis, within the first week of January and July of each year, regarding the Related-Party Transactions that they have engaged in. If they are not carried out, the directors shall so report. The secretary of the Board of Directors shall send a notice to the directors on a semi-annual basis requesting the appropriate information that must be sent to the Company.

11. The notice must include the following information: the nature of the transaction; the date on which the transaction originated; the conditions and periods for payment; the name of the person who carried out the transaction and the relationship, if any, with the director; the amount of the transaction; and other aspects, such as pricing policies, guarantees given and received, and any other feature of the transactions that allows for a proper assessment thereof, particularly such information as allows for verification that it has

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been carried out on arm's length conditions and in compliance with the principle of equal treatment.

12. The secretary of the Board of Directors shall prepare a register of Related-Party Transactions. The information set forth in such register shall be made available to the Compliance Unit when it so requests, and shall also periodically be made available to the Audit and Risk Supervision Committee through the Management of the Internal Audit Area.

D.2 Describe any transactions which are significant, either because of the amount involved or subject matter, entered into between the company or entities within its group and the company's significant shareholders:

Name of significant shareholder	Name of company or entity within the group	Nature of the relationship	Type of transaction	Amount (thousand euros)
QATAR INVESTMENT AUTHORITY	IBERDROLA, S.A.	Corporate	Dividends and other distributed profits	2,766
QATAR INVESTMENT AUTHORITY	IBERDROLA Group	Corporate	Other	248

Remarks
Transactions by shareholders exercising a significant influence on participation in the entity's financial and operating decisions, with significant influence being understood as having a member of the Board of Directors, are deemed to be related-party transactions. Shareholders who are able to exercise the proportional representation system due to their interest in the capital of the Company are also considered to have such influence. As of the date of this report, only Qatar Investment Authority meets this condition, for which reason the amounts reflected in the period refer to transactions with this shareholder. The amount allocated for "dividends and other distributed profits" corresponds to the bonus for attending the General Shareholders' Meeting and "other" corresponds to the income from treasury placements made with Qatar National Bank by Scottish Power Ltd.; there was no outstanding amount at 31 December.

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D.3 Describe any transactions which are significant, either because of the amount involved or subject matter, entered into between the company or entities within its group and the directors or officers of the company:

Name of director or manager	Name of related party	Relationship	Type of transaction	Amount (thousand euros)
No data				

D.4 Report any material transactions carried out by the company with other entities belonging to the same group, provided that these are not eliminated in the preparation of the consolidated financial statements and do not form part of the company's ordinary business activities in terms of their purpose and conditions.
In any event, note any intragroup transaction conducted with entities established in countries or territories which are considered tax havens:

Name of entity within the group	Brief description of the transaction	Amount (thousand euros)
No data		

Remarks
Transactions with subsidiaries and companies in which the Company has an interest that have not been eliminated in the process of consolidation were made in the ordinary course of business of the Company, were carried out under arm's-length conditions, and are of little significance to accurately reflect the assets, financial condition and results of operations of the Company.

D.5 Describe significant transactions conducted with other related parties that have not been reported in the previous sections.

Name of the related party	Brief description of the transaction	Amount (thousand euros)
SIEMENS GAMESA GROUP	PURCHASE OF MATERIAL ASSETS	698,463
SIEMENS GAMESA GROUP	RECEIPT OF SERVICES	42,978
SIEMENS GAMESA GROUP	PURCHASE OF GOODS (FINISHED OR IN PROGRESS)	1,995

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SIEMENS GAMESA GROUP	SALES	1,201

D.6 Describe the mechanisms in place to detect, determine and resolve potential conflicts of interest between the company and/or its group and its directors, senior management or significant shareholders.

Pursuant to the Regulations of the Board of Directors, a conflict of interest shall be deemed to exist in those situations provided by law, particularly when the interests of the director, either for their own or another's account, directly or indirectly conflict with the interest of the Company or of companies within the group and their duties to the Company. An interest of a director shall exist when a matter affects the director or a person related thereto or, in the case of a proprietary director, when it also affects the shareholder or shareholders that proposed or caused the appointment thereof or persons directly or indirectly related thereto.

The *Regulations of the Board of Directors* contain a list of persons deemed to be related for such purposes, distinguishing between an individual and a corporate director.

Conflicts of interest shall be governed by the following rules, without prejudice to the general duty imposed on all directors to take the measures necessary to avoid engaging in these situations:

a) Communication: once a director becomes aware of being in a situation of conflict of interest, the director must give written notice of the conflict to the Board of Directors, in the person of the secretary thereof. The secretary shall periodically submit a copy of the notices received to the Appointments Committee, in the person of the secretary thereof.
The notice shall contain a description of the situation giving rise to the conflict of interest, with a statement as to whether it is a direct conflict or an indirect conflict through a related person, in which case the latter person must be identified.
The description of the situation must include, as applicable, the subject matter and the principal terms of the transaction or the planned decision, including the amount thereof or an approximate financial assessment thereof. If the situation giving rise to the conflict of interest is a Related-Party Transaction (as this term is defined in article 48 of the *Regulations of the Board of Directors*), the notice shall also identify the department or person of the Company or of any of the companies of the Group with which the respective contacts were made.
Any question as to whether a director might be involved in a conflict of interest must be forwarded to the secretary of the Board of Directors, and the director must refrain from taking any action until it is resolved.

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b) Abstention: if the conflict arises from an operation, transaction, or circumstance that requires any kind of operation, report, decision, or acceptance, the director must refrain from taking any action until the Board of Directors studies the case and informs the director of the appropriate decision.
To this end, the director shall leave the meeting during the deliberation and voting on those matters in which the director is affected by a conflict of interest, and shall not be counted in the number of members attending for purposes of the calculation of a quorum and majorities. At each meeting of the Board of Directors and of the committees thereof, the secretary reminds the directors, before dealing with the agenda, of this abstention rule.

c) Transparency: whenever required by law, the Company shall report any cases of conflict of interest in which the directors have been involved during the financial year in question and of which the Company is aware by reason of notice given thereto by the director affected by such conflict or by any other means.

If the conflict of interest is, or may reasonably be expected to be, of a structural and permanent nature, it shall be deemed that there is a loss of the suitability required to hold office, which constitutes an event requiring the resignation, separation and removal of the director.

Conflicts of interest with officers are subject to the same rules of communication, abstention and transparency.

The Code of Ethics, which dedicates a specific section to conflicts of interest, applies to all professionals within the group, regardless of rank.

Furthermore, transactions between companies forming part of the group with significant shareholders or shareholders that have proposed the appointment of any of the directors and their respective related persons are also dealt with in the Regulations of the Board of Directors as explained in section D.1. They must be carried out on arm's-length conditions and be previously approved by the Board of Directors (or, in urgent cases, by the Executive Committee) or approved by the shareholders at a General Shareholders' Meeting if the value of the transaction exceeds 10% of the corporate assets. All transactions will be reported in the Annual Corporate Governance Report and in the Annual Financial Report.

D.7 Is there more than one company in the group listed in Spain?

Yes □ **No X**

Identify the other companies that are listed in Spain and their relationship to the company:

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E RISK MANAGEMENT AND CONTROL SYSTEMS

E.1. Explain the scope of the company's Risk Management and Control System, including tax compliance risk.

Iberdrola's *General Risk Control and Management Policy* and the *Risk Policies* (corporate and those specific to the businesses) in development thereof are implemented within a comprehensive risk control and management system, supported by a Risk Committee of the group and based upon a proper definition and allocation of duties and responsibilities at the operating level and upon supporting procedures, methodologies and tools, suitable for the various stages and activities within the system, including:

a) The establishment of a structure of risk policies, guidelines, limits and indicators, as well as of the corresponding mechanisms for the approval, implementation and monitoring thereof, which effectively contributes to risks being managed in accordance with the Company's risk appetite.

b) The ongoing identification of significant risks and threats, taking into account their possible impact on key management objectives and the accounts (including contingent liabilities and other off-balance sheet risks).

c) The analysis of such risks, both at each corporate business or function and taking into account their combined effect on the group as a whole.

d) The measurement and control of risks following homogeneous procedures and standards common to the entire group.

e) The analysis of risks associated with new investments, as an essential element in risk/return-based decision-making, including physical and transition risks related to climate change.

f) The maintenance of a system for monitoring and control of compliance with policies, guidelines and limits, by means of appropriate procedures and systems, including the contingency plans needed to mitigate the impact of the materialisation of risks.

g) The periodic monitoring and control of profit and loss account risks in order to control the volatility of the annual income of the group.

h) The ongoing evaluation of the suitability and efficiency of applying the system and the best practices and recommendations in the area of risks for eventual inclusion thereof in the model.

i) The audit of the comprehensive risk control and management system by the Internal Audit Division.

The foregoing is undertaken in accordance with the following main principles of conduct:

a) Integrate the risk/opportunity vision into the group's management, through a definition of the strategy and the risk appetite and the incorporation of this variable into strategic and operating decisions.

b) Segregate functions, at the operating level, between areas that assume risks and areas responsible for the analysis, control and monitoring of such risks, ensuring an appropriate level of independence between them.

c) Guarantee the proper use of risk-hedging instruments and the maintenance of records thereof as required by applicable law.

d) Inform regulatory agencies and the principal external players, in a transparent fashion, regarding the risks facing the group and the operation of the systems developed to monitor such risks, maintaining suitable channels of communication.

e) Ensure appropriate compliance with the corporate governance rules established by the Company through its *Corporate Governance System* and the update and continuous improvement thereof

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within the framework of the best international practices as to transparency and good governance, and implement the monitoring and measurement thereof.

f) Act at all times in compliance with the values and standards reflected in the *Code of Ethics*, under the principle of "zero tolerance" for the commission of unlawful acts and situations of fraud set forth in the *Crime Prevention Policy* and in the *Anti-Corruption and Anti-Fraud Policy*, and the principles and good practices reflected in the *Corporate Tax Policy*.

The *General Risk Control and Management Policy* and the *Risk Policies* in further development thereof apply to all companies over which the Company has effective control, within the limits established in the legal provisions applicable to the companies of the group that carry out regulated activities in the various countries in which it has a presence.

The listed country subholding companies (Avangrid, Inc. and Neoenergia, S.A.) have their own risk policies approved by their competent bodies pursuant to their own special framework of strengthened autonomy, which are aligned with those of the group.

At those companies in which the Company has an interest but which do not belong to the group, the Company shall promote principles, guidelines, and risk limits consistent with those established in the *General Risk Control and Management Policy* and in its supplemental *Risk Policies* and shall maintain appropriate channels of information to ensure a proper understanding of risks.

Iberdrola believes that its comprehensive risk control and management system operates on a comprehensive and continuous basis, strengthening such management by business unit or activity, subsidiaries, geographic areas and corporate-level support areas.

E.2. Identify the bodies within the company responsible for creating and executing the Risk Management and Control System, including tax compliance risk.

1. BOARD OF DIRECTORS

In the area within its purview, and with the support of the Audit and Risk Supervision Committee, it must use develop all of its capabilities in order for the significant risks to all the activities and businesses of the group to be adequately identified, measured, managed and controlled, and to establish through the *General Risk Control and Management Policy* the mechanisms and basic principles for appropriate management of the risk/opportunity ratio. By virtue thereof, it defines the risk strategy and profile of the group and approves the *Risk Policies*.

2. EXECUTIVE COMMITTEE

In order to conform the impact of the risks to the established appetite, the Executive Committee, upon the proposal of affected business or corporate divisions and after a report from the group's Risk Committee, annually reviews and approves the specific guidelines regarding the risk limits of the corporate risk policies.

3. AUDIT AND RISK SUPERVISION COMMITTEE.

As a consultative body of the Board of Directors, it has the following powers, among others, relating to the risk control and management systems and the tax area:

- Directly supervise the Corporate Risk Division and maintain an appropriate relationship therewith and with the audit and compliance committees of the other companies of the group.
- Continuously review the risk control and management systems, such that the principal risks are properly identified, managed and reported.
- Supervise the effectiveness of the risk control and management systems, formulating proposals for improvement.

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- Obtain information regarding any significant deficiency in internal control that the statutory auditor detects while carrying out its audit work.
- Ensure that the group's risk control and management system identifies at least:
  - the various risk factors that the Company faces;
  - the establishment and review of the risk map and the risk levels that are deemed acceptable;
  - the measures identified in order to mitigate the potential impact the materialisation of any of the identified risks; and
  - the internal control and information systems to be used in order to control and manage such risks.
- Promote (within the limits of its purview) a culture in which risk is a factor that is taken into account in the decisions of the Company.
- Identify and evaluate emerging risks, like those arising from technological, climactic, social and regulatory changes and reputational risks, as well as existing alert mechanisms, periodically evaluating the effectiveness thereof.
- Receive annual visits from the heads of the businesses of the group in order for them to report on the trends of their respective businesses and the risks associated therewith.
- Report in advance on the risks of the group to be included in the *Annual Corporate Governance Report*.
- Receive information from the Company's tax director regarding the tax standards applied during the financial year, and particularly regarding the level of compliance with the *Corporate Tax Policy*.

4. BOARDS OF DIRECTORS AND AUDIT AND COMPLIANCE COMMITTEES OF COUNTRY SUBHOLDING AND HEAD OF BUSINESS COMPANIES

The country subholding companies adopt the risk policies of the group and define the application thereof, approving guidelines on specific risk limits based on the nature and particularities of the businesses in each country. The audit and compliance committees of such companies shall report to the Board of Directors on the internal risk control and management systems.

The management decision-making bodies of the head of business companies of each country must approve the specific risk limits applicable to each of them and implement the control systems necessary to ensure compliance therewith, all within the limits provided by the legal provisions applicable to the companies of the group that carry out regulated activities.

Pursuant to their special framework of strengthened autonomy, the listed companies of the group (Avangrid, Inc. and Neoenergia, S.A.) and those with significant interests of other shareholders have their own risk policies, which are aligned with those of the group.

5. GROUP RISK COMMITTEE

The Risk Committee of the Iberdrola group is a technical committee that is chaired by the CFO and that performs executive duties in the customary management of risks and provides advice to the governance bodies of the group.

- It meets at least once a month, with the participation of the group's Risk Management director, the risk directors of the country subholding companies and corporate areas that have such a position, the Internal Audit Division and the Administration and Control Division.
- It reviews new reported risks and the reports monitoring the main existing risks, and issues the *Quarterly Risk Report of the group*, which includes the main risk positions, the report on compliance with the risk limits and indicators, and the update of the key risks map.

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It is supplemented by the credit risk and market risk committees, which report to the former, and which meet on a monthly basis to discuss and decide on credit and market (financial and commodities) risks.

E.3. State the primary risks, including tax compliance risks, and those deriving from corruption (with the scope of these risks as set out in Royal Decree Law 18/2017), to the extent that these are significant, which may affect the achievement of business objectives

The group is subject to various risks inherent in the different countries, industries and markets in which it does business and in the activities it carries out, which may prevent it from achieving its objectives and successfully implementing its strategies.

In the "Principal risks and uncertainties" section of the *Management Report* for financial year 2019, there is a detailed description of the principal risks associated with the activities of the main businesses of the group, as well as the risks of the corporation.

Due to the universal and dynamic nature thereof, the comprehensive risk system allows for the consideration of new risks that could affect the group as a consequence of changes in the environment or revisions of objectives and strategies, as well as updates based on the monitoring, verification, review and supervision activities that are performed on a continuous basis.

Pursuant to the definitions established by the *General Risk Control and Management Policy*, risks at the group level are classified as follows:

a) Corporate governance risks.

b) Market risks.

c) Credit risks.

d) Business risks.

e) Regulatory and political risks.

f) Operational, technological, environmental, social and legal risks.

g) Reputational risks.

The activities of the group during financial year 2020 and later years will be affected by the following main risk factors:

- Changes in the exchange rate between the euro and the currencies of the principal countries in which the group does business.
- The evolution of commodities and electricity prices in these countries.
- The annual change in hydraulic or wind resources for the production of electricity at the renewable generation plants of the group.
- Increased competition in the unrestricted market in Spain as a result of the entry of significant new players, and the current increased competition in the United Kingdom, with a possible impact on the annual accounts.
- The ability to implement the current major investment plan, in terms of cost and timing.
- The risks associated with cybersecurity.

Finally, in relation to possible risks with a reputational impact, the following is reported:

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- The proceeding that commenced in April 2017 when the Public Prosecutor filed a claim against Iberdrola Generación España, S.A.U., bringing before the courts an adverse government ruling by the National Markets and Competition Commission (*Comisión Nacional de los Mercados y de la Competencia*) ("CNMC"), which was appealed to the contentious-administrative courts, relating to the price of bids for the Duero, Sil and Tajo hydroelectric management units between 30 November 2013 and 23 December 2013.
- The hiring of entities linked to the former police commissioner José Manuel Villarejo Pérez, a matter disclosed in the annex to this Report due to the limit on the number of characters in this section.

In relation to these types of risks, it should be noted that the group's comprehensive risk control and management system specifically identifies all risks with a reputational impact and establishes mechanisms for the monitoring, control and internal and external communication thereof.

Furthermore, Iberdrola has a Compliance System made up of a set of substantive rules, formal procedures and significant actions intended to ensure that conduct is in accordance with ethical principles and applicable law, preventing, avoiding and mitigating the risk of conduct that is improper or contrary to ethics or the law. The bodies and divisions directly entrusted with the implementation and further development thereof also form part of this system.

Elements of the system include the *Code of Ethics* (which is applicable to all professionals of the group, board members and suppliers) and the Compliance Unit, a collective permanent and internal body linked to the Sustainable Development Committee, which, among other things, spreads a preventive culture based on the principle of "zero tolerance" towards the commission of illegal acts or improper conduct. The system has been designed following the best domestic and international practices in the area of compliance, fraud prevention and the fight against corruption.

For more details regarding the risks to which the group is subject, see:

- The annual accounts 2019, and particularly the section dedicated to risk factors in the Management Report.
- Statement of Non-Financial Information. Sustainability Report 2019
- The Integrated Report 2019.
- Other sections of this Annual Corporate Governance Report.

E.4. State whether the entity has a risk tolerance level, including tolerance for tax compliance risk.

The Company's Board of Directors reviews and approves the risk tolerance level that is acceptable for the group on an annual basis. The *General Risk Control and Management Policy*, together with the policies that further develop and supplement it, qualitatively and quantitatively establish the annually accepted risk appetite, in a sufficiently detailed manner, both at the group level and at the level of each of its principal businesses and corporate functions.

By way of complement, the Administration and Control Division, after considering such limits and guidelines, in order to verify the risk globally assumed in the annual profit and loss account, engages in a comprehensive probability analysis of the global risk remaining for the financial year at the time of approving the annual budget.

In addition, all new multi-annual plans are accompanied by their corresponding analysis of associated risk.

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The *General Risk Control and Management Policy* is further developed and supplemented through the following policies, which are also subject to approval and update by the Company's Board of Directors, and which include the following risk limits and indicators:

Corporate Risk Policies:

- *Corporate Credit Risk Policy*
- *Corporate Market Risk Policy*
- *Operational Risk in Market Transactions Policy*
- *Insurance Policy*
- *Investment Policy*
- *Financing and Financial Risk Policy*
- *Treasury Share Policy*
- *Risk Policy for Equity Interests in Listed Companies*
- *Information Technologies Policy*
- *Cybersecurity Risk Policy*
- *Reputational Risk Framework Policy*
- *Procurement Policy*

Risk policies for the various businesses of the group:

- *Risk Policy for the Networks Businesses of the Iberdrola group*
- *Risk Policy for the Renewable Energy Businesses of the Iberdrola group*
- *Risk Policy for the Liberalised Businesses of the Iberdrola group*
- *Risk Policy for the Real Estate Business of the Iberdrola group*

The *General Risk Control and Management Policy*, as well a summary of the risk policies in further implementation thereof, are available on the corporate website.

The limits and indicators of the risk policies should be consistent with the annual budget and the objectives set forth in the multi-annual investment plans. The numeric values of the limits and indicators set forth in the various policies are probabilistic in nature (like VaR and EBITDA at risk) or deterministic in nature, and are expressed in monetary units, indices or benchmarks based on which volumetric risks and/or values are generated, including:

- limits on the maximum overall credit risk exposure by type of counterparty;
- limitations on market risk proportional to the volume of activity of each business;
- strict overall limit on the discretional trading of energy;
- limitations on operational risk through preventative maintenance programmes and assurance programmes; and
- strict limitations on activities not associated with the main energy business.

The *Corporate Tax Policy* establishes the limits on tax risk by setting the tax strategy, the principles of conduct and the good tax practices assumed by the Company.

As described above, the Iberdrola group has a risk tolerance level (acceptable risk level) established at the corporate level, which is annually approved by the Board of Directors and its Executive Committee. The group's Risk Committee, the Operating Committee, the Audit and Risk Supervision Committee, the

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businesses, the corporate functions, the Administration and Control Division and the Risk Management Division also participate in the process.

E.5. State which risks, including tax compliance risks, have materialised during the year

The activities of the Iberdrola group during 2019 have been subject to various risk factors occurring in the countries and markets in which it operates, and on a global basis have not had a significant impact on the results for the financial year, thanks to the diversification of activities, markets and geographic areas in which the group is present, which has allowed for the negative effects of some businesses to be offset with favourable performance in others.

During the financial year, the group was negative affected by events described below, although they have been offset by the following positive events:

- The approval at the end of 2019 of the new remuneration framework and rate applicable to the electricity distribution business in Spain for the 2020-25 period and the approval in December 2019 of the remuneration rate applicable for the next 12 years to the assets of the rate-regulated renewable energy business in Spain.
- These approvals, together with the agreement reached with ENRESA at the beginning of the year for a “Plan for scheduled closing of Spanish nuclear plants”, positively eliminate uncertainties relating to these activities by the group in Spain.
- The approval in August 2019, on terms favourable to the group, of the remunerative framework of Elektro, applicable until August 2023.
- The sale with positive impacts for the group of: 1) 40% of the East Anglia One offshore wind farm in the United Kingdom, 2) the group’s long-term liquefied natural gas supply contracts, and 3) the fibre optic business of the networks business in Spain.

The risks that have materialised include:

- The slowdown of economic growth in some of the countries in which the group is present, like Mexico, Brazil and the United Kingdom, partially offset by the group’s business model, which makes it less sensitive to changing circumstances in the economic growth of the countries in which it is present.
- Lower hydrological contributions received by our hydroelectric plants as a result of the drought in Spain during 2019, which has resulted in hydroelectric production 4.5 TWh lower than expected in annual terms.

The write-off of 54 million euros in accounts receivable for territorial supplements, corresponding to the eco-tax in Extremadura (Spain).

E.6. Explain the response and monitoring plans for all major risks, including tax compliance risks, of the company, as well as the procedures followed by the company in order to ensure that the board of directors responds to any new challenges that arise.

The comprehensive risk control and management system, together with the control and management policies of the Company that implement them, including the group’s Risk Committee and the Company’s

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Operating Committee, have allowed for the identification of risks and new threats sufficiently in advance, as well as for establishing appropriate mitigation plans.

The Company's Operating Committee meets on an approximately weekly basis.

The group's Risk Committee, which reviews the evolution of the various risks, meets on a monthly basis, and on a quarterly basis issues the *Quarterly Risk Report of the Group*, which includes the main risk positions, the report on compliance with policies and limits approved, and the update of the key risks map.

On at least a quarterly basis, the Audit and Risk Supervision Committee of the Board of Directors supervises the evolution of the Company's risks:

- It reviews the group's Quarterly Risk Report submitted by the group's Risk director.
- It coordinates and reviews the Risk Report submitted on a regular basis (at least half-yearly) by the audit and compliance committees of the country subholding and head of business companies of the group.
- On at least a half-yearly basis, it prepares a Risk Report for the Board of Directors.

F. INTERNAL RISK MANAGEMENT AND CONTROL SYSTEMS RELATED TO THE PROCESS OF PUBLISHING FINANCIAL INFORMATION (ICFR)

Describe the mechanisms comprising the System of Internal Control over Financial Reporting (ICFR) of your company.

F.1. Control environment

Report on at least the following, describing their principal features:

F.1.1. The bodies and/or departments that are responsible for (i) the existence and maintenance of an adequate and effective ICFR; (ii) their implementation; and (iii) their supervision.

Iberdrola's Board of Directors is ultimately responsible for implementing and maintaining a proper and effective internal control over financial information ("**ICFR**") system. The Boards of Directors of the country subholding companies and head of business companies also have this responsibility within their various purviews.

The heads of the country subholding companies and of the head of business companies, together with their respective heads of control, as well as the directors of the global corporate areas, are in turn responsible for the design and implementation of the ICFR system. This responsibility is explicitly set forth in the certifications that said persons sign on a half-yearly basis in relation to the financial information for their respective areas of responsibility.

Pursuant to article 31.6.d of the *Regulations of the Board of Directors*, the Audit and Risk Supervision Committee (hereinafter, "**ARSC**") is responsible for supervising the effectiveness of the internal control of the Company and of its group, as well as the risk management systems thereof. Article 31.6.f also provides that the duties of the ARSC include that of supervising the process of preparing and presenting mandatory financial information and submitting recommendations or proposals to the Board of Directors to protect the integrity of this information. The ARSC relies on the Internal Audit Area to carry out these responsibilities. Any audit committees at the country subholding and head of business companies have these powers within their respective purviews.

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F.1.2. State whether the following are present, especially if they relate to the creation of financial information:

- **Departments and/or mechanisms in charge of: (i) design and review of corporate structure; (ii) clear definition of lines of responsibility and authority with an adequate distribution of tasks and functions; and (iii) assurance that adequate procedures exist for proper communication throughout the entity.**

The Board of Directors of Iberdrola defines the organisational structure at the first level. The heads of these top-level organisations, together with the Human Resources and General Services Division, implement the deployment within their respective purviews.

Each top-level division prepares a proposed organisational structure, including a description of the mission, duties and responsibilities of the various organisations deployed, which must subsequently be validated by the Human Resources and General Services Division, as well as by the Finance and Resources Division.

The main responsibility for preparing financial information lies with the corporate Administration and Control Division. This division proposes the structure of heads of Control of the country subholding and head of business companies and deals with coordinating and supervising the conduct thereof.

- **Code of conduct, the body approving this, degree of dissemination and instruction, including principles and values, (state if there is specific mention of transaction recording and creation of financial information), a body charged with analysing breaches and proposing corrective actions and sanctions.**

The Iberdrola group has a *Code of Ethics* that was first approved by the Board of Directors in financial year 2002, and that is regularly reviewed and updated. In its review of April 2019, the *Code of Ethics* strengthened the obligation of the group's professionals to report to the Compliance Division the commission of any illegal act or any impropriety. The obligation of suppliers to comply with the *Code of Ethics* and with the corporate anti-corruption policies is also included.

The *Code of Ethics* is communicated and disseminated among the professionals of the Iberdrola group in accordance with the plan approved annually for this purpose by the Compliance Unit, which provides for various initiatives in the area of training (both on-line and in-person) and communication, addressed to the various groups of employees based on their exposure to Compliance risks.

The *Code of Ethics,* which includes informational transparency among its general ethical principles and principles on relations with Iberdrola's stakeholders, expressly states the following in article B.6.:

"1. *The group shall provide true, proper, useful and consistent information regarding its programmes and actions. The transparency of the information required to be disclosed is a basic principle that must govern the conduct of all directors, professionals and suppliers of the group.*

2. The economic/financial information of the group (especially the annual accounts) shall faithfully reflect its economic and financial position and its net worth, in accordance with generally accepted accounting principles and applicable international financial reporting standards. For such purposes, no directors, professional or supplier shall conceal or distort the information set forth in the accounting records and reports of the group, which shall be complete, accurate and truthful.

3. A lack of honesty in the communication of information, whether within the group (to professionals, subsidiaries, departments, internal bodies, management decision-making bodies, etc.) or externally (to auditors, shareholders and investors, regulatory entities, the media, etc.) is a breach of this Code of Ethics. This includes delivering incorrect information, organising it in an incorrect manner or seeking to confuse those who receive it".

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The Compliance Unit, which is a collective permanent and internal body linked to the Sustainable Development Committee of Iberdrola, controls the effective operation of the Company's Compliance System, with powers in the area of regulatory compliance. The duties of the Unit include ensuring the application of the *Code of Ethics* and of the other rules of the group in the compliance area, and the spread of a preventive culture based on the principle of "zero tolerance" towards the commission of unlawful acts. It also approves the *General Compliance System Framework of the Iberdrola group*, which contains the basic principles of structure and operation of the group's Compliance System as well as the duties and responsibilities of the various bodies involved. The Unit also evaluates and prepares an annual report on the effectiveness of the Compliance System of the Company and of the other companies of the group. The report is submitted to the Sustainable Development Committee, which issues its opinion and forwards it to the Board of Directors.

The Compliance Unit is also in charge of determining whether a professional of Iberdrola, S.A. has engaged in activities that violate the provisions of law or the *Code of Ethics*, and if applicable, for tasking the Human Resources and General Services Division to apply disciplinary measures in accordance with the offences and penalties system set forth in the collective bargaining agreement to which the professional belongs or in applicable labour law. The Compliance divisions of the other companies of the group perform this same function at each of them.

Pursuant to article F.5.1 thereof, directors, professionals of the companies of the group and the suppliers thereof expressly accept the rules of conduct established in the *Code of Ethics* that are applicable thereto.

Pursuant to article F.5.2, professionals who hereafter join or become part of the group and suppliers contracting with companies of the group shall also expressly accept the rules of conduct to which they are subject as set forth in sections D (for professionals of the group) and E (for suppliers), respectively, of the *Code of Ethics*. For this purpose, a literal extract of the corresponding section in each case is attached to their respective contracts.

Likewise, directors shall receive a complete copy of the *Code of Ethics,* for which they shall deliver a signed receipt.

- **Whistleblower channel, that allows notifications to the audit committee of irregularities of a financial and accounting nature, in addition to potential breaches of the code of conduct and unlawful activities undertaken in the organisation, reporting, as the case may be, if this is of a confidential nature.**

Iberdrola has various reporting mailboxes based on the sender: (i) ethics mailboxes for the professionals of the group; (ii) the mailbox available to shareholders and investors; and (iii) the suppliers' mailbox, accessible from the Employee Portal, from the OLS "On Line Shareholders" system or their mobile app, and from the Supplier Portal, respectively. These channels allow for communicating and complaining of any conduct that may involve the commission of an improper act or an act in violation of legal provisions or of the rules of conduct laid down in the *Code of Ethics* or to ask questions regarding any issue with respect to Compliance.

One need not identify oneself in order to send a complaint through these mailboxes (complaints may be anonymous), and if one does so Iberdrola guarantees absolute confidentiality with respect to both the information provided and the personal data of the reporting party. The group naturally states its commitment to not retaliate against any employee making a complaint, unless there is bad faith on the party of the complaining party.

- **Training and periodic refresher programmes for staff involved in the preparation and revision of financial information, as well as assessment of the ICFR (Internal Control System for Financial Information), that covers at least accounting rules, audits, internal control and risk management.**

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Training is key in the Iberdrola's human resources policy and is an essential element form adjusting new employees to Iberdrola and the proper performance of their jobs, as well as to keep the group's employees updated regarding any changes that occur within the group itself as well as the environment within which it does business.

As an example of the commitment to training, Iberdrola has a corporate campus with multiple training centres in various countries, including the International Corporate Campus in San Agustín de Guadalix (Madrid). Training in all areas is provided at these facilities by internal professionals, outside entities, universities, outside experts, etc.

Specifically, the personnel directly or indirectly involved in the preparation and review of financial information and in the evaluation of the ICFR system, based on their different responsibilities, receive regular training on accounting standards, internal control and risk management, which is intended to give them the knowledge needed for the optimal performance of their duties as well as to anticipate, to the extent possible, the proper conformance of the group to future rules and to best practices. Most of these courses are provided by outside entities: business schools, universities and consultants specialising in economic/financial matters.

In addition, and on a general basis, these professionals regularly take coursework to improve their qualifications in the use of the computer-based tools required to perform their duties, mainly excel and database management.

They also attend various conferences, symposia and seminars in the areas of accounting, tax and internal audit, at both the domestic and international level.

Furthermore, in order to pool best practices and analyse the challenges facing the group in these areas, various meetings between the professionals of these areas from the different countries and country subholding companies are organised on an annual basis. Specifically, in 2019 there were, among other events, the International Internal Audit Planning Days, the "VII-Global Tax Meeting" and the annual "XII Global Control Committee", which analyses the most significant issues affecting the function, like new accounting rules, with special attention on reviewing and evaluating the group's ICFR system.

In addition, although not considered specific training activities, the Accounting Practices Division, which reports directly to the director of Administration and Control, who is responsible for defining and updating the accounting policies, publishes a quarterly bulletin that is broadly distributed within the group regarding new accounting developments with respect to International Financial Reporting Standards ("IFRS"), which includes updates on standards (standards that have entered into effect, drafts issued, standards issued, standards approved by the European Union, new standards and expected drafts, as well as existing standards) and accounting questions asked internally, together with the conclusions with respect thereto.

F.2. Assessment of financial information risks

Report on at least the following:

F.2.1. The main characteristics of the risk identification process, including error and fraud risk, as regards:

- **Whether the process exists and is documented.**

The process of identifying risks of error in financial information is one of the most important steps within the methodology for performing the internal control over financial information at Iberdrola, documenting both the objectives and performance thereof as well as its results.

The methodology starts with an analysis of the consolidated financial information of the Iberdrola group and of the various country subholding companies, in order to select the most significant accounting headings and notes, pursuant to quantitative (materiality) and qualitative (business risk and third-party visibility) standards. The headings and notes selected area grouped into management cycles or large processes in which the selected information is generated. The cycles are analysed and a high-level

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description of each of them is prepared as a means for identifying the potential risks of error in the financial information in relation to attributes like integrity, presentation, valuation, cut-off, recording and validity. The risks identified are subject to a process of evaluation, selecting the most significant ones, applying professional judgement regarding a number of indicators (existence of documented processes and controls, intervention of systems that automate the process, occurrence of incidents in the past, familiarity with and maturity of the process, and need for the use of judgement to make estimates). The risks of fraud are not subject to explicit identification, although they are taken into account to the extent that they can generate material errors in the financial information.

Once the most significant risks have been selected and the main aspects to be controlled are identified, the controls required for the mitigation or management thereof are selected and designed, with these controls being subject to monitoring and documentation, as well as systematic review by the Internal Audit Area.

The selected risks are reviewed at least annually within the framework of the assessment of the effectiveness of the internal control system performed by those responsible for it. This review is intended to update the risks to the changing circumstances in which the Company operates, especially given changes in the organisation, computer systems, regulation, products or the status of the markets.

- **If the process covers all of the objectives of financial information, (existence and occurrence; completeness; valuation; delivery; breakdown and comparability; and rights and obligations), whether it is updated and with what frequency.**

As mentioned above, the cycles or large processes in which financial information is generated are reviewed at least on an annual basis to identify potential risks of error in relation to attributes like validity (existence and approval), integrity, valuation, presentation, cut-off and recording.

- **The existence of a process for identifying the scope of consolidation, taking into account, among other factors, the possible existence of complex company structures, shell companies, or special purpose entities.**

The scope of consolidation is identified on a monthly basis, and is obtained as a product of an updated map of companies, with express identification of the changes that have occurred each period.

The scope of this review is the totality of all companies in which Iberdrola or any of its subsidiaries has an interest, regardless of the significance thereof.

Furthermore, following the provisions of section 529 of the *Companies Act*, the *Regulations of the Board of Directors* provide that the purview of the Board of Directors includes, among other things, approving the creation or acquisition of equity interests in special purpose entities or entities registered in countries or territories that are considered to be tax havens, as well as any other transactions or operations of a similar nature that, due to their complexity, might diminish the transparency of the group. In any event, the making of such decision requires a prior report of the ARSC, as provided in Iberdrola's *Regulations of the Audit and Risk Supervision Committee.*

Pursuant to specific internal procedures in effect (conforming to the current corporate governance model), the initiative relating to the creation or acquisition of an interest in a special purpose entity or an entity domiciled in a tax haven is within the purview of the Management of the group or of the country subholding company or head of business company or subsidiary thereof that intends to create or acquire a company of this nature. In the event that such transactions are carried out by listed country subholding companies of the group or by subsidiaries thereof, the audit and compliance committee or similar body of such listed country subholding company shall be responsible for issuing the relevant report.

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- **If the process takes into account the effects of other types of risk (operational, technological, financial, legal, tax, reputational, environmental, etc.) to the extent that they affect the financial statements.**

The process of identifying risks of error in financial information takes into account the effects of other types of risk (operational, technological, financial, legal, tax, reputational, environmental, etc.) to the extent that they affect the financial statements, which risks are evaluated and managed by various corporate units like the Risk Division or the Legal Division, among others. However, there is no express identification of such other types for the identification of financial information risks.

- **The governing body within the company that supervises the process.**

The governing body that supervises the process is the ARSC, which is supported by the Management of the Internal Audit Area in the performance of this duty.

F.3. Control activities

State whether the company has at least the following, describing their main characteristics:

F.3.1. Review and authorisation procedures for financial information published by the stock markets and a description of the ICFR, indicating those responsible, as well as documentation describing the flow of activity and controls (including those relating to the risk of fraud) of the various types of transactions which may materially affect the financial statements, including financial closing procedures and the specific review of judgements, estimates, valuations and relevant forecasts.

On 24 July 2018, Iberdrola's Board of Directors approved an *Iberdrola group Financial Information Preparation Policy* that applies to all companies of the group, and which further develops the process for preparing the consolidated financial information and clearly defines the powers vested in the ARSC and the audit and compliance committees of the other companies of the group.

"*Consolidated financial information*" means the information appearing in the consolidated annual accounts, in the *Interim Management Statements* corresponding to the results of Iberdrola and its consolidated group for the first and third quarter, and in the *Half-Yearly Financial Report*.

The policy provides that the financial information required for the preparation of the "*consolidated financial information*" must be prepared in accordance with the accounting standards established in the *Accounting Policies Handbook* and the models approved by Iberdrola's Administration and Control Division.

The policy provides which management decision-making body of each company shall be responsible for preparing the financial information relating to its respective company that may be required to prepare the "*consolidated financial information*". By analogy, the management decision-making bodies of the country subholding companies shall be responsible for approving the "*financial information for consolidation*" within which the information regarding the company itself and that of the subsidiaries forming part of its subgroup are included.

Thus, the management decision-making bodies of the country subholding companies, following a report from their respective audit and compliance committees, and based on the information received from their subsidiaries, shall prepare and approve the financial information for consolidation corresponding to each

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subgroup, and once such information has been verified by their external auditor within the context of its review of the consolidated financial information, they shall send it to Iberdrola's Administration and Control Division prior to the date indicated thereby, in order to prepare the consolidated financial information and submit it for formulation or approval by Iberdrola's Board of Directors, as appropriate, after a report from its ARSC.

Furthermore, the process or structure of certification of the financial information, which is formally carried out on a half-yearly basis, coinciding with the interim and annual close, reflects the form in which the financial information is generated within the group.

In this structure, the heads of the country subholding companies and the heads of the head of business companies, together with their respective heads of control, as well as the heads of the global corporate areas, certify both the reliability of the financial information regarding their areas of responsibility (which is the information they provide for consolidation at the group level) and the effectiveness of the internal control system established to reasonably guarantee such reliability. Finally, the chairman & CEO, as the top responsible executive, and the Corporate Administration and Control Director, who is responsible for the preparation of the financial information, certify to the Board of Directors the reliability of the consolidated annual accounts and the *Half-Yearly Financial Report.*

The ARSC, with the support of the Management of the Internal Audit Area, supervises the entire process of certification, submitting to the Board of Directors the conclusions obtained from this analysis at the meetings during which the accounts are formally prepared.

As regards the description of the ICFR system to be published in the securities markets, the procedure for the review and approval thereof is the same as the one used for all disclosures of an economic and financial nature in the *Annual Corporate Governance Report.*

The documentation of the Internal Control over Financial Reporting (ICFR) System includes high-level descriptions of the cycles for generating the selected relevant financial information, as well as detailed descriptions of the prioritised risks of error and of the controls designed for the mitigation or management thereof. The description of the controls includes the evidence obtained for the implementation thereof, which is necessary for their review.

Each of the accounting close processes at the businesses is considered a cycle, and the same occurs with the group of accounting close activities at the corporate level, with the process of global consolidation and with the process of preparing the notes. This means that all of these activities are subject to the methodological process described in the section relating to risks.

Furthermore, the specific review of critical accounting opinions, estimates, valuations and relevant projections is subject to specific controls within the model, as these types of issues involve risks of error in the various cycles in which they are made. The evidence of the specific controls is the support for such reviews in many cases.

Independently of the process of certification followed in the countries, businesses and corporate areas, the ARSC, once again with the support of the Internal Audit Division, performs a quarterly global review of the financial information, ensuring that the half-yearly financial reports and quarterly management statements are prepared using the same accounting standards as the annual financial reports, and verifying the proper definition of the scope of consolidation, as well as the correct application of generally accepted accounting principles and international financial reporting standards.

F.3.2. Internal IT control policies and procedures (access security, change controls, their operation, operational continuity, and segregation of duties, among others) which support relevant processes within the company and relate to the creation and publication of financial information.

The controls considered to mitigate or manage the risks of error in financial reporting include some relating to the most significant software applications, like the controls relating to user access permissions or those relating to the integrity of the transfer of information between applications, of the transaction, and of change management.

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In addition, the Iberdrola group has internal control guidelines and procedures regarding IT systems in relation to the acquisition and development of software, the acquisition of systems infrastructure, the installation and testing of software, change management, management of service levels, management of third-party services, security of the systems and access thereto, incident management, transaction management, continuity of operations and the segregation of functions.

These guidelines and procedures (which in some cases are different based on geographic area or type of solution, and are in a process of progressive homogenisation) are applied to all IT systems that support the relevant process of generation of financial information, and to the infrastructure required for the operation thereof.

The Iberdrola group also has an Information Technologies (IT) Policy that contemplates the management of risks associated with the use, ownership, operation, participation, influence and adoption of specific information technology or the processes for the management and control thereof.

Thus, there is a model of general controls integrated within the risk management model that allows for a global evaluation of the risks related to information technology.

Both the risk model and the IT controls are based on and aligned with good market practices, like COBIT5 and COSO. The evolution thereof over the long term is maintained by including the new needs arising from the changing regulatory compliance framework that applies to the IT systems and services, as well as the recommendations and guidelines of auditors and relevant third parties.

As part of the general IT controls model, there is a regular evaluation of the effectiveness of the information technology controls in the area of financial systems, adopting the appropriate measures if any incident is detected.

On an annual basis, the heads of the IT systems of the Iberdrola group certify the effectiveness of the internal controls established regarding financial information. This certification covers all systems declared to be within the scope of the external financial auditing, as well as others deemed to be relevant, by the corresponding business organisations within the group.

For financial year 2019, the total number of systems covered by the IT controls system was 46, on which there was homogeneous application of 14 controls, most of which are evaluated and applied by the Systems Division, and in some cases by other business organisations. The frequency of the evaluation is annual or biannual, depending on the nature of the control, and it is performed using a principle of sampling of all of the relevant evidence in each case. The entire process of evaluating the IT controls is supported by a GRC system and is supervised annually by the Internal Audit Division.

F.3.3. Internal control policies and procedures intended to guide the management of activities subcontracted to third parties, as well as those aspects of assessment, calculation or evaluation entrusted to independent experts, which may materially affect financial statements.

In general terms, the Iberdrola group does not have significant functions subcontracted to third parties with a direct impact on financial information. The evaluations, calculations or assessments entrusted to third parties that could materially affect the financial statements are considered to be activities relevant to the generation of financial information leading to the identification of any priority risks of error, which involves the design of associated internal controls. These controls cover the internal analysis and approval of fundamental assumptions to be used, as well as the review of the evaluations, calculations or assessments made by outside parties, by comparing them to the calculations made internally.

F.4. Information and communication

State whether the company has at least the following, describing their main characteristics:

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F.4.1. A specifically assigned function for defining and updating accounting policies (accounting policy area or department) and resolving doubts or conflicts arising from their interpretation, maintaining a free flow of information to those responsible for operations in the organisation, as well as an up-to-date accounting policy manual distributed to the business units through which the company operates.

The Accounting Practice Division, which reports directly to the Administration and Control director, is responsible for defining and updating the accounting policies, as well as for resolving questions or conflicts arising from the interpretation thereof. It maintains fluid communication with the heads of operation of the organisation, and particularly with the heads of the accounting functions.

It publishes a quarterly bulletin that is broadly distributed within the group regarding new accounting developments deriving from the IFRS, which includes updates on standards (standards that have entered into effect, drafts issued, standards issued, standards approved by the European Union, new standards and expected drafts, as well as existing standards) and accounting questions asked internally, together with the conclusions with respect thereto.

The Accounting Practice Division is also responsible for keeping the *Accounting Policies Handbook of the group* continuously updated and ensuring the appropriate dissemination thereof.

The accounting policies handbook is continuously updated. For this purpose, the Accounting Practice Division analyses whether the new developments or changes in the accounting area have an effect on the group's accounting policies, as well as the date of entry into force of each of the standards. When a new provision, or new interpretations thereof, are identified having an effect on the accounting policies of the group, it is included in the handbook, and also communicated to the parties responsible for preparing the financial information of the group through the quarterly bulletins mentioned above, and the application supporting the handbook is also updated.

The updated version of the handbook is available in an application on the internal network of the group. This application is also accessible by users via remote access and can be connected to e-mail. Any change or upload of a document of the handbook generates an e-mail notice to all users.

F.4.2. Measures for capturing and preparing financial information with consistent formats for application and use by all of the units of the entity or the group, and which contain the main financial statements and notes, as well as detailed information regarding ICFR.

The mechanism for capturing and preparing the information supporting the main financial statements of the Iberdrola group is mainly based on the use of a unified management consolidation tool (called BPC), which is accessible from all geographic areas, that is currently deployed throughout the group.

A large part of the information supporting the breakdowns and notes is included in the consolidation tool, with the rest being captured by homogeneously formatted spreadsheets, called reporting packets, that are prepared for the half-yearly and yearly close.

F.5. Supervision of system performance

Describe at least the following:

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F.5.1. The activities of the audit committee in overseeing ICFR as well as whether there is an internal audit function that has among its mandates support of the committee and the task of supervising the internal control system, including ICFR. Additionally, describe the scope of ICFR assessment made during the year and the procedure through which the person responsible prepares the assessment reports on its results, whether the company has an action plan describing possible corrective measures, and whether its impact on financial reporting is considered.

The activities for supervising the ICFR by the ARSC mainly include: (i) monitoring of compliance with the process of certification by the various parties responsible for the financial information; (ii) the review, with the support of the Management of the Internal Audit Area, of the design and operation of the internal control system, to evaluate the effectiveness thereof; and (iii) regular meetings with the external auditors, internal auditors and senior management to review, analyse and comment on the financial information, the boundary of companies that it covers and the accounting criteria applied, as well as any significant weaknesses in internal control that have been identified.

It should be mentioned that the parties responsible for preparing the financial information of each country subholding company, each head of business company and each corporate area must engage in an annual process, coordinated by the Internal Control Division, of reviewing the design and operation of the internal control system within their area of responsibility in order to evaluate the effectiveness thereof.

There is thus an analysis of whether, based on the changing circumstances in which the group acts (changes in organisation, systems, processes, products, regulation, etc.), changes in the risks identified and prioritised and/or new risks identified should be included. There is also an analysis of whether the design of the existing controls to mitigate or manage the risks that may have changed is appropriate, as well as whether they have operated satisfactorily in accordance with their design.

The conclusions from this annual review process, with respect to both the deficiencies identified (which are classified as serious, medium or mild, based precisely on their potential impact on the financial information) and the action plans to fix them, are presented at an annual specialised meeting chaired by the Administration and Control director, and at which the Management of the Internal Audit Area is also present. Conclusions are made at this meeting regarding the effectiveness of the internal control system within each of the different areas of responsibility, and globally for the entire group.

Thereafter, the most significant conclusions regarding the review are submitted to the ARSC within the framework of the regular meetings it holds with the Administration and Control director.

Apart from what is described in the preceding paragraphs, the Internal Audit Area, in support of the ARSC, undertakes an independent review of the design and operation of the internal control system, identifying deficiencies and preparing recommendations for improvement. The Internal Audit Area reports hierarchically to the chairman of Iberdrola's Board of Directors, and functionally to the ARSC, and pursuant to the Basic Internal Audit Regulations has the main duties of assisting this committee in the exercise of its powers and objectively and independently supervising the effectiveness of the group's internal control system, which is made up of a set of risk management and control mechanisms and systems.

Based thereon, the Management of the Internal Audit Area engages in ongoing monitoring of the action plans agreed to with the various organisations to correct the deficiencies detected and to implement the suggestions for improvement agreed to with the organisations.

The period that the Management of the Internal Audit Area plans for in-depth review of the entire internal control system is five years.

Specifically, 18 cycles were reviewed during financial year 2019. These are cycles corresponding to the companies Iberdrola México, S.A. de C.V., Scottish Power Ltd., Iberdrola España, S.A. (Sociedad Unipersonal), Neoenergía, S.A. and Iberdrola Inmobiliaria, S.A.U., as well as corporate cycles.

In addition, on a half-yearly basis, coinciding with the half-yearly and yearly close, the Management of the Internal Audit Area performs a review of the operation of the internal controls that are considered to

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be most critical, to which there should be added the annual review of all the SOX Key Controls of Avangrid, Inc.

The combination of regular reviews, together with the half-yearly reviews of the most critical controls, allows the Management of the Internal Audit Area to perform an evaluation of the internal control system (both design and operation) and issue an opinion regarding the effectiveness of the internal controls established to ensure the reliability of the financial information, which it submits to the ARSC within the framework of their regular meetings.

F.5.2. If there is a procedure by which the account auditor (in accordance with the contents of the Normas Técnicas de Auditoría (NTA) - "Auditing Standards"), internal auditor and other experts may communicate with senior management and the audit committee or senior managers of the company regarding significant weaknesses in internal control identified during the review of the annual accounts or any others they have been assigned. Additionally, state whether an action plan is available for correcting or mitigating any weaknesses found.

In general terms, the procedure for discussion regarding significant internal control weaknesses that have been identified is based on regular meetings by the various agents.

Thus, the ARSC holds meetings, both at the half-year and yearly close, with the external auditors, with the internal auditors, and with the management responsible for preparing the financial information, in order to discuss any relevant aspect of the preparation process and of the resulting financial information.

Specifically, as established in its Regulations (scope of powers), Iberdrola's ARSC has, among other powers, that of obtaining information regarding any significant deficiency in internal control that the statutory auditor detects while carrying out its audit work. For these purposes, the statutory auditor appears before such Committee on an annual basis to present recommendations in connection with the internal control weaknesses identified during the review of the annual accounts. Any weaknesses noted by the statutory auditor are continuously monitored by the Committee with the support of the Management of the Internal Audit Area. Management responsible for preparing the consolidated accounts also holds meetings with the external auditors and with the internal auditors, at both the half-yearly and yearly close, in order to discuss any significant issues relating to the financial information.

F.6. Other relevant information.

Iberdrola has an Internal Control over Financial Reporting (ICFR) system or model that is intended to reasonably guarantee the reliability of the financial information. The development of the model, which began in 2006, was not the result of a legal requirement but rather the conviction, by both the Board of Directors and the Company's senior management, that within a context of growth and internationalisation as was already forecast for the group, an explicit and auditable internal control system would contribute to maintaining and improving its control environment and the quality of the financial information, while at the same time increasing the confidence of investors due to its effects on the transparency, reputation and good governance of Iberdrola and of the companies making up the group.

The ICFR system has two main sides: certification, and internal control itself.

Certification is a process by which those responsible for financial information in the different areas of the Company certify that: (i) the financial information they deliver to Iberdrola for purposes of consolidation does not contain any material errors or omissions and provides a fair view of the results and the financial condition of the Company within their area of responsibility, and (ii) they are responsible for establishing the ICFR system within their area of responsibility and have found, upon evaluation, that the system is

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effective. The text of these certifications is inspired by the form of certification established in section 302 of the U.S. Sarbanes-Oxley Act.

The culmination of the half-yearly process is a joint certification that the chairman & CEO and the Administration and Control director submit to the Board of Directors for purposes of approval of the Half-Yearly Financial Report or the formulation of the annual accounts.

The process is carried out by means of electronic signature in a software application which manages the areas of responsibility and time periods and which serves as a repository of all the documentation generated, allowing for periodic review by the supervision and control bodies of the group.

The other side of the model, that of internal control itself, is inspired by the leading framework described in the “Internal Control Integrated Framework” report of the “Committee of Sponsoring Organizations of the Treadway Commission (COSO)”, and is mainly focused on providing a reasonable level of security in achieving the goal of reliability of financial information.

The methodology used by Iberdrola for the development and continuous update of internal control has the following stages or steps: (i) analysis and selection of significant financial information; (ii) the grouping thereof within cycles or large processes in which it is generated; (iii) the identification, evaluation and prioritisation of the risks of error in financial information within the selected cycles; (iv) the design and operation of controls to mitigate or manage the selected risks; and (v) the monitoring and update of the foregoing steps to continuously adapt the model to the circumstances of the business activity.

One of the main characteristics of the design of the model is that it attempts to ensure the quality of the financial information during each month of the year, and is not only limited to the periods corresponding to the annual or half-yearly close.

This characteristic is strengthened with the use of a specific software application internally developed by the group, which allows for the monitoring of the status of the controls at all times.

Another important characteristic of the model is that it extends the culture of internal control to all of the organisations, both corporate and business, that significantly contribute to the generation of financial information, by personally assigning responsibility in the implementation and documentation of controls.

All significant documentation regarding Iberdrola’s ICFR system, including both the process of certification and the internal control itself, is stored in this software application.

The people responsible for implementing the controls input into the software application evidence showing the performance thereof, and evaluate the results obtained, classifying them as satisfactory or unsatisfactory. This allows for monitoring of the internal control situation in real-time, permitting quick action regarding any deficiencies detected.

Additionally, on an annual basis, the various heads of control at the country subholding and head of business companies, as well as the heads of the corporate areas, review the design and operation of the ICFR system, as a systematic process for the update thereof to the changing circumstances of the business activity.

The annual review is coordinated by the Internal Control Division, which is also tasked with administering the software application and with coordinating the development of the ICFR system within the various businesses and corporate areas of the group, as well as maintaining the homogeneity of the ICFR system throughout the group.

Furthermore, the Management of the Internal Audit Area, which is responsible for supervising internal control in support of the ARSC, undertakes an independent review of the design and operation of the ICFR system, identifying deficiencies and preparing recommendations for improvement. This review is performed applying a mixed model of selecting cycles based on risk and a minimum rotation of five years.

In addition, on a half-yearly basis, the Management of the Internal Audit Area undertakes an independent review of the effectiveness of the internal controls established to ensure the reliability of the financial information. It also reviews the process of certification of the financial information on a half-yearly basis. The conclusions from these reviews are submitted to the ARSC, which, if applicable, makes them its own and forwards them to the Board of Directors.

Based on materiality standards, the current scope of the ICFR system covers the entire Iberdrola group. More than 1,750 people from the group use the software application, both to document the evidence showing the implementation of more than 3,000 controls —which mitigate or manage more than 1,180

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risks of error in the financial information deemed priority— and to monitor, analyse, adjust and evaluate the ICFR system.

In addition, the approximately 110 department heads who participate in the process of certifying the correctness of the information for which they are responsible do so using an electronic signature directly within the software application.

All of the above allows for the final result of the certification process, which is supported by the situation of internal control itself, to be reviewed by Iberdrola's Board of Directors as one of the major guarantees of reliability in connection with the formulation of the annual and interim financial information of the group.

F.7. External auditor's report

Report on:

F.7.1. If the ICFR information submitted to the markets has been subject to review by the external auditor, in which case the entity shall include its report as an attachment. If not, reasons why should be given.

The information on the ICFR system sent to the markets has not been subject to review by the external auditor consistent with the fact that the other information contained in the Annual Corporate Governance Report is only subject to review by the external auditor in relation to the accounting information contained in said Report. Furthermore, it is believed that externally reviewing the information on the ICFR system sent to the markets would in a certain way be redundant, taking into account the review of internal control that the external auditor must perform in accordance with technical auditing standards within the context of the statutory audit of accounts.

G EXTENT OF COMPLIANCE WITH CORPORATE GOVERNANCE RECOMMENDATIONS

Specify the company's level of compliance with recommendations from the Good Governance Code of Listed Companies.
In the event that a recommendation is not followed or only partially followed, a detailed explanation should be included explaining the reasons in such a manner that shareholders, investors and the market in general have enough information to judge the company's actions. General explanations are not acceptable.

1. That the Articles of Association of listed companies do not limit the maximum number of votes that may be cast by one shareholder or contain other restrictions that hinder the takeover of control of the company through the acquisition of shares on the market.

Complies | Explanation | X

Article 29.2 of the By-Laws provides that "No shareholder may cast a number of votes greater than those corresponding to shares representing ten (10%) per cent of share capital, even if the number of shares held exceeds such percentage of the share capital. This limitation does not affect votes corresponding to shares with respect to which a shareholder is holding a proxy as a result of the provisions of article 23 above, provided, however, that with respect to the number of votes corresponding to the shares of each shareholder represented by proxy, the limitation set forth above shall apply".

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Section 3 of such article adds: "The limitation set forth in the preceding section shall also apply to the maximum number of votes that may be collectively or individually cast by two or more shareholders that are entities or companies belonging to the same group. Such limitation shall also apply to the number of votes that may be cast collectively or individually by an individual and the shareholder entity, entities, or companies controlled by such individual. A group shall be deemed to exist under the circumstances provided by law, and also when a person controls one or more entities or companies".

Iberdrola believes that the limitation on the maximum number of votes that may be cast by a single shareholder, or by several shareholders belonging to the same group or, if applicable, acting in concert, is a measure to protect shareholders at companies with dispersed share ownership, whose investment is thus guarded from any transaction that is contrary to the corporate interest. In this regard, most shareholders, especially including but not limited to small retail investors, who represent approximately one-fourth of Iberdrola's capital, have little room to manoeuvre and respond to a potential shareholder owning a non-controlling interest and not reaching the threshold requiring a takeover bid but seeking influence over the Company and whose own interest is not totally in line with the corporate interest.

It should also be noted that such voting limitation has been in effect since 16 June 1990, the date on which the General Shareholders' Meeting was held at which it was resolved, by unanimous vote of the attendees, to bring the By-Laws of the Company (then doing business as Iberduero, S.A.) into line with the consolidated text of the Companies Act approved by Royal Legislative Decree 1564/1989 of 22 December. This shows the level of corporate consensus that has existed on such voting limitation from the very beginning, which has been confirmed by the fact that such limitation has remained unchanged through various by-law amendments passed by the shareholders at General Shareholders' Meetings. In turn, it reflects the will of the shareholders to increase their bargaining power in the event of hostile offers or transactions.

In any event, article 50 of the current By-Laws establishes the instances of removal of such voting limitation in the event that the Company is the target of a takeover bid that receives the required shareholder approval, in which case the provisions of section 527 of the Companies Act prevail. Pursuant to the foregoing, it cannot be deemed that the limitation on the maximum number of votes that may be cast by a shareholder constitutes an obstacle to a takeover bid.

2. That when the parent company and a subsidiary are listed on the stock market, both should publicly and specifically define:

a) The respective areas of activity and possible business relationships between them, as well as those of the listed subsidiary with other group companies.

b) The mechanisms in place to resolve any conflicts of interest that may arise.

Complies | X Complies Partially | Explanation | Not Applicable |

3. That, during the course of the ordinary General Shareholders' Meeting, complementary to the distribution of a written Annual Corporate Governance Report, the chairman of the Board of Directors makes a detailed oral report to the shareholders regarding the most material aspects of corporate governance of the company, and in particular:

a) Changes that have occurred since the last General Shareholders' Meeting.

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b) Specific reasons why the company did not follow one or more of the recommendations of the Code of Corporate Governance and, if so, the alternative rules that were followed instead.

Complies | X Complies Partially | Explanation |

4. That the company has defined and promoted a policy of communication and contact with shareholders, institutional investors and proxy advisors that complies in all aspects with rules preventing market abuse and gives equal treatment to similarly situated shareholders.

And that the company has made such a policy public through its web page, including information related to the manner in which said policy has been implemented and the identity of contact persons or those responsible for implementing it.

Complies | X Complies Partially | Explanation |

5. That the Board of Directors should not propose to the General Shareholders' Meeting any proposal for delegation of powers allowing the issuance of shares or convertible securities without pre-emptive rights in an amount exceeding 20% of equity at the time of delegation.

And that whenever the Board of Directors approves any issuance of shares or convertible securities without pre-emptive rights the company immediately publishes reports on its web page regarding said exclusions as referenced in applicable company law.

Complies | **X** Complies Partially | Explanation |

6. That listed companies which draft reports listed below, whether under a legal obligation or voluntarily, publish them on their web page with sufficient time before the General Shareholders' Meeting, even when their publication is not mandatory:

a) Report regarding the auditor's independence.

b) Reports regarding the workings of the audit committee and the appointments and remuneration committee.

c) Report by the audit committee regarding related-party transactions.

d) Report on the corporate social responsibility policy.

Complies | X Complies Partially | Explanation |

7. That the company reports in real time, through its web page, the proceedings of the General Shareholders' Meetings.

Complies | **X** Explanation |

8. That the audit committee ensures that the Board of Directors presents financial statements in the audit report for the General Shareholders' Meetings which do not have qualifications or reservations and that, in the exceptional circumstances in which qualifications may appear, that the chairman of the audit committee and the auditors clearly explain to the shareholders the content and scope of said qualifications or reservations.

Complies | **X** Complies Partially | Explanation |

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9. **That the company permanently maintains on its web page the requirements and procedures for certification of share ownership, the right of attendance at the General Shareholders' Meetings, and the exercise of the right to vote or to issue a proxy.**

   And that such requirements and procedures promote attendance and the exercise of shareholder rights in a non-discriminatory fashion.

   Complies | **X** Complies Partially | Explanation |

10. **That when a verified shareholder has exercised his right to make additions to the agenda or to make new proposals to it with sufficient time in advance of the General Shareholders' Meeting, the company:**

    a) **Immediately distributes the additions and new proposals.**

    b) **Publishes the attendance card credential or proxy form or form for distance voting with the changes such that the new agenda items and alternative proposals may be voted upon under the same terms and conditions as those proposals made by the Board of Directors.**

    c) **Submits all of these items on the agenda or alternative proposals to a vote and applies the same voting rules to them as are applied to those drafted by the Board of Directors including, particularly, assumptions or default positions regarding votes for or against.**

    d) **That after the General Shareholders' Meeting, a breakdown of the results of said additions or alternative proposals is communicated.**

    Complies | **X** Complies Partially | Explanation | Not Applicable |

11. **That, in the event the company intends to pay for attendance at the General Shareholders' Meeting, it establishes in advance a general policy of long-term effect regarding such payments.**

    Complies | **X** Complies Partially | Explanation | Not Applicable |

12. **That the Board of Directors completes its duties with a unity of purpose and independence, treating all similarly situated shareholders equally and that it is guided by the best interests of the company, which is understood to mean the pursuit of a profitable and sustainable business in the long term, and the promotion of continuity and maximisation of the economic value of the business.**

    And that in pursuit of the company's interest, in addition to complying with applicable law and rules and in engaging in conduct based on good faith, ethics and a respect for commonly accepted best practices, it seeks to reconcile its own company interests, when appropriate, with the interests of its employees, suppliers, clients and other stakeholders, as well as the impact of its corporate activities on the communities in which it operates and the environment.

    Complies | **X** Complies Partially | Explanation |

13. **That the Board of Directors is of an adequate size to perform its duties effectively and collegially, and that its optimum size is between five and fifteen members.**

    Complies | **X** Explanation |

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14. That the Board of Directors approves a selection policy for directors that:

a) Is concrete and verifiable.

b) Ensures that proposals for appointment or re-election are based upon a prior analysis of the needs of the Board of Directors.

c) Favours diversity in knowledge, experience and gender.

That the resulting prior analysis of the needs of the Board of Directors is contained in the supporting report from the appointments committee published upon a call to the General Shareholders' Meeting submitted for ratification, appointment or re-election of each director.

And that the selection policy for directors promotes the objective that by the year 2020 the number of female directors accounts for at least 30% of the total number of members of the Board of Directors.

The appointments committee will annually verify compliance with the selection policy of directors and explain its findings in the Annual Corporate Governance Report.

Complies | **X** Complies Partially | Explanation |

15. That proprietary and independent directors constitute a substantial majority of the Board of Directors and that the number of executive directors is kept at a minimum, taking into account the complexity of the corporate group and the percentage of equity participation of executive directors.

Complies | **X** Complies Partially | Explanation |

16. That the percentage of proprietary directors divided by the number of non- executive directors is no greater than the proportion of the equity interest in the company represented by said proprietary directors and the remaining share capital.

This criterion may be relaxed:

a) In companies with a high market capitalisation in which interests that are legally considered significant are minimal.

b) In companies where a diversity of shareholders is represented on the Board of Directors without ties among them.

Complies | X Explanation |

17. That the number of independent directors represents at least half of the total number of directors.

Nonetheless, when the company does not have a high level of market capitalisation or in the event that it is a high cap company with one shareholder or a group acting in a coordinated fashion who together control more than 30% of the company's equity, the number of independent directors represents at least one third of the total number of directors.

Complies | **X** Explanation |

18. That companies publish and update the following information regarding directors on the company website:

a) Professional profile and biography.

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b) Any other Boards to which the director belongs, regardless of whether the companies are listed, as well as any other remunerated activities engaged in, regardless of type.

c) Category of directorship, indicating, in the case of individuals who represent significant shareholders, the shareholder that they represent or to which they are connected.

d) The date of their first appointment as a director of the company's Board of Directors, and any subsequent re-election.

e) The shares and options they own.

Complies | **X** Complies Partially | Explanation |

19. That the Annual Corporate Governance Report, after verification by the appointments committee, explains the reasons for the appointment of proprietary directors at the proposal of the shareholders whose equity interest is less than 3%. It should also explain, where applicable, why formal requests from shareholders for membership on the Board meeting were not honoured, when their equity interest is equal to or exceeds that of other shareholders whose proposal for proprietary directors was honoured.

Complies | Complies Partially | Explanation | Not Applicable | **X**

20. That proprietary directors representing significant shareholders must resign from the Board if the shareholder they represent disposes of its entire equity interest. They should also resign, in a proportional fashion, in the event that said shareholder reduces its percentage interest to a level that requires a decrease in the number of proprietary directors representing this shareholder.

Complies | Complies Partially | Explanation | Not Applicable | **X**

21. That the Board of Directors may not propose the dismissal of any independent director before the completion of the director's term provided for in the Articles of Association unless the Board of Directors finds just cause and a prior report has been prepared by the appointments committee. Specifically, just cause is considered to exist if the director takes on new duties or commits to new obligations that would interfere with his or her ability to dedicate the time necessary for attention to the duties attendant to his post as a director, fails to complete the tasks inherent to his or her post, or enters into any of the circumstances which would cause the loss of independent status in accordance with applicable law.

The dismissal of independent directors may also be proposed as a result of a public takeover bid, merger or similar transaction entailing a change in the shareholder structure of the company, provided that such changes in the structure of the Board are the result of the proportionate representation criteria provided for in Recommendation 16.

Complies | **X** Explanation |

22. That companies establish rules requiring that directors inform the Board of Directors and, where appropriate, resign from their posts, when circumstances arise which may damage the company's standing and reputation. Specifically, directors must be required to report any criminal acts with which they are charged, as well as the consequent legal proceedings.

And that should a director be indicted or tried for any of the offences set out in company law legislation, the Board of Directors must investigate the case as soon as possible

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and, based on the particular situation, decide whether the director should continue in his or her post. And that the Board of Directors must provide a reasoned written account of all these events in its Annual Corporate Governance Report.

Complies | **X** Complies Partially | Explanation |

23. That all directors clearly express their opposition when they consider any proposal submitted to the Board of Directors to be against the company's interests. This particularly applies to independent directors and directors who are unaffected by a potential conflict of interest if the decision could be detrimental to any shareholders not represented on the Board of Directors.

Furthermore, when the Board of Directors makes significant or repeated decisions about which the director has serious reservations, the director should draw the appropriate conclusions and, in the event the director decides to resign, explain the reasons for this decision in the letter referred to in the next recommendation.

This recommendation also applies in the case of the secretary of the Board of Directors, despite not being a director.

Complies | Complies Partially | Explanation | Not Applicable | **X**

24. That whenever, due to resignation or any other reason, a director leaves before the completion of his or her term, the director should explain the reasons for this decision in a letter addressed to all the directors of the Board of Directors. Irrespective of whether the resignation has been reported as a relevant fact, it must be included in the Annual Corporate Governance Report.

Complies X Complies Partially | Explanation | Not Applicable |

25. That the appointments committee ensures that non-executive directors have sufficient time in order to properly perform their duties.

And that the Board rules establish the maximum number of company Boards on which directors may sit.

Complies | **X** Complies Partially | Explanation |

26. That the Board of Directors meets frequently enough so that it may effectively perform its duties, at least eight times per year, following a schedule of dates and agenda established at the beginning of the year and allowing each director individually to propose items that do not originally appear on the agenda.

Complies | **X** Complies Partially | Explanation |

27. That director absences only occur when absolutely necessary and are quantified in the Annual Corporate Governance Report. And when absences occur, that the director appoints a proxy with instructions.

Complies | **X** Complies Partially | Explanation |

28. That when directors or the secretary express concern regarding a proposal or, in the case of directors, regarding the direction in which the company is headed and said concerns are not resolved by the Board of Directors, such concerns should be included in the minutes, upon a request from the protesting party.

Complies | Complies Partially | Explanation | Not Applicable | **X**

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29. That the company establishes adequate means for directors to obtain appropriate advice in order to properly fulfil their duties including, should circumstances warrant, external advice at the company's expense.

Complies | **X** Complies Partially | Explanation |

30. That, without regard to the knowledge necessary for directors to complete their duties, companies make refresher courses available to them when circumstances require.

Complies | **X** Explanation | Not Applicable |

31. That the agenda for meetings clearly states those matters about which the Board of Directors is to make a decision or adopt a resolution so that the directors may study or gather all relevant information ahead of time.

When, under exceptional circumstances, the chairman wishes to bring urgent matters for decision or resolution before the Board of Directors which do not appear on the agenda, prior express agreement of a majority of the directors shall be necessary, and said consent shall by duly recorded in the minutes.

Complies | **X** Complies Partially | Explanation |

32. That directors shall be periodically informed of changes in equity ownership and of the opinions of significant shareholders, investors and rating agencies of the company and its group.

Complies | **X** Complies Partially | Explanation |

33. That the chairman, as the person responsible for the efficient workings of the Board of Directors, in addition to carrying out his duties required by law and the Articles of Association, should prepare and submit to the Board of Directors a schedule of dates and matters to be considered; organise and coordinate the periodic evaluation of the Board as well as, if applicable, the chief executive of the company, should be responsible for leading the Board and the effectiveness of its work; ensuring that sufficient time is devoted to considering strategic issues, and approve and supervise refresher courses for each director when circumstances so dictate.

Complies | **X** Complies Partially | Explanation |

34. That when there is a coordinating director, the Articles of Association or the Board rules should confer upon him the following competencies in addition to those conferred by law: chair of the Board of Directors in the absence of the chairman and deputy chairmen, should there be any; reflect the concerns of non- executive directors; liaise with investors and shareholders in order to understand their points of view and respond to their concerns, in particular as those concerns relate to corporate governance of the company; and coordinate a succession plan for the chairman.

Complies | **X** Complies Partially | Explanation | Not Applicable |

35. That the secretary of the Board of Directors should pay special attention to ensure that the activities and decisions of the Board of Directors take into account the recommendations regarding good governance contained in this Code of Good Governance and which are applicable to the company.

Complies | **X** Explanation |

36. That the Board of Directors meets in plenary session once a year and adopt, where appropriate, an action plan to correct any deficiencies detected in the following:

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a) The quality and efficiency of the Board of Directors' work.

b) The workings and composition of its committees.

c) Diversity of membership and competence of the Board of Directors.

d) Performance of the chairman of the Board of Directors and the chief executive officer of the company.

e) Performance and input of each director, paying special attention to those in charge of the various Board committees.

In order to perform its evaluation of the various committees, the Board of Directors will take a report from the committees themselves as a starting point and for the evaluation of the Board, a report from the appointments committee.

Every three years, the Board of Directors will rely upon the assistance of an external advisor for its evaluation, whose independence shall be verified by the appointments committee.

Business relationships between the external adviser or any member of the adviser's group and the company or any company within its group shall be specified in the Annual Corporate Governance Report.

The process and the areas evaluated shall be described in the Annual Corporate Governance Report.

Complies | **X** Complies Partially | Explanation |

37. That if there is an executive committee, the proportion of each different director category must be similar to that of the Board itself, and its secretary must be the secretary of the Board.

Complies | Complies Partially | **X** Explanation | Not Applicable |

The Executive Committee is made up of the chairman & CEO, the vice chair of the Board of Directors, who is classified as other external director, and two independent directors, one of whom is a woman. Iberdrola believes that the various types of directors are duly represented and that the composition of said Committee is sufficiently diverse.

38. That the Board of Directors must always be aware of the matters discussed and decisions taken by the executive committee and that all members of the Board of Directors receive a copy of the minutes of meetings of the executive committee.

Complies | **X** Complies Partially | Explanation | Not Applicable |

39. That the members of the audit committee, in particular its chairman, are appointed in consideration of their knowledge and experience in accountancy, audit and risk management issues, and that the majority of its members be independent directors.

Complies | **X** Complies Partially | Explanation |

40. That under the supervision of the audit committee, there must be a unit in charge of the internal audit function, which ensures that information and internal control systems operate correctly, and which reports to the non-executive chairman of the Board or of the audit committee.

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Complies | X Complies Partially | Explanation |

41. That the person in charge of the group performing the internal audit function should present an annual work plan to the audit committee, reporting directly on any issues that may arise during the implementation of this plan, and present an activity report at the end of each year.

Complies | X Complies Partially | Explanation | Not Applicable |

42. That in addition to the provisions of applicable law, the audit committee should be responsible for the following:

1. With regard to information systems and internal control:

a) Supervise the preparation and integrity of financial information relative to the company and, if applicable, the group, monitoring compliance with governing rules and the appropriate application of consolidation and accounting criteria.

b) Ensure the independence and effectiveness of the group charged with the internal audit function; propose the selection, appointment, re- election and dismissal of the head of internal audit; draft a budget for this department; approve its goals and work plans, making sure that its activity is focused primarily on material risks to the company; receive periodic information on its activities; and verify that senior management takes into account the conclusions and recommendations of its reports.

c) Establish and supervise a mechanism that allows employees to report confidentially and, if appropriate, anonymously, any irregularities with important consequences, especially those of a financial or accounting nature, that they observe in the company.

2. With regard to the external auditor:

a) In the event that the external auditor resigns, examine the circumstances which caused said resignation.

b) Ensure that the remuneration paid to the external auditor for its work does not compromise the quality of the work or the auditor's independence.

c) Insist that the company file a relevant fact with the CNMV when there is a change of auditor, along with a statement on any differences that arose with the outgoing auditor and, if applicable, the contents thereof.

d) Ensure that the external auditor holds an annual meeting with the Board of Directors in plenary session in order to make a report regarding the tasks accomplished and regarding the development of its accounting and risks faced by the company.

e) Ensure that the company and the external auditor comply with applicable rules regarding the rendering of services other than auditing, proportional limits on the auditor's billing, and all other rules regarding the auditor's independence.

Complies | X Complies Partially | Explanation |

43. That the audit committee may require the presence of any employee or manager of the company, even without the presence of any other member of management.

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Complies | X Complies Partially | Explanation |

44. That the audit committee be kept abreast of any corporate and structural changes planned by the company in order to perform an analysis and draft a report beforehand to the Board of Directors regarding economic conditions and accounting implications and, in particular, any exchange ratio involved.

Complies | **X** Complies Partially | Explanation | Not Applicable |

45. That the risk management and control policy identify, at a minimum:

a) The various types of financial and non-financial risks (among those operational, technological, legal, social, environmental, political and reputational) which the company faces, including financial or economic risks, contingent liabilities and other off-balance sheet risks.

b) Fixing of the level of risk the company considers acceptable.

c) Means identified in order to minimise identified risks in the event they transpire.

d) Internal control and information systems to be used in order to control and manage identified risks, including contingent liabilities and other off balance sheet risks.

Complies | **X** Complies Partially | Explanation |

46. That under the direct supervision of the audit committee or, if applicable, of a specialised committee of the Board of Directors, an internal control and management function should exist delegated to an internal unit or department of the company which is expressly charged with the following responsibilities:

a) Ensure the proper functioning of risk management and control systems and, in particular, that they adequately identify, manage and quantify all material risks that may affect the company.

b) Actively participate in the creation of the risk strategy and in important decisions regarding risk management.

c) Ensure that the risk management and control systems adequately mitigate risks as defined by policy issued by the Board of Directors.

Complies | **X** Complies Partially | Explanation |

47. That members of the appointment and remuneration committee – or of the appointments committee and the remuneration committee if they are separate – are chosen taking into account the knowledge, ability and experience necessary to perform the duties they are called upon to carry out and that the majority of said members are independent directors.

Complies | **X** Complies Partially | Explanation |

48. That high market capitalisation companies have formed separate appointments and remuneration committees.

Complies | **X** Explanation | Not Applicable |

49. That the appointments committee consult with the chairman of the Board of Directors and the chief executive of the company, especially in relation to matters concerning executive directors.

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And that any director may ask the appointments committee to consider potential candidates he or she considers appropriate to fill a vacancy on the Board of Directors.

Complies | **X** Complies Partially | Explanation |

50. That the remuneration committee exercises its functions independently and that, in addition to the functions assigned to it by law, it should be responsible for the following:

a) Propose basic conditions of employment for senior management.

b) Verify compliance with company remuneration policy.

c) Periodically review the remuneration policy applied to directors and senior managers, including remuneration involving the delivery of shares, and guarantee that individual remuneration be proportional to that received by other directors and senior managers.

d) Oversee that potential conflicts of interest do not undermine the independence of external advice rendered to the Board.

e) Verify information regarding remuneration paid to directors and senior managers contained in the various corporate documents, including the Annual Report on Director Remuneration.

Complies | **X** Complies Partially | Explanation |

51. That the remuneration committee consults with the chairman and the chief executive of the company, especially in matters relating to executive directors and senior management.

Complies | **X** Complies Partially | Explanation |

52. That the rules regarding composition and workings of supervision and control committees appear in the rules governing the Board of Directors and that they are consistent with those that apply to mandatory committees in accordance with the recommendations above, including:

a) That they are comprised exclusively of non-executive directors, with a majority of them independent.

b) That their chairmen be independent directors.

c) That the Board of Directors select members of these committees taking into account their knowledge, skills and experience and the duties of each committee; discuss their proposals and reports; and detail their activities and accomplishments during the first plenary session of the Board of Directors held after the committee's last meeting.

d) That the committees be allowed to avail themselves of outside advice when they consider it necessary to perform their duties.

e) That their meetings be recorded and the minutes be made available to all directors.

Complies | **X** Complies Partially | Explanation | Not Applicable |

53. That verification of compliance with corporate governance rules, internal codes of conduct and social corporate responsibility policy be assigned to one or split among more than one committee of the Board of Directors, which may be the audit committee, the appointments committee, the corporate social responsibility committee in the event that one exists, or a special committee created by the Board of Directors pursuant to

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its powers of self-organisation, to which at least the following responsibilities shall be specifically assigned:

a) Verification of compliance with internal codes of conduct and the company's corporate governance rules.

b) Supervision of the communication strategy and relations with shareholders and investors, including small- and medium-sized shareholders.

c) The periodic evaluation of the suitability of the company's corporate governance system, with the goal that the company promotes company interests and take into account, where appropriate, the legitimate interests of other stakeholders.

d) Review of the company's corporate social responsibility policy, ensuring that itis orientated towards value creation.

e) Follow-up of corporate social responsibility strategy and practice, and evaluation of degree of compliance.

f) Supervision and evaluation of the way relations with various stakeholders are handled.

g) Evaluation of everything related to non-financial risks to the company, including operational, technological, legal, social, environmental, political and reputational risks.

h) Coordination of the process of reporting on diversity and reporting non-financial information in accordance with applicable rules and international benchmarks.

Complies | **X** Complies Partially | Explanation |

54. That the corporate social responsibility policy include principles or commitments which the company voluntarily assumes regarding specific stakeholders and identifies, at a minimum:

a) The objectives of the corporate social responsibility policy and the development of tools to support it.

b) Corporate strategy related to sustainability, the natural environment and social issues.

c) Concrete practices in matters related to: shareholders, employees, clients, suppliers, social issues, the natural environment, diversity, fiscal responsibility, respect for human rights, and the prevention of unlawful conduct.

d) Means or systems for monitoring the results of the application of specific practices described in the immediately preceding paragraph, associated risks, and their management.

e) Means of supervising non-financial risk, ethics, and business conduct.

f) Communication channels, participation and dialogue with stakeholders.

g) Responsible communication practices that impede the manipulation of data and protect integrity and honour.

Complies | **X** Complies Partially | Explanation |

55. That the company reports, in a separate document or within the management report, on matters related to corporate social responsibility, following internationally recognised methodologies.

PUBLIC

Complies | X Complies Partially | Explanation |

56. That director remuneration be sufficient in order to attract and retain directors who meet the desired professional profile and to adequately compensate them for the dedication, qualifications and responsibility demanded of their posts, while not being so excessive as to compromise the independent judgment of non-executive directors.

Complies | X Explanation |

57. That only executive directors receive remuneration linked to corporate results or personal performance, as well as remuneration in the form of shares, options or rights to shares or instruments whose value is indexed to share value, or long-term savings plans such as pension plans, retirement accounts or any other retirement plan.

Shares may be given to non-executive directors under the condition that they maintain ownership of the shares until they leave their posts as directors. The foregoing shall not apply to shares that the director may be obliged to sell in order to meet the costs related to their acquisition.

Complies | **X** Complies Partially | Explanation |

58. That as regards variable remuneration, the policies incorporate limits and administrative safeguards in order to ensure that said remuneration is in line with the work performance of the beneficiaries and is not based solely upon general developments in the markets or in the sector in which the company operates, or other similar circumstances.

And, in particular, that variable remuneration components:

a) Are linked to pre-determined and measurable performance criteria and that such criteria take into account the risk undertaken to achieve a given result.

b) Promote sustainability of the company and include non-financial criteria that are geared towards creating long term value, such as compliance with rules and internal operating procedures and risk management and control policies.

c) Are based upon balancing short-, medium- and long-term objectives, permitting the reward of continuous achievement over a period of time long enough to judge creation of sustainable value such that the benchmarks used for evaluation are not comprised of one-off, seldom occurring or extraordinary events.

Complies | X Complies Partially | Explanation | Not Applicable |

59. That a material portion of variable remuneration components be deferred for a minimum period of time sufficient to verify that previously established performance criteria have been met.

Complies | **X** Complies Partially | Explanation | Not Applicable |

60. That remuneration related to company results takes into account any reservations which may appear in the external auditor's report which would diminish said results.

Complies | **X** Complies Partially | Explanation | Not Applicable |

61. That a material portion of variable remuneration for executive directors depends upon the delivery of shares or instruments indexed to share value.

PUBLIC

Complies | **X** Complies Partially | Explanation | Not Applicable |

62. That once shares or options or rights to shares arising from remuneration schemes have been delivered, directors are prohibited from transferring ownership of a number of shares equivalent to two times their annual fixed remuneration, and the director may not exercise options or rights until a term of at least three years has elapsed since they received said shares.

The foregoing shall not apply to shares that the director may be obliged to sell in order to meet the costs related to their acquisition.

Complies | **X** Complies Partially | Explanation | Not Applicable |

63. That contractual arrangements include a clause which permits the company to seek reimbursement of variable remuneration components in the event that payment does not coincide with performance criteria or when delivery was made based upon data later deemed to be inaccurate.

Complies | **X** Complies Partially | Explanation | Not Applicable |

64. That payments made for contract termination shall not exceed an amount equivalent to two years of total annual remuneration and that it shall not be paid until the company has verified that the director has fulfilled all previously established criteria for payment.

Complies | Complies Partially | **X** Explanation | Not Applicable |

Contracts with executive directors and senior officers signed as from 2011 provide severance pay for contractual termination equal to a maximum of two times annual salary in the event of termination of their relationship with the Company, provided that termination of the relationship is not the result of a breach attributable thereto or solely due to a voluntary decision thereof. This is the case of the Business CEO.

The Company included guarantee clauses of up to five years in contracts with its key officers in the year 2000. Subsequently, in 2001, when the current chairman & CEO joined Iberdrola, he received the treatment in effect for such officers, in order to achieve an effective and sufficient level of loyalty. As chairman & CEO, he is currently entitled to three times his annual salary.

The Board of Directors has analysed this situation, the treatment of which is necessarily collective in nature. Any reduction in the salary multiples would carry high costs for the Company, for which reason the Board of Directors believes that it is most appropriate not to change the status quo. Any proposed reduction in the salary multiples would have a higher cost for the Company, as the amount of the contingency will gradually decrease due to the passage of time, resulting in payments far smaller than any possible reduction in the agreed severance payment, taking into account the average age of the affected group and the low likelihood of the guarantees being enforced. In this regard, it should be pointed out that at year-end 2014, there were 62 officers with a right to severance pay greater than two years in case of termination. At year-end 2019, the number has decreased again to 26, without the enforcement of any guarantee clause.

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H FURTHER INFORMATION OF INTEREST

1. If there is any aspect regarding corporate governance in the company or other companies in the group that has not been included in other sections of this report, but which is necessary in order to obtain a more complete and comprehensible picture of the structure and governance practices in the company or group, describe it briefly below.

2. This section may also be used to provide any other information, explanation or clarification relating to previous sections of the report, so long as it is relevant and not redundant.

   Specifically, state whether the company is subject to any corporate governance legislation other than that prevailing in Spain and, if so, include any information required under this legislation that differs from the data requested in this report.

3. The company may also state whether it voluntarily complies with other ethical or best practice codes, whether international, sector-based or other. In such a case, name the code in question and the date the company began following it. It should be specifically mentioned that the company adheres to the Code of Good Tax Practices of 20 July, 2010.

On 20 July 2010 the Company acceded to the Code of Good Tax Practices, a document approved by the full Forum of Large Businesses (*Foro de Grandes Empresas*) established by the National Tax Administration Agency (*Agencia Estatal de Administración Tributaria*) and certain large companies and held on that date.

Pursuant to the provisions of section 2 of the annex of accession to the Code of Good Tax Practices and section 4.a) of the Corporate Tax Policy, the Company reports that it has complied with the text of said Code as from the time of approval thereof.

In particular, it is reported that during financial year 2019, the Company's tax director appeared before Iberdrola's Audit and Risk Supervision Committee on 18 February 2019 and 22 July 2019 to report on compliance with the Corporate Tax Policy, which includes the good tax practices contained in said Code, all of which has been reported to the Board of Directors.

The annex contains a description of the attendance of each and every one of the directors at the meetings of the Board of Directors and its committees during financial year 2019. Proxies granted with specific voting instructions are considered to be attendances.

This Annual Corporate Governance Report was approved by the Board of Directors of the company at the meeting held on 24/02/2020.

State whether any directors voted against or abstained from voting on this report.

Yes □ No X

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Annex to ACGR 2019:

SECTION C.1.26

Below is the data on attendance of each and every one of the directors at the meetings of the Board of Directors and its committees during financial year 2019. Proxies granted with specific voting instructions are considered to be attendances.

Directors	Board	Committees				
		EC	ARSC	AC	RC	SDC
MR JOSÉ IGNACIO SÁNCHEZ GALÁN	8/8	15/15	-	-	-	-
MR ÍÑIGO VÍCTOR DE ORIOL IBARRA	8/8	-	-	9/9	-	9/9
MS INÉS MACHO STADLER	8/8	15/15	-	-	7/7	-
MS SAMANTHA BARBER	8/8	15/15	-	-	-	9/9
MS MARÍA HELENA ANTOLÍN RAYBAUD	8/8	-	-	9/9	-	-
MR ÁNGEL JESÚS ACEBES PANIAGUA	2/2	3/3	-	2/2	-	-
MS GEORGINA KESSEL MARTÍNEZ	8/8	-	12/12	-	-	-
MS DENISE MARY HOLT	8/8	-	12/12	-	-	-
MR JOSÉ W. FERNÁNDEZ	8/8	-	12/12	-	-	-
MR MANUEL MOREU MUNAIZ	8/8	15/15	-	-	7/7	-
MR XABIER SAGREDO ORMAZA	8/8	-	12/12	-	-	-
MR JUAN MANUEL GONZÁLEZ SERNA	8/8	-	-	-	7/7	-
MR FRANCISCO MARTÍNEZ CÓRCOLES	8/8	-	-	-	-	-
MR ANTHONY L. GARDNER	8/8	-	-	6/6	-	2/3
MS SARA DE LA RICA GOIRICELAYA	5/5	-	-	1/1	-	6/6

Notes:
The denominator indicates the number of meetings held during the period of the year in which the director served as such or as a member of the respective Committee.
EC: Executive Committee.
ARSC: Audit and Risk Supervision Committee.

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AC: Appointments Committee.
RC: Remuneration Committee.
SDC: Sustainable Development Committee (previously the Corporate Social Responsibility Committee).

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SECTION E.3.

ACTIONS OF IBERDROLA, S.A. AND IBERDROLA RENOVABLES ENERGIA, S.A.U. RELATING TO THE HIRING OF CLUB EXCLUSIVO DE NEGOCIOS Y TRANSACCIONES, S.L. (CENYT)

Since the day following the appearance of the first news reports in certain media regarding the hiring of "Club Exclusivo de Negocios y Transacciones, S.L." ("**CENYT**"), Iberdrola, S.A. (Iberdrola) has conducted various investigations described below in accordance with the provisions of its Corporate Governance System and its Compliance System.

Both systems define and describe the powers assigned to the various companies of the group and their corresponding governance bodies, and particularly the Audit and Risk Supervision Committee, the Sustainable Development Committee, the Executive Committee and the Board of Directors of Iberdrola, and the Board of Directors of Iberdrola Renovables, in relation to the facts referred to in said news reports.

The first news about the hiring of CENYT by Iberdrola appeared on 11 June 2018. Four days later, on 15 June 2018, the Compliance Unit (which, pursuant to the provisions of the *Regulations of the Compliance Unit*, is the body authorised since its creation in 2012 to investigate facts like those referred to above) prepared a first report identifying 14 invoices issued by CENYT to Iberdrola between 2004 and 2009 (in the total amount of 1,017,824.14 euros) and another 3 invoices issued between 2012 and 2017 to Iberdrola Renovables, S.A.U. (Iberdrola Renovables) (in the total amount of 114,200.00 euros).

In relation to the same news reports, the Audit and Risk Supervision Committee requested a report from the Internal Audit Area regarding invoices issued to the Iberdrola group on 19 November 2018 by companies connected to the former police commissioner Villarejo. Said report concluded (i) that the only company linked to Mr Villarejo Pérez (through his spouse and son) that invoiced the Iberdrola group was CENYT; and (ii) that the invoices paid corresponded to services purchased by the Corporate Security Division, which, according to statements thereby, were actually provided by CENYT within the context of Iberdrola's international expansion process, in order to ensure the integrity of its officers in their travels to at-risk countries, ensure the confidentiality of communications and of significant meetings of the management team, and strengthen the security of vital sites for the group's power generation activities.

On 25 September 2019 Iberdrola's Internal Audit Area prepared a second report on the internal control of third parties, which was intended to describe the main controls implemented in recent years in relation with the process of hiring third party creditors and analyse how the internal controls worked in the hiring of CENYT. The Internal Audit Area concluded that the process followed conformed to the internal control procedures in effect at that time.

Beginning on 8 October 2019, additional news referring to alleged specific assignments by Iberdrola to CENYT were published in the media, on this occasion describing allegedly illegal content or purposes.

On that same 8 October, the Compliance Unit, under the supervision of the Sustainable Development Committee and in coordination with Iberdrola Renovable's Compliance Division, commenced an internal investigation to clarify this additional news.

The content of the 24 meetings of Iberdrola's governance bodies between the months of October 2019 and February 2020 reflects the impetus given to all of the investigations performed, the supervision of the performance thereof without any limitation in scope, and the guarantee that all internal areas responsible for performing them had the required human and material resources at all times and acted free of any type of internal or external interference.

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The internal investigations performed at both companies covered all available documentary evidence, in whatever media they may have been stored. However, it should be noted that in certain cases, whether due to the nature of the services provided, the time since they were provided (which well exceeded the six-year period legally provided for maintaining business documentations) or the lack of cooperation of certain former employees, complete documentation was not available.

The Compliance Unit also directly hired the services of "Pricewaterhousecoopers Asesores de Negocio, S.L." ("PwC") to perform an independent investigation, with neither supervision nor control of internal bodies or outside lawyers, and which made a commitment to make its findings immediately available to the judicial authorities, whatever those findings may be. PwC dedicated more than 3,000 hours of work to this investigation, processing 4.67 TB of information (4.4 million files) and reviewing more than 300,000 files and more than 3,000 invoices.

As arises from the internal investigations conducted by the respective Internal Audit Areas and the Compliance divisions:

(i) After the investigations and based on the results of PwC's collaboration on the terms and with the intensity described above, no payments to companies directly or indirectly linked to Mr Villarejo have been identified other than those corresponding to the 17 invoices issued by CENYT to the group: 14 to Iberdrola and 3 to Iberdrola Renovables.

(ii) All of the payments made to CENYT correspond to invoices received for which the information has been entered into the Iberdrola group's internal records, as the Management System (SAP) does not allow for the making of payments that do not correspond to the entry of the respective invoice.

(iii) Specifically, the payments to CENYT were made in accordance with the internal procedures at all times in effect within the group, which require that the service be requested and the corresponding invoice be approved by a person duly authorised to do so by reason of the subject matter, and approved by a controller other than the requesting party.

(iv) No evidence or indications have been detected that would warrant a suspicion that the services set forth in the invoices reviewed were not provided.

(v) In particular, based on the information available to Iberdrola and Iberdrola Renovables, no illegal conduct or conduct contrary to the rules making up the Corporate Governance System has been identified as a result of the internal investigations being conducted.

(vi) All relevant information available and the full findings from the forensic work performed by PwC have been made available to Central Investigation Court number 6.

As of the date hereof, based on both the internal information and the external events of which the Company has become aware, the facts cannot be considered legally relevant for the Company, such that the impact thereof, if any, would be limited to the reputational area.

Along these lines, Iberdrola's Sustainable Development Committee and Board of Directors have been monitoring changes in corporate reputation and no impairment in the general reputation of the group or negative impact in relation to its professionals, customers, shareholders or suppliers has been detected. The aforementioned news reports have also not had a negative effect on the group's financial performance.

To ensure maximum dissemination in accordance with the Company's commitment to transparency, the information set out in the preceding paragraphs in connection with the hiring of CENYT reproduces the text of the memorandum of the Board of Directors regarding this issue published on the corporate website on occasion of the call to the General Shareholders' Meeting.

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VINEYARD WIND

ATTACHMENT TO SECTION 5

Attachment 5.6-23: Iberdrola Annual Report 2020

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Annual financial information

Iberdrola, S.A.

2020

IBERDROLA

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AUDITOR’S REPORT

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KPMG Auditores, S.L.
Torre Iberdrola
Plaza Euskadi, 5
Planta 17
48009 Bilbao

(Translation from the original in Spanish. In the event of discrepancy, the Spanish-language version prevails.)

Independent Auditor's Report on the Annual Accounts

To the Shareholders of *Iberdrola, S.A.*

REPORT ON THE ANNUAL ACCOUNTS

Opinion

We have audited the annual accounts of Iberdrola, S.A. (the "Company"), which comprise the balance sheet at 31 December 2020, and the income statement, statement of changes in equity and statement of cash flows for the year then ended, and notes.

In our opinion, the accompanying annual accounts give a true and fair view, in all material respects, of the equity and financial position of the Company at 31 December 2020, and of its financial performance and its cash flows for the year then ended in accordance with the applicable financial reporting framework (specified in note 2 to the accompanying annual accounts) and, in particular, with the accounting principles and criteria set forth therein.

Basis for Opinion

We conducted our audit in accordance with prevailing legislation regulating the audit of accounts in Spain. Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Annual Accounts* section of our report.

We are independent of the Company in accordance with the ethical requirements, including those regarding independence, that are relevant to our audit of the annual accounts pursuant to the legislation regulating the audit of accounts in Spain. We have not provided any non-audit services, nor have any situations or circumstances arisen which, under the aforementioned regulations, have affected the required independence such that this has been compromised.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key Audit Matters

Key audit matters are those matters that, in our professional judgement, were of most significance in the audit of the annual accounts of the current period. These matters were addressed in the context of our audit of the annual accounts as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

KPMG Auditores, S.L., a limited liability Spanish company and a member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative ("KPMG International"), a Swiss entity.
Paseo de la Castellana, 259C – Torre de Cristal – 28046 Madrid

On the Spanish Official Register of Auditors ("ROAC") with No. S0702, and the Spanish Institute of Registered Auditors' list of companies with No. 10.
Reg. Mer Madrid, T. 11.961, F. 90, Sec. 8, H. M -188.007, Inscrip. 9
N.I.F. B-78510153

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Recoverability of non-current investments in Group companies and associates **See note 10 to the annual accounts**	
Key audit matter	How the matter was addressed in our audit
The recoverable amount of investments in Group companies and associates is determined, for those companies in which there is objective evidence of impairment, by applying valuation techniques which often require the exercising of judgement by the Directors and the use of assumptions and estimates. Due to the uncertainty associated with the establishment of these estimates, it has been considered a relevant aspect of the audit.	Our audit procedures included the following: ▪ Evaluating the design and implementation of the key controls related to the process of calculating the recoverable amount; ▪ Assessing the existence of indications of impairment, as well as the methodology, assumptions and data used to determine the recoverable amount with the involvement of our specialists. ▪ Assessing whether the disclosures in the annual accounts meet the requirements of the financial reporting framework applicable to the Company.

Other Information: Director's' Report

Other information solely comprises the 2020 directors' report, the preparation of which is the responsibility of the Company's Directors and which does not form an integral part of the annual accounts.

Our audit opinion on the annual accounts does not encompass the directors' report. Our responsibility regarding the information contained in the directors' report is defined in the legislation regulating the audit of accounts, as follows:

a) Determine, solely, whether the non-financial information statement and certain information included in the Annual Corporate Governance Report, as specified in the Spanish Audit Law, has been provided in the manner stipulated in the applicable legislation, and if not, to report on this matter.

b) Assess and report on the consistency of the rest of the information included in the directors' report with the annual accounts, based on knowledge of the entity obtained during the audit of the aforementioned annual accounts. Also, assess and report on whether the content and presentation of this part of the directors' report are in accordance with applicable legislation. If, based on the work we have performed, we conclude that there are material misstatements, we are required to report them.

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(Translation from the original in Spanish. In the event of discrepancy, the Spanish-language version prevails.)

Based on the work carried out, as described above, we have observed that the information mentioned in section a) above has been provided in the manner stipulated in the applicable legislation, that the rest of the information contained in the directors' report is consistent with that disclosed in the annual accounts for 2020, and that the content and presentation of the report are in accordance with applicable legislation.

Directors' and Audit Committee's Responsibility for the Annual Accounts

The Directors are responsible for the preparation of the accompanying annual accounts in such a way that they give a true and fair view of the equity, financial position and financial performance of the Company in accordance with the financial reporting framework applicable to the entity in Spain, and for such internal control as they determine is necessary to enable the preparation of annual accounts that are free from material misstatement, whether due to fraud or error.

In preparing the annual accounts, the Directors are responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Directors either intend to liquidate the Company or to cease operations, or have no realistic alternative but to do so.

The audit committee is responsible for overseeing the preparation and presentation of the annual accounts.

Auditor's Responsibilities for the Audit of the Annual Accounts

Our objectives are to obtain reasonable assurance about whether the annual accounts as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with prevailing legislation regulating the audit of accounts in Spain will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence economic decisions of users taken on the basis of these annual accounts.

As part of an audit in accordance with prevailing legislation regulating the audit of accounts in Spain, we exercise professional judgement and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the annual accounts, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

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- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Directors.
- Conclude on the appropriateness of the Directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the annual accounts or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the annual accounts, including the disclosures, and whether the annual accounts represent the underlying transactions and events in a manner that achieves a true and fair view.

We communicate with the audit committee of Iberdrola, S.A. regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide the entity's audit committee with a statement that we have complied with the applicable ethical requirements, including those regarding independence, and to communicate with them all matters that may reasonably be thought to bear on our independence and, where applicable, related safeguards.

From the matters communicated to the audit committee of the entity, we determine those that were of most significance in the audit of the annual accounts of the current period and which are therefore the key audit matters.

We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter.

REPORT ON OTHER LEGAL AND REGULATORY REQUIREMENTS

European Single Electronic Format

We have examined the digital file of Iberdrola, S.A. for 2020 in European Single Electronic Format (ESEF) comprising an XHTML file with the annual accounts for the aforementioned year, which will form part of the annual financial report.

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(Translation from the original in Spanish. In the event of discrepancy, the Spanish-language version prevails.)

The Directors of Iberdrola, S.A. are responsible for the presentation of the 2020 annual financial report in accordance with the format requirements stipulated in Commission Delegated Regulation (EU) 2019/815 of 17 December 2018 (hereinafter the "ESEF Regulation").

Our responsibility consists of examining the digital file prepared by the Company's Directors, in accordance with prevailing legislation regulating the audit of accounts in Spain. This legislation requires that we plan and perform our audit procedures to determine whether the content of the annual accounts included in the aforementioned digital file fully corresponds to the annual accounts we have audited, and whether the annual accounts have been formatted, in all material respects, in accordance with the requirements of the ESEF Regulation.

In our opinion, the digital file examined fully corresponds to the audited annual accounts, and these are presented, in all material respects, in accordance with the requirements of the ESEF Regulation.

Additional Report to the Audit Committee

The opinion expressed in this report is consistent with our additional report to the Company's audit committee dated 25 February 2021.

Contract Period

We were appointed as auditor by the shareholders at the ordinary general meeting on 2 April 2020 for a period of two years, beginning after the year ended 31 December 2020.

Previously, we had been appointed for a period of three years, by consensus of the shareholders at their general meeting, and have been auditing the annual accounts since the year ended 31 December 2017.

KPMG Auditores, S.L.
On the Spanish Official Register of Auditors ("ROAC") with No. S0702

(Signed on original in Spanish)

Enrique Asla García
On the Spanish Official Register of Auditors ("ROAC") with No. 1,797

25 February 2021

PUBLIC

FINANCIAL STATEMENTS AND MANAGEMENT REPORT FOR THE YEAR ENDED 31 DECEMBER 2020

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PUBLIC IBERDROLA

Translation of Financial statements originally issued in Spanish and prepared in accordance with accounting principles generally accepted in Spain (see Note 26). In the event of a discrepancy, the Spanish-language version prevails.

IBERDROLA, S.A.
STATEMENT OF FINANCIAL POSITION AT 31 DECEMBER 2020

(Millions of euros)

ASSETS	Notes	2020	2019 (*)
NON-CURRENT ASSETS		47,111	44,978
Intangible assets	**7**	**105**	**109**
Computer software		104	105
Other intangible assets		1	4
Property, plant and equipment	**8**	**281**	**283**
Land and buildings		220	168
Technical installations and other items		61	67
Under construction and advances		–	48
Non-current investments in group companies and associates		**45,721**	**43,456**
Equity instruments	10	43,258	43,406
Loans to companies	9, 23.1.a	2,458	32
Derivatives	9, 15, 23.1.c	5	18
Non-current investments		**13**	**113**
Loans to third parties	9	3	4
Derivatives	9, 15	10	109
Deferred tax assets	**17.4**	**321**	**347**
Non-current trade and other receivables	**17.7**	**668**	**668**
Non-current prepayments		**2**	**2**
CURRENT ASSETS		1,143	2,666
Current trade and other receivables		**345**	**213**
Trade receivables		1	1
Trade receivables, group companies and associates	23.1.b	62	100
Other receivables		4	12
Current tax assets	17.1	248	99
Other public administration receivables	17.1	30	1
Current investments in group companies and associates		**544**	**2,309**
Loans to companies	9,23.1.a	29	25
Derivatives	9,15,23.1.c	–	3
Other financial assets	9,23.1.a	515	2,281
Current investments		**42**	**53**
Derivatives	9, 15	40	52
Other financial assets	9	2	1
Current prepayments		**–**	**2**
Cash and cash equivalents		**212**	**89**
Cash on hand		212	89
TOTAL ASSETS		48,254	47,644

(*) The Statement of financial position at 31 December 2019 is presented for comparison purposes only.
The accompanying Notes are an integral part of the Statement of financial position at 31 December 2020.

PUBLIC IBERDROLA

Translation of Financial statements originally issued in Spanish and prepared in accordance with accounting principles generally accepted in Spain (see Note 26). In the event of a discrepancy, the Spanish-language version prevails.

IBERDROLA, S.A.
STATEMENT OF FINANCIAL POSITION AT 31 DECEMBER 2020
(Millions of euros)

LIABILITIES	Notes	2020	2019 (*)
EQUITY	**11**	**31,802**	**32,540**
CAPITAL AND RESERVES		**31,813**	**32,559**
Capital	**11.1**	**4,762**	**4,771**
Registered capital		4,762	4,771
Share premium	**11.2**	**14,361**	**14,512**
Reserves		**1,328**	**3,093**
Legal and bylaw reserves	11.3	969	969
Other reserves		359	2,124
Treasury shares and own equity investments	**11.6**	**(1,977)**	**(1,428)**
Prior years' profit and loss		**11,018**	**8,732**
Retained earnings		11,018	8,732
Profit/(loss) for the year		**2,292**	**2,849**
Other equity instruments	**12**	**29**	**30**
VALUATION ADJUSTMENTS	**11.7**	**(11)**	**(19)**
Hedging instruments		**(11)**	**(19)**
NON-CURRENT LIABILITIES		**8,708**	**6,570**
Non-current provisions		**484**	**491**
Non-current employee benefits	13.1	224	257
Other provisions	13.2	260	234
Non-current payables		**263**	**369**
Bank borrowings	9,14	206	283
Finance lease payables	8,9,14	54	56
Derivatives	9,15	–	27
Other financial liabilities	9	3	3
Payables to group companies and associates, non-current	**9,15,23.1.a,23.1.c**	**7,209**	**4,977**
Deferred tax liabilities	**17.4**	**752**	**733**
CURRENT LIABILITIES		**7,744**	**8,534**
Current provisions		**–**	**1**
Current payables		**1,236**	**1,406**
Bank borrowings	9,14	1,165	1,333
Finance lease payables	8,9,14	2	2
Derivatives	9,15	47	–
Other financial liabilities	9	22	71
Payables to group companies and associates, current	**9,15,23.1.a,23.1.c**	**6,387**	**6,947**
Trade and other payables		**121**	**149**
Suppliers		–	36
Suppliers, group companies and associates	23.1.b	12	3
Other payables		41	57
Personnel (salaries payable)		21	21
Other taxes payable	17.1	47	32
Current accruals		**–**	**31**
TOTAL EQUITY AND LIABILITIES		**48,254**	**47,644**

(*) The Statement of financial position at 31 December 2019 is presented for comparison purposes only.
The accompanying Notes are an integral part of the Statement of financial position at 31 December 2020.

PUBLIC IBERDROLA

Translation of Financial statements originally issued in Spanish and prepared in accordance with accounting principles generally accepted in Spain (see Note 26). In the event of a discrepancy, the Spanish-language version prevails.

IBERDROLA, S.A.
INCOME STATEMENT FOR THE YEAR ENDED 31 DECEMBER 2020

(Millions of euros)

	Notes	2020	2019 (*)
CONTINUING OPERATIONS			
Revenue	**18.1**	**2,847**	**4,568**
Sales		3	422
Finance income from equity investments in group companies and associates	10,23.2	2,449	3,872
Finance income from debt securities and other financial instruments of group companies and associates	23.2	21	18
Income from services rendered to group companies and associates	23.2	374	256
Own work capitalised	**7,8**	**2**	**1**
Supplies	**18.2**	**(1)**	**(393)**
Merchandise used		(1)	(393)
Other operating income		**1**	**1**
Non-trading and other operating income		1	1
Personnel expenses		**(116)**	**(137)**
Salaries and wages		(99)	(95)
Employee benefits expense	18.3	(17)	(42)
Other operating expenses		**(191)**	**(203)**
External services		(222)	(196)
Taxes		32	(4)
Losses, impairment and changes in trade provisions		1	–
Other operating expenses		(2)	(3)
Amortisation and depreciation	**7,8**	**(70)**	**(69)**
Impairment and gains/(losses) on disposal of fixed assets		**–**	**1**
Impairment and losses		–	1
Impairment gains/(losses) on disposal of financial instruments of group companies and associates		**(102)**	**(779)**
Impairment and losses	10	(102)	(777)
Gains/(losses) on disposal and other		–	(2)
OPERATING INCOME		2,370	2,990
Finance income	**18.6**	**23**	**1**
From debt securities and other financial instruments in third parties		23	1
Finance expenses	**18.5**	**(143)**	**(166)**
Due to borrowings from group companies and associates	23.2	(136)	(184)
Due to third-party borrowings		4	30
Provision adjustments		(11)	(12)
Change in fair value of financial instruments	**18.7**	**(11)**	**(1)**
Exchange differences	**18.8**	**14**	**(11)**
NET FINANCE INCOME/(EXPENSE)		(117)	(177)
PROFIT/(LOSS) BEFORE INCOME TAX		2,253	2,813
Income tax	**17.3**	**39**	**36**
PROFIT/(LOSS) FOR THE YEAR FROM CONTINUING OPERATIONS		2,292	2,849
PROFIT/(LOSS) FOR THE YEAR		2,292	2,849

(*) The Income statement for the year 2019 is presented for comparison purposes only.
The accompanying Notes are an integral part of the Income statement for the year ended on 31 December 2020.

PUBLIC IBERDROLA

Translation of Financial statements originally issued in Spanish and prepared in accordance with accounting principles generally accepted in Spain (see Note 26). In the event of a discrepancy, the Spanish-language version prevails.

IBERDROLA, S.A.
STATEMENT OF CHANGES IN EQUITY FOR THE YEAR ENDED 31 DECEMBER 2020

(Millions of euros)

A) Statement of recognised income and expense for the year ended 31 December 2020

	Notes	2020	2019 (*)
PROFIT/(LOSS) FOR THE YEAR		**2,292**	**2,849**
INCOME AND EXPENSE RECOGNISED DIRECTLY IN EQUITY			
Cash flow hedges	11.7	(1)	(2)
Actuarial gains and losses and other adjustments	13.1.a	–	(8)
Tax effect	11.7, 17.4	(1)	3
TOTAL INCOME AND EXPENSE RECOGNISED DIRECTLY IN EQUITY		**(2)**	**(7)**
AMOUNTS TRANSFERRED TO THE INCOME STATEMENT			
Cash flow hedges	11.7	12	11
Tax effect	11.7	(3)	(3)
TOTAL AMOUNTS TRANSFERRED TO THE INCOME STATEMENT		**9**	**8**
TOTAL RECOGNISED INCOME AND EXPENSE		**2,299**	**2,850**

(*) The Statement of recognised income and expense for 2019 is presented for comparison purposes only.

The accompanying Notes are an integral part of the Statement of recognised income and expense for the year ended 31 December 2020.

PUBLIC IBERDROLA

Translation of Financial statements originally issued in Spanish and prepared in accordance with accounting principles generally accepted in Spain (see Note 26). In the event of a discrepancy, the Spanish-language version prevails.

IBERDROLA, S.A.

B) Statement of changes in equity for the year ended 31 December 2020
(Millions of euros)

	Capital (Note 11.1)	Share premium (Note 11.2)	Reserves (Note 11.3, 11.4 and 11.5)	Treasury shares and own equity investments (Note 11.6)	Prior years' profit and loss	Profit/(loss) for the year (Note 3)	Other equity instruments (Note 12)	Valuation adjustments (Note 11.7)	TOTAL
OPENING BALANCE 2019 (*)	**4,798**	**14,668**	**4,927**	**(1,002)**	**8,070**	**992**	**28**	**(26)**	**32,455**
Total recognised income and expense	**–**	**–**	**(6)**	**–**	**–**	**2,849**	**–**	**7**	**2,850**
Transactions with shareholders or owners									
Reduction in share capital	(210)	–	(1,804)	2,015	–	–	–	–	**1**
Scrip issue	183	(156)	(29)	–	–	–	–	–	**(2)**
Distribution of earnings	–	–	–	–	662	(992)	–	–	**(330)**
Transactions with treasury shares or own equity instruments (net)	–	–	5	(2,441)	–	–	–	–	**(2,436)**
Other changes in equity	**–**	**–**	**–**	**–**	**–**	**–**	**2**	**–**	**2**
CLOSING BALANCE 2019 (*)	**4,771**	**14,512**	**3,093**	**(1,428)**	**8,732**	**2,849**	**30**	**(19)**	**32,540**
OPENING BALANCE 2020	**4,771**	**14,512**	**3,093**	**(1,428)**	**8,732**	**2,849**	**30**	**(19)**	**32,540**
Total recognised income and expense	**–**	**–**	**(1)**	**–**	**–**	**2,292**	**–**	**8**	**2,299**
Transactions with shareholders or owners									
Reduction in share capital	(160)	–	(1,758)	1,918	–	–	–	–	**–**
Scrip issue	151	(151)	–	–	–	–	–	–	**–**
Distribution of earnings	–	–	–	–	2,286	(2,849)	–	–	**(563)**
Transactions with treasury shares or own equity instruments (net)	–	–	5	(2,467)	–	–	–	–	**(2,462)**
Other changes in equity	**–**	**–**	**(11)**	**–**	**–**	**–**	**(1)**	**–**	**(12)**
CLOSING BALANCE 2020	**4,762**	**14,361**	**1,328**	**(1,977)**	**11,018**	**2,292**	**29**	**(11)**	**31,802**

(*) The Statement of changes in equity for 2019 is presented for comparison purposes only.
The accompanying Notes are an integral part of the Statement of changes in equity for the year ended 31 December 2020.

IBERDROLA PUBLIC

Translation of Financial statements originally issued in Spanish and prepared in accordance with accounting principles generally accepted in Spain (see Note 26). In the event of a discrepancy, the Spanish-language version prevails.

IBERDROLA, S.A.
STATEMENT OF CASH FLOWS FOR THE YEAR ENDED 31 DECEMBER 2020

(Millions of euros)

	Notes	2020	2019 (*)
Profit/(loss) for the year before tax		**2,253**	**2,813**
Adjustments for:		**(2,141)**	**(2,825)**
Amortisation and depreciation	7,8	70	69
Impairment		101	777
(Gains)/losses on disposal of fixed assets		–	(1)
(Gains)/losses on disposal of financial instruments		–	2
Finance income	18.1,18.6	(2,493)	(3,891)
Finance expenses	18.5	143	166
Exchange differences	18.8	(14)	11
Change in fair value of financial instruments		11	1
Other income and expenses		41	41
Changes in operating assets and liabilities		**(54)**	**14**
Trade and other receivables		18	(47)
Trade and other payables		(72)	61
Other cash flows from operating activities		**2,940**	**3,056**
Interest paid		(150)	(237)
Dividends received		3,117	3,199
Interest received		65	88
Income tax proceeds/(payments)		(34)	58
Other proceeds/(payments)		(58)	(52)
CASH FLOWS FROM OPERATING ACTIVITIES		**2,998**	**3,058**
Payments for investments		**(2,794)**	**(1,004)**
Group companies and associates	10	(2,721)	(917)
Intangible assets	7	(46)	(42)
Property, plant and equipment	8	(18)	(44)
Other financial assets		(9)	(1)
Proceeds from investments		**1,371**	**613**
Group companies and associates	10	1,363	611
Property, plant and equipment	8	–	1
Other financial assets		8	1
CASH FLOWS USED IN INVESTING ACTIVITIES		**(1,423)**	**(391)**
Proceeds from and payments for equity instruments		**(2,583)**	**(1,356)**
Issues of equity instruments	11.1	–	(2)
Reduction in share capital	11.1	–	1
Acquisition of own equity instruments	11.6	(2,708)	(1,402)
Disposal of own equity instruments	11.6	125	47
Proceeds from and payments for financial instruments		**1,694**	**(892)**
Instruments issued		7,117	4,800
Bank borrowings		1,120	138
Payables to group companies and associates		5,887	4,662
Other payables		110	–
Redemption and repayment		(5,423)	(5,692)
Bank borrowings		(1,140)	(816)
Payables to group companies and associates		(4,130)	(4,876)
Other payables		(153)	–
Dividends paid and payments on other equity instruments		**(563)**	**(330)**
Dividends		(563)	(330)
CASH FLOWS USED IN FINANCING ACTIVITIES		**(1,452)**	**(2,578)**
NET INCREASE / (DECREASE) IN CASH AND CASH EQUIVALENTS		**123**	**89**
Cash and cash equivalents at 1 January		**89**	**–**
Cash and cash equivalents at 31 December		**212**	**89**

(*) The Statement of cash flows for 2019 is presented for comparison purposes only.
The accompanying Notes are an integral part of the Statement of cash flows for the year ended 31 December 2020.

PUBLIC IBERDROLA

IBERDROLA, S.A.
Notes to the Financial statements for the year ended 31 December 2020

1. COMPANY ACTIVITY

Pursuant to article 5 of its By-Laws, the corporate purpose of Iberdrola, S.A. (hereinafter "IBERDROLA"), a company incorporated in Spain, is as follows:

- To carry out all manner of activities, works and services inherent in or related to the business of production, transmission, switching and distribution or supply of electric power or electricity by-products and applications thereof and the raw material or energy needed for the generation thereof; energy, engineering, information-technology, telecommunications and internet-related services; water treatment and distribution; the integral provision of urban and gas supply services, as well as other gas storage, regasification, transportation or distribution activities, which will be carried out indirectly through the ownership of shares or equity interests in other companies that will not engage in the supply of gas.

- The distribution, representation and marketing of all manner of goods and services, products, articles, merchandise, software programs, industrial equipment and machinery, tools, utensils, spare parts and accessories.

- The investigation, study and planning of investment and corporate organisation projects, as well as the promotion, creation and development of industrial, commercial or service companies.

- The provision of services assisting or supporting companies and businesses in which it has an interest or which are within its corporate group, for which purpose it may provide appropriate guarantees and bonds in favour thereof.

The aforementioned activities may be carried out in Spain as well as abroad, and may be carried out, in whole or in part, either directly by IBERDROLA or through the ownership of shares or equity interests in other companies, subject in all cases and at all times to applicable legal provisions for each industry, especially the electricity industry.

IBERDROLA also provides various services to other Group companies, mainly including the provision of IT services and other non-operating, structural and support services, as well as Group financing, which is managed centrally.

It previously supplied gas on a wholesale basis for subsequent delivery to its subsidiary Iberdrola Generación España, S.A.U., until this activity ended on 1 January 2020 following the signing of the agreement to transfer its portfolio of long-term liquefied natural gas (LNG) supply contracts with Pavilion Energy Trading & Supply Pte. Ltd. (Pavilion) (Note 18.1).

IBERDROLA, individually considered, has no environmental liabilities, expenses, assets, provisions or contingencies that could have a significant impact on its equity, financial position or results. Therefore, no specific environmental disclosures have been included in these Notes to the Financial statements.

IBERDROLA has its registered office at Plaza Euskadi 5, in Bilbao.

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2. BASIS OF PRESENTATION OF THE FINANCIAL STATEMENTS

2.1 Accounting legislation applied

The Financial statements have been prepared in accordance with the Spanish General Chart of Accounts (*Plan General de Contabilidad*) (PGC) approved by Royal Decree 1514/2007 of 16 November, which was amended by Royal Decree 602/2016 of 2 December and prevailing commercial legislation.

These Financial statements have been drawn up by the directors of IBERDROLA and will be submitted for approval at the General Shareholders' Meeting. It is expected that they will be approved without modification.

Unless stated otherwise, the figures appearing in these Financial statements are expressed in millions of euros. The euro is the Company's functional currency.

IBERDROLA has drawn up its consolidated Financial statements in accordance with current law, pursuant to the provisions of the International Financial Reporting Standards (IFRS) as approved by the European Union. The main figures shown in the IBERDROLA Group's 2020 and 2019 consolidated Financial statements are as follows:

Millions of euros	2020	2019
Total assets	**122,518**	**122,369**
Equity:		
Parent	35,412	37,678
Non-controlling interests	11,806	9,517
Revenue	**33,145**	**36,438**
Profit/(loss) for the year:		
Parent	3,611	3,466
Non-controlling interests	341	348

2.2 True and fair view

The Financial statements have been prepared on the basis of IBERDROLA's auxiliary accounting records, in accordance with prevailing accounting legislation and the electronic reporting format requirements set out in Commission Delegated Regulation EU 2018/815, in order to give a true and fair view of the equity, financial position and results of IBERDROLA.

The Statement of cash flows has been drawn up to present fairly the source and application of IBERDROLA's cash and cash equivalents.

At 31 December 2020 IBERDROLA's Statement of financial position shows a working capital deficit (current liabilities exceeding current assets) in the amount of EUR 6,601 million. This deficit is largely due to the existence of current debt with group companies and associates in the amount of EUR 6,387 million. According to IBERDROLA's directors, this will be offset by the generation of funds from the IBERDROLA Group's businesses and the dividends received from its subsidiaries. Moreover, IBERDROLA has undrawn loans totalling EUR 5,990 million (Note 14).

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2.3 Comparative information

In accordance with commercial legislation, figures for the previous year have been provided along with the figures for 2020 for comparative purposes in relation to each item on the Statement of financial position, Income statement, Statement of changes in equity and Statement of cash flows. Quantitative information from the previous year is also included in the Notes.

3. DISTRIBUTION OF EARNINGS

IBERDROLA's Board of Directors has agreed to submit for the approval of the shareholders at the General Shareholders' Meeting the following distribution of 2020 profit and prior years' profit and loss:

Millions of euros	2020
Basis for distribution:	
Prior years' profit and loss	11,018
Profit for financial year 2020	2,292
Total	**13,310**
Distribution:	
To legal reserve	–
To dividends	Amount to be determined resulting from adding: (a) the Interim Dividend and (b) the result of multiplying the Final Dividend by the total number of shares that the holders have decided to receive as cash remuneration under the framework of the first-time implementation of the *Iberdrola Flexible Remuneration* optional dividend system for 2021.
To retained earnings	Amount to be determined resulting from deducting the amounts earmarked for dividends from the total basis for distribution.
Total	**13,310**

IBERDROLA's Board of Directors has agreed to propose at the General Shareholders' Meeting the distribution (chargeable to earnings for 2020 and prior years' profit and loss) of a dividend the gross amount of which will be the sum of the following amounts:

(a) the EUR 266 million that was paid out as an interim dividend for 2020 on 8 February 2021 to the holders of 1,583,410,921 IBERDROLA shares that chose to receive their remuneration in cash under the second application of the optional *Iberdrola Flexible Remuneration* system for 2020 and therefore received EUR 0.168, gross, per share (the Interim Dividend); and

(b) the amount to be determined by multiplying:

(i) the gross amount per share that the Company will distribute as final dividends for 2020 under the framework of the first application of the 2021 *Iberdrola Flexible Remuneration* optional dividend system (the *Final Dividend*); by

(ii) the total number of shares upon which the holders have opted for receiving the *Final Dividend* within the first application of the *Iberdrola Flexible Remuneration* optional dividend system.

On the date of authorisation for issue of these Financial statements, it is not possible to determine the amount of the *Final Dividend* or, consequently, the amount of the dividend charged to 2020 profit.

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The Final Dividend will be paid together with the implementation of the bonus issue that the Board of Directors will propose to the General Shareholders' Meeting, to offer the shareholders the possibility of receiving their remuneration in cash (through the payment of the *Final Dividend*) or in the newly-issued scrip shares of the Company (through the aforementioned bonus issue).

Payment of the *Final Dividend* will be one of the alternatives that a shareholder may choose when receiving their remuneration in the first-time application of the *Iberdrola Flexible Remuneration* optional dividend system corresponding to 2021, which will be carried through the aforementioned scrip issue.

4. ACCOUNTING POLICIES

4.1 Intangible assets

Intangible assets are measured at acquisition cost or production cost, less any accumulated amortisation and any impairment losses. An intangible asset is recognised only if it is probable that it will generate future economic benefits that will flow to IBERDROLA and the cost of the asset can be measured reliably. The recoverability of intangible assets is analysed when events or changes in circumstances take place that indicate that their carrying amount may not be recovered.

The acquisition price or production cost includes specific and generic finance expenses, incurred prior to putting the asset to use for those intangible assets that take more than one year to be ready for use.

Intangible assets are amortised using the straight-line method over their estimated useful life. If the useful life cannot be reliably estimated, the intangible assets will be amortised on a 10-year basis, unless another legal or regulatory provision establishes a different time limit. The amortisation periods and methods are revised annually at year end and, where appropriate, adjusted prospectively.

Computer software

The costs incurred in connection with the basic computer systems used in the management of IBERDROLA and developed in-house, and the amounts paid for ownership of or the right to use programs are also recorded under the "Intangible assets" heading of the Statement of financial position. These items are amortised on a straight-line basis over a maximum period of five years from the date on which each application comes into service. Personnel expenses for employees who have worked on IT projects are recognised as an increase in the cost of the projects and recorded with a credit to "Own work capitalised" in the Income statement.

4.2 Property, plant and equipment

Items of property, plant and equipment are measured at acquisition or production cost, including the legally permitted revaluations undertaken by IBERDROLA under Royal Decree-law 7/1996, less accumulated depreciation and impairment losses, if any.

The acquisition price or production cost includes specific and generic financial costs incurred prior to putting the asset into use for assets that take more than one year to be ready for use. Also, personnel expenses related directly or indirectly to facilities under construction are recognised as an increase in the cost of the projects and recorded with a credit to "Own work capitalised" in the Income statement.

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Repairs that do not prolong the useful life of the assets and maintenance expenses are charged directly to the Income statement as accrued. Expenses incurred for expansion or improvements that increase the productivity or prolong the useful life of the asset are capitalised as an increase in the value of the assets.

Replacements or renewals of complete units are recorded as an increase in property, plant and equipment, and the units replaced or renewed are derecognised.

IBERDROLA transfers work under construction to property, plant and equipment in use upon startup of the plant.

Leases are classified as finance leases when an analysis of the nature of the agreement and its terms and conditions reveals that all risks and rewards of ownership of the asset have been substantially transferred to IBERDROLA. Therefore, the property acquired under these leases is accounted for by its nature in property, plant and equipment for an amount equal to the lower of its fair value and the present value of minimum payments set at the beginning of the lease.

The amortisation and depreciation of the fixed assets shown on the Statement of financial position at 31 December 2020 is based on cost using the straight-line method over the following estimated years of useful life:

	Average years of estimated useful life
Buildings	50
Equipment for IT processes	4 – 8
Other fixed assets	7 – 40

At each financial year end, IBERDROLA reviews and adjusts, where necessary, the assets' residual values, useful lives and depreciation method, prospectively adjusting them, as appropriate.

4.3 Impairment of non-current non-financial assets

IBERDROLA assesses, at least annually, whether there is any indication that its non-current non-financial assets may be impaired. If any such indication exists, the asset's recoverable amount is estimated.

An asset's recoverable amount is the higher of fair value less cost to sell, or value in use. In assessing the value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the specific risk to the asset. For assets that do not generate cash inflows that are largely independent of those from other financial assets or groups of assets, the recoverable amount is determined for the cash-generating units to which the asset belongs.

Impairment losses are recognised for all assets or, where appropriate, their cash-generating units, when the carrying amount exceeds the recoverable amount. Impairment losses are recognised in the Income statement and, except in the case of goodwill, reversed if there has been a change in the estimates used to determine the asset's recoverable amount. Reversal of an impairment loss is recognised as income in the Income statement and only to the extent that the increased carrying amount cannot exceed the carrying amount that would have been determined, net of depreciation, had no impairment loss been recognised for the asset.

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4.4 Financial instruments

4.4.1 *Classification and measurement of financial assets and liabilities*

The financial assets and liabilities of IBERDROLA are classified as follows:

a) Loans and receivables

Includes the financial assets that originate from the sale of goods and rendering of services related with business activities as well as other credits for non-commercial activities that, not being equity instruments or derivatives, are of fixed or determinable payments that are not quoted in an active market.

Financial assets herein are recognised at fair value. After initial recognition, loans and receivables are measured at amortised cost. Interest accrued is recognised in the Income statement applying the effective interest method.

However, loans and receivables maturing in less than a year that do not have a contractual interest rate are measured both initially and subsequently at par value when the impact of not discounting cash flows is not significant.

b) Equity investments in group companies and associates

This category includes investments in companies in which the entity exercises control (Group companies), joint control via by-law resolutions or contractual arrangements with one or more partners (jointly controlled entities), or has significant influence (associates).

In the Statement of financial position, these investments are initially recognised at fair value which, barring evidence to the contrary, is the transaction price. The transaction price is equivalent to the fair value of the consideration given. The initial value includes preferential subscription and similar rights acquired. After initial measurement, these financial assets are stated at cost, less any accumulated impairment loss.

In the case of non-monetary contributions to a Group company for the purpose of a business, the investment is measured at the carrying amount of the delivered assets and liabilities in the consolidated Financial statements on the date the transaction was performed. The consolidated Financial statements used are those of the higher group or subgroup, whose parent is Spanish, in which the assets and liabilities are included. In the event the aforementioned financial statements are not prepared, in accordance with any exemption provided for in the consolidated criteria, the values prior to carrying out the transaction in the separate Financial statements of the contributing company will be taken.

When these assets must be valued, for derecognition from the Statement of financial position or other purposes, they are measured using the weighted average cost method by standard groups, understanding that these values have the same rights. When pre-emptive subscription rights or similar are sold or transferred for exercise, the cost of the rights is deducted from the carrying amount of the related assets.

c) Available-for-sale financial assets

This heading includes equity instruments of other companies that are not classified under any of the preceding categories.

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After initial recognition, available-for-sale financial assets are measured at fair value, including any attributable transaction costs incurred to dispose of them. Any gains or losses in fair value are recognised directly in equity until the investment is derecognised or determined to be impaired, at which time the cumulative gain or loss previously recorded in equity is recognised in the Income statement. However, impairment losses and accrued dividends are recognised in the Income statement.

Investments in equity instruments whose fair value cannot be determined reliably are shown at cost, less any accumulated impairment losses.

When these assets must be valued for derecognition from the Statement of financial position or other purposes, they are measured using the weighted average cost method by standard groups. When pre-emptive subscription rights or similar are sold or transferred for exercise, the cost of the rights is deducted from the carrying amount of the related assets. This amount corresponds to the fair value or cost of the rights, calculated in accordance with the measurement of the related financial asset.

d) Assets and liabilities held for trading

IBERDROLA includes in this category derivative financial instruments that do not meet the criteria for hedge accounting according to accounting policies.

Assets and liabilities held for trading are initially recognised at fair value. The transaction costs directly attributable to purchase or issue is recognised as an expense in the Income statement. After initial recognition, available-for-sale financial assets and liabilities are measured at fair value, including any attributable transaction costs incurred to dispose of them. Any gains or losses in fair value are recognised in the Income statement for the year.

e) Loans and payables

This heading includes financial liabilities arising from the sale of goods and rendering of services in the Company's ordinary course of business, as well as non-trade loans that are not derivatives.

Loans and payables are initially recognised at fair value which, barring evidence to the contrary, is the transaction price. The transaction price is equivalent to the fair value of the consideration received. Directly attributable transaction costs are included in the initial measurement of financial liabilities. After initial recognition, financial liabilities included in this category are subsequently measured at amortised cost. Interest accrued is recognised in the Income statement applying the effective interest method.

However, trade payables that have no contractual interest rate and are payable within a year, and capital called up by third parties, which is expected to be paid in the short term, both in the initial and subsequent measurement, are measured at their nominal amount, when the effect of not discounting the cash flows is immaterial.

4.4.2. *Interest and dividends received on financial assets*

Dividends are recognised as income in the Income statement when the investee or any Group company in which the investee holds an interest generates profits in excess of the equity to be distributed.

When the dividends paid come explicitly from profits obtained prior to the acquisition date, these dividends are not recognised as income, but are rather deducted from the carrying amount of the investment.

The judgment as to whether the investee has generated profits will be made solely on the basis of the profits recognised in the separate Income statement since the date on which the investee was acquired, unless it is clear that the dividend payment out of those profits should be treated as a recovery of the investment in the eyes of the entity receiving the dividend.

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Interest is recognised using the effective interest rate method and dividends when the right to receive the payment is established.

4.4.3. *Impairment of financial assets*

IBERDROLA regularly assesses whether its financial assets or groups of financial assets are impaired.

a) Loans and receivables

If there is objective evidence that an impairment loss on an asset or group of assets carried at amortised cost has been incurred, due to an event or series of events that have occurred after initial recognition and that lead to a reduction or delay in the estimated future cash flows, the carrying amount of the asset or group of assets is corrected.

The amount of the impairment loss on these financial assets is measured as the difference between the asset's carrying amount and the present value of the estimated future cash flows discounted at the financial asset's original effective interest rate. For variable-rate financial assets, the effective interest rate at the year-end financial statements date based on the contractual terms is used. Impairment losses on a group of financial assets are calculated using models based on statistical formulas or methods.

Impairment adjustments and their reversal, when the amount of such loss decreases due to causes related to a subsequent event, are recognised as an expense or income, respectively, in the Income statement. The loss can only be reversed to the limit of the carrying amount of the asset had the impairment loss not been recognised.

b) Equity investments in group companies and associates

When there is objective evidence that the carrying amount of an investment cannot be recovered, it is adjusted accordingly.

The amount of the loss is measured as the difference between the carrying amount of the investment and its recoverable amount. Recoverable amount is the higher of the fair value less costs to sell and the present value of the estimated future cash flows. In estimating impairment on investments, the investee's equity (or consolidated equity, as the case may be) is taken into consideration, corrected for any unrealised gains at the measurement date, unless better evidence of the recoverable amount of the investment is available.

The impairment losses and, where appropriate, their reversals are recognised as an expense or income, respectively, in the Income statement. An impairment loss may be reversed up to the carrying amount of the asset recognised at the date of reversal had no impairment loss been recognised previously.

c) Available-for-sale financial assets

IBERDROLA considers objective evidence of impairment to be a significant or prolonged decline in the fair value of an investment in an equity instrument below its cost. To this end, a significant or prolonged decline in the fair value (stock market value for listed instruments) is considered to be 40% or a loss of value below the purchase price for at least 18 months. When the fair value is regained, the 18-month period must again be computed, provided it is not a momentary or immaterial event.

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4.4.4. *Derecognition of financial assets*

IBERDROLA derecognises a financial asset, or part of a financial asset, when the contractual rights to receive cash flows from the asset have expired or are transferred, and it has transferred substantially all the risks and rewards incidental to its ownership. This is assessed by comparing IBERDROLA's exposure to the change in the amounts and schedule of net cash flows from the transferred asset before and after the transfer.

If IBERDROLA has neither transferred nor retained substantially all the risks and rewards of the financial asset, the financial asset is derecognised when it has not retained control of the asset, which is determined based on the transferee's ability to transfer the asset. If IBERDROLA retains control of the asset, it continues to recognise the asset at the amount of the company's exposure to changes in the fair value of the transferred asset; that is, to the extent of its continuing involvement, and recognises the related liability.

When the financial asset is derecognised, the difference between the consideration received less directly attributable transaction costs, taking into account any new asset acquired less any liability assumed, and the carrying amount of the financial asset plus any cumulative amounts recognised directly in equity determines the related gain or loss and is recognised in the Income statement in the year.

IBERDROLA does not derecognise financial assets and recognises a financial liability at the amount received in return in transfers of financial assets where it has retained substantially all the risks and rewards inherent to ownership.

4.4.5. *Derecognition of financial liabilities*

IBERDROLA derecognises a financial liability when the obligation has been extinguished.

When a debt instrument between IBERDROLA and the counterparty is replaced by another on substantially different terms, the original financial liability is derecognised and the new liability is recognised. The difference between the carrying amount of the financial liability or part of the financial liability and the amount paid to extinguish the liability, including attributable transaction costs and any asset transferred other than cash or liability assumed, is recognised in the Income statement for the period.

IBERDROLA considers that the conditions are substantially different if the present value of the discounted cash flows under the new conditions, including any fee paid net of any fee received, and using the original effective interest rate for the discount, differs at least 10 per cent from the current discounted value of the remaining cash flows from the original financial liability.

When the debt instrument is replaced by another on terms that are not substantially different, the original financial liability is not derecognised in the Statement of financial position, and the carrying amount is adjusted for the fees paid. The amortised cost of the financial liability is determined using the effective interest rate, which is the rate used to discount the carrying amount of the financial liability at the date of modification to the cash flows payable under the new terms.

4.4.6. *Derivative financial instruments and hedging*

Derivative financial instruments are initially recognised at fair value in the Statement of financial position, and subsequently remeasured at fair value as necessary. Any gains or losses arising from changes in fair value on derivatives are recognised directly in the Income statement except for those designated as cash flow hedges, in which case the changes in fair value are temporarily recognised in equity.

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At the beginning of each hedging relationship, IBERDROLA formally designates and documents the relationship. This documentation includes the beginning and end date of the hedge, the identification of the hedging instrument, the hedged item, the nature of the risk being hedged and how it assesses the instrument's effectiveness. In addition, hedges are assessed periodically to determine that they are highly effective both prospectively and retrospectively.

Hedges that meet the criteria for hedge accounting are accounted for as follows:

a) Fair value hedges

Hedge the exposure to changes in the fair value of a recognised asset or liability or firm commitment.

Changes in the fair value of the derivative financial instruments designated as a hedge, or the exchange rate component of a monetary item in the case of hedging instruments that are not derivatives, as well as changes in the fair value of the hedged item due to the hedged risk, are recognised in the Income statement.

b) Cash flow hedges

Used to hedge exposure to fluctuations in cash flows that are either attributable to a specific risk associated with an asset or liability or a highly probable planned transaction, or fluctuations in foreign currency risk under a firm commitment.

Amounts taken to equity are transferred to the Income statement when the hedged transaction affects profit or loss. When the hedged relates to a forecast transaction that leads to the recognition of a non-financial asset or liability, the amounts taken to equity are transferred to the cost of the asset acquired or liability assumed. The part of the hedge considered ineffective is recorded in the Income statement.

c) Hedge of net investment in foreign operations

Hedges of investments in foreign operations are treated as fair value hedges for the foreign currency component.

Changes in value of the hedging instrument or exchange rate differences associated with the monetary item used as the hedging instrument are recognised in the Income statement. Changes in value of the investments associated with the underlying amount in foreign currency are recognised in the Income statement.

Discontinuation of hedges

The IBERDROLA Group prospectively discontinues fair value hedge accounting where the hedging instrument expires, is sold, released or exercised, the hedge no longer fulfils the hedge accounting conditions or the designation is revoked.

When hedge accounting is discontinued, the cumulative amount at that date recognised under "Adjustments for changes in value" in the Statement of financial position is maintained in said heading until the hedged transaction occurs, whereupon the gain or loss on the transaction will be adjusted. If a hedged transaction is no longer expected to occur, the amount accumulated under the aforementioned heading is transferred to the Income statement.

Fair value of derivative financial instruments

The fair value of derivative financial instruments is calculated as follows (Note 15):

- The fair value of derivatives quoted on an organised market corresponds to their quoted price at year end.

- For derivatives not traded in organised financial markets, IBERDROLA uses assumptions based on market conditions at the date of the Statement of financial position. In particular:
    - the fair value of interest rate swaps is calculated as the value discounted at market interest rates of the interest rate swap contract spread.
    - currency futures are measured by discounting the future cash flows calculated using the forward exchange rates at year end.

These measurement models take into account the risks of the asset or liability, including the credit risk of both the counterparty (Credit Value Adjustment) and the entity itself (Debit Value Adjustment). The credit risk is calculated according to the following parameters:

- Exposure at default: the amount of the risk arising at the time of non-payment by a counterparty, taking into account any collateral or compensation arrangements connected to the transaction.
- Probability of default: the probability that a counterparty will breach its obligations to pay the principal and/or interest, depending mainly on the features of the counterparty and its credit rating.
- Loss given default: the estimated loss in the event of default.

4.5 Cash and cash equivalents

This heading includes cash, bank current accounts, short-term deposits and purchases of assets under repurchase agreements that meet the following requirements:

- They are readily convertible to cash.
- They mature within less than three months from the acquisition date.
- The risk of change in value is insignificant.
- They are part of the IBERDROLA's standard cash management policy.

For the Statement of cash flows, occasional bank overdrafts used as part of IBERDROLA's cash management strategy are recognised as a decrease in cash and cash equivalents.

4.6 Treasury shares

Treasury shares held by IBERDROLA at the date of the Statement of financial position under the "Equity – Treasury shares and own equity investments" heading are measured at acquisition cost.

Gains and losses arising from the sale of treasury shares by IBERDROLA Group companies are recognised under "Reserves – Other reserves" in the Statement of financial position.

4.7 Post-employment and other benefits

Contributions to defined contribution post-employment benefit plans are recognised as an expense under the "Personnel expenses" heading in the Income statement on an accrual basis.

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In the case of defined benefit plans, IBERDROLA's policy is to recognise the related expense on an accrual basis over the working lives of the employees based on actuarial studies by independent experts using the projected unit credit method to measure the obligation accrued at the end of the period. Any actuarial gains and losses are recognised under the "Reserves – Other reserves" heading when they arise. The provision recognised for this item represents the present value of the defined benefit obligation reduced by the fair value of the plan assets.

When the fair value of the assets exceeds the present value of the obligation, the net asset is not recognised in the Statement of financial position unless it is virtually certain that it will be recovered by IBERDROLA.

4.8 Collective redundancy procedures and other early retirement plans for employees

IBERDROLA recognises termination benefits when there is an agreement with the employees or a certain expectation that such an agreement will be reached that will enable the employees to be terminated in exchange for a severance payment.

IBERDROLA has labour force reduction plans in progress which guarantee those benefits will be received throughout the pre-retirement period.

IBERDROLA recognises the full amount of the expenditure relating to these plans when the obligation is incurred by performing the appropriate actuarial studies to calculate the present value of the actuarial obligation at year end. The actuarial gains and losses disclosed each year are recognised in the Income statement for that year.

4.9 Termination benefits

Under current labour regulations, IBERDROLA is required to make severance payments to terminated employees under certain conditions.

4.10 Share-based employee compensation

The delivery of IBERDROLA shares to employees as consideration for their services is recognised under the "Personnel expenses" heading in the Income statement as the workers perform the services, with a credit to equity under the "Reserves – Other reserves" heading in the Statement of financial position at the fair value of the equity instruments on the grant date, defined as the date when IBERDROLA and its employees reach an agreement establishing the terms of the compensation.

If share-based remuneration is paid in cash, the amount booked as "Personnel expenses" in the Income statement is credited to "Non-current payables – Other financial liabilities" on the liabilities side of the Statement of financial position, and the fair value of the cash consideration is remeasured at each reporting date.

4.11 Contingent provisions assets and liabilities

IBERDROLA relies on its best estimates to recognise provisions for contingencies and expenses to cover probable or certain quantifiable liabilities arising from litigation in progress or from indemnity payments, obligations or unpaid expenses of an undetermined amount, and collateral and other similar guarantees provided by the company.

Provisions are recognised in the Statement of financial position when IBERDROLA has a present obligation (legal, contractual, constructive or tacit) as a result of a past event and it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation.

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A provision is recognised when the liability or obligation arises, with a charge to the heading in the Income statement in accordance with the nature of the obligation, for the present value of the provision when the effect of discounting the value of the obligation to present value is material. The change in the provision due to its discounting each year is recognised under “Finance expenses” in the Income statement.

In addition, contingent liabilities are understood as possible obligations resulting from past events, the occurrence of which is subject to future events that are not entirely under the control of IBERDROLA, as well as current obligations resulting from past events, for which it is not probable that an outflow of resources will be required to settle the obligation or that cannot be measured reliably. These contingent liabilities are not recognised, but are detailed in the Notes when an outflow of resources is possible.

Contingent assets are only recognised when their realisation is deemed virtually certain.

4.12 Foreign currency transactions

Transactions in foreign currency are initially recognised at the exchange rate prevailing at the date of the transaction.

Monetary assets and liabilities denominated in foreign currencies are translated at the rate of exchange prevailing at the date of the Statement of financial position. All translation differences, both gains and losses, originated in this process, including those arising from the settlement of items on the Statement of financial position, are taken to the Income statement for the year in which they arise.

4.13 Income tax expense

IBERDROLA files consolidated tax returns with certain Group companies.

Income tax expense for the year is calculated as the sum of the current tax expense derived by applying the corresponding tax rate to the tax base for the year, after taking into account all applicable tax relief and deductions, and the change in deferred tax assets and liabilities recognised. Tax deductions and credits are recognised in the companies that generated them.

Income tax expense is recognised in the Income statement except when it relates directly to items recognised in equity, in which case it is recognised also in this heading.

Current tax assets and liabilities are measured at the amount expected to be recovered from/paid to the tax authorities. The tax rates used are those in force at the date of the Statement of financial position, including any tax adjustments from previous years.

Meanwhile, temporary differences between the tax bases of assets and liabilities and their carrying amounts in the Financial statements generate deferred income tax balances.

IBERDROLA recognises deferred tax liabilities for all taxable temporary differences unless the deferred tax liability arises from the initial recognition of goodwill or an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affected neither accounting profit nor taxable profit or loss.

IBERDROLA recognises deferred tax assets for all deductible temporary differences, the carry forward of unused tax credits and unused tax losses, to the extent that it is probable that IBERDROLA will have taxable profit available against which these can be utilised, except when the deferred tax asset relating to the deductible temporary difference arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss.

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At the end of each year, IBERDROLA reviews the deferred tax assets recognised at the date of the Statement of financial position and those that have not been recognised previously. Based on this review, IBERDROLA derecognises a previously recognised asset if it is no longer probable that it will be recovered or recognises a deferred tax asset not previously recorded only if it is probable that IBERDROLA will have sufficient taxable profit available for it to be utilised.

Unless there is evidence to the contrary, it is not considered likely that the tax group will have future tax gains if future recovery is expected in more than 10 years from the reporting date. However, it is considered likely that the tax group will have sufficient tax gains to recover deferred tax assets where there are taxable temporary differences that may be reversed in the same year as the expected reversal of deductible temporary differences or in years in which a tax loss, due to a deductible temporary difference, can be netted against previous or subsequent gains.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply at the time of the reversal based on tax laws in effect and on how it reasonably expects to recover the deferred tax asset or settle the deferred tax liability. Changes to the carrying amounts of deferred tax assets and liabilities are recognised in the Income statement, except where the related deferred tax assets and liabilities are recognised directly in equity.

Deferred tax assets and liabilities are measured without taking into account the impact of the time value of money.

4.14 Classification of current and non-current assets and liabilities

Assets and liabilities are classified in the Statement of financial position as current or non-current. Accordingly, assets and liabilities are classified as current when they are associated with IBERDROLA's operating cycle and are expected to be sold, consumed, realised or settled within one year.

4.15 Income and expenses

Income and expenses are recognised at the time the goods or services they represent are delivered or rendered, regardless of when actual payment or collection occurs.

Income from the sale of goods and rendering of services is recognised at the fair value of the consideration received or to be received, derived from them, less the amount of any discount, price reduction or similar granted by the company, as well as the indirect taxes levied on the transactions which can be passed on to third parties.

Income is recognised based on the economic substance of the transaction and is recognised when all of the following conditions are met:

- IBERDROLA has transferred the significant risks and rewards of ownership of the goods to the buyer, regardless of when legal title is transferred.
- IBERDROLA does not maintain managerial involvement to the extent usually associated with ownership and effective control over the goods.
- The amount of the income can be measured reliably.
- It is probable that the economic benefits associated with the transaction will flow to IBERDROLA.
- The costs incurred or to be incurred in respect of the transaction can be measured reliably.

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In addition, income from the rendering of services is recognised when the outcome of the transaction can be estimated reliably, taking into account the stage of completion at the reporting date. When the outcome of the transaction involving the rendering of services cannot be estimated reliably, income should be recognised to the extent of the expenses recognised that are deemed recoverable.

As a holding company of the IBERDROLA Group, IBERDROLA includes dividends and accrued income from financing granted to subsidiaries, as well as services rendered to Group companies, under the heading “Revenue” in the Income statement.

4.16 Related-party transactions

Related-party transactions are accounted for pursuant to the abovementioned valuation standards.

5 FINANCIAL RISK MANAGEMENT

The IBERDROLA Group, of which Iberdrola, S.A. is the parent, is exposed to various financial risks inherent in the countries, industries and markets in which it operates and the businesses it carries out, which could prevent it from achieving its objectives and successfully pursuing its strategies.

In particular, the *Financing and Financial Risk Policy* and the *Corporate Risk Credit Policy* of the IBERDROLA Group, both approved by the Board of Directors, identify the risk factors described below that could affect the Company. The IBERDROLA Group has an organisation and systems that enable it to identify, measure and control the financial risks to which it is exposed.

The Company performs its corporate business activities indirectly through the ownership of shares or other equity investments in other companies (country subholding companies, which in turn perform their activities through their head of business companies). The corporate and governance organisation is based on the recognition of the multinational nature of the Group.

Interest rate risk

The Company is exposed to the risk of fluctuations in interest rates affecting cash flows and fair value in respect of items in the Statement of financial position (debt and derivatives).

In order to adequately manage and limit this risk, each year the Company determines the desired structure of the debt between fixed and floating interest rate. The actions to be carried out throughout the year are regularly planned: new sources of financing (at a fixed, floating or indexed rate) and/or the use of interest rate derivatives.

IBERDROLA’s debt structure at 31 December 2020 and 2019, after taking into account hedging derivatives, is as follows:

Millions of euros	2020	2019
Fixed interest rate	276	380
Floating interest rate	1,151	1,294
Total	**1,427**	**1,674**

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IBERDROLA's debt structure with Group companies and associates at 31 December 2020 and 2019, after taking into account hedging derivatives, is as follows:

Millions of euros	2020	2019
Fixed interest rate	3,329	806
Floating interest rate	10,266	11,107
Total	**13,595**	**11,913**

Floating rate borrowings are largely pegged to market rates (mainly Euribor and Libor-pound sterling).

Currency risk

As IBERDROLA's functional currency is the euro, fluctuations in the value of the currencies of borrowings and transactions (mainly pound sterling, US dollar and Brazilian real) with respect to the euro may have an impact on the Group's finance expenses, earnings for the year and equity.

IBERDROLA mitigates this risk by ensuring that all of its economic flows are in euros, provided that this is possible, economically viable and efficient, or otherwise through the use of derivatives.

The impact of exchange rate variations on investments in foreign subsidiaries is mitigated by holding debt in foreign currency, as well as through financial derivatives.

Liquidity risk

Exposure to adverse situations in the debt or capital markets or Iberdrola, S.A.'s economic and financial situation can hinder or prevent it from obtaining the financing required to properly carry out its business activities.

The IBERDROLA Group's liquidity policy, with a global focus, is designed to ensure that it can meet its payment obligations without having to rely on financing under unfavourable terms. For this purpose, various management metrics are used, such as the arrangement of committed credit facilities of sufficient amount, term and flexibility, diversification of the hedging of financing needs through access to different markets and geographical areas, and diversification of the maturities of the debt issued.

Figures showing IBERDROLA's debt performance are included in Note 14 to the Financial statements.

As indicated in that note, at 31 December 2020 IBERDROLA had undrawn loans and credit facilities of approximately EUR 5,990 million.

Credit risk

IBERDROLA Group companies are exposed to the credit risk arising from the possibility that their counterparties (customers, financial institutions, partners, insurers, insurance firms, etc.) might fail to honour their contractual obligations.

Risk is properly managed and limited, depending on the type of transaction and the creditworthiness of counterparties. In particular, there is *Corporate Credit Risk Policy* setting the framework and principles of conduct for proper risk management.

Receivables do not pose a relevant credit risk for IBERDROLA since its activity as a holding company for the Group is centred on services provided to other Group companies. There were no material non-payments or losses in 2020 or 2019 in relation to other exposures (counterparties in transactions with derivatives, placement of cash surpluses, etc.).

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Brexit

The business in the United Kingdom may be affected by the nation's exit from the European Union. While the European Union and the United Kingdom have hammered out a trade agreement on their future relationship, it remains to be seen exactly how it will be implemented. There is still a risk that we may see further regulatory and legal disputes related to tax, trade, security and employment issues. However, it should be noted that the main risks that could affect the recoverable value of the investment in SPW Investments, Ltd. relate to exchange rate fluctuations and the potential impact on demand in the United Kingdom. These risks would be mitigated by the net investment hedging policy and by the importance of the revenues obtained from the regulated businesses of electricity distribution and transmission and renewable energy production, which account for 86% of the subgroup's total EBITDA. These businesses operate within stable long-term regulatory frameworks, with revenues that are fully or partially discounted in line with inflation and interest rate movements in the United Kingdom. They are not, therefore, subject to demand risk.

6 USE OF ACCOUNTING ESTIMATES

IBERDROLA relied on certain assumptions and estimates in drawing up these Financial statements. The main matters subject to estimate in the preparation of these Financial Statements are as follows:

- Provision for pensions and similar obligations:

  At each year end, IBERDROLA estimates the current actuarial provision required to cover obligations relating to pensions plans and other similar commitments with its employees. In preparing these estimates, IBERDROLA receives advice from independent actuaries (Notes 4.7 and 4.8).

- Impairment of investments in group companies and associates:

  As described in Note 4.3, IBERDROLA, in accordance with applicable accounting regulations, conducts an annual impairment test for those investments that require such a test. Specific tests are also conducted if indications of impairment are detected. These impairment tests require the estimate of the future evolution of the business and the most appropriate discount rate in each case. IBERDROLA believes these estimates are appropriate and consistent with the current market situation.

- Provisions for contingencies and expenses:

  As described in Note 4.11, IBERDROLA recognises provisions to cover present obligations arising from past events. For this purpose, it must assess the outcome of certain procedures of a legal or other nature that are ongoing at the date of authorisation for issue of these Financial statements, based on the best information available.

- Effects of COVID-19:

  The impact of the COVID-19 pandemic, mainly as regards the recoverable value of Investments in group companies and associates, is not expected to significantly affect long-term business plans and, therefore, the recoverable amount of the assets.

Although these estimates were made on the basis of the best information available at the date of authorisation for issue of these Financial statements, future events may require adjustments (upwards or downwards) in coming years. Any such changes would be applied prospectively, recognising the effects of the change in estimates for future periods.

7. INTANGIBLE ASSETS

Changes in the items comprising "Intangible assets" in 2020 and 2019 are as follows:

Millions of euros	Balance at 01.01.2019	Additions and allowances	Balance at 31.12.2019	Additions and allowances	Balance at 31.12.2020
Cost					
Computer software	670	42	712	46	758
Other intangible assets	30	–	30	–	30
	700	**42**	**742**	**46**	**788**
Accumulated amortisation					
Computer software	(565)	(42)	(607)	(47)	(654)
Other intangible assets	(19)	(7)	(26)	(3)	(29)
	(584)	**(49)**	**(633)**	**(50)**	**(683)**
Net book value	**116**	**(7)**	**109**	**(4)**	**105**

In 2020 and 2019, Personnel expenses of the employees who worked on IT projects were capitalised to the cost of those projects and amounted to EUR 2 million and EUR 1 million, respectively.

At 31 December 2020 and 2019 there were no intangible assets securing bank loans.

At 31 December 2020, there was no amount recognised for intangible assets acquired from group companies and associates (EUR 1 million at 31 December 2019).

In 2020 and 2019, no intangible assets were sold to Group companies.

IBERDROLA had no intangible assets whose rights may be exercised outside of Spain in 2020 and 2019.

Fully amortised intangible assets in use amounted to EUR 189 million at 31 December 2020 (EUR 185 million at 31 December 2019).

At 31 December 2020 IBERDROLA had firm commitments to acquire intangible assets amounting to EUR 14 million (EUR 6 million at 31 December 2019). At 31 December 2020 and 2019 there were no firm commitments to sell intangible assets.

Expenses incurred in research and development activities amounted to EUR 30 million in 2020 (EUR 29 million in 2019).

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8. PROPERTY, PLANT AND EQUIPMENT

Changes in Property, plant and equipment in 2020 and 2019 are as follows:

Millions of euros	Balance at 01.01.2020	Additions and allowances	Transfers	Decreases, disposals or reversals	Balance at 31.12.2020
Cost					
Land	59	–	–	–	59
Buildings	138	3	52	–	193
Technical installations and other items	384	11	–	(1)	394
Total PP&E in use	**581**	**14**	**52**	**(1)**	**646**
Under construction and advances	48	4	(52)	–	–
Total cost	**629**	**18**	**–**	**(1)**	**646**
Accumulated depreciation					
Buildings	(29)	(3)	–	–	(32)
Technical installations and other items	(317)	(17)	–	1	(333)
Total accumulated depreciation of PP&E	**(346)**	**(20)**	**–**	**1**	**(365)**
Impairment allowance					
Under construction and advances	–	–	–	–	–
Total provision for impairment	**–**	**–**	**–**	**–**	**–**
Total net cost	**283**	**(2)**	**–**	**–**	**281**

Millions of euros	Balance at 01.01.2019	Additions and allowances	Transfers	Decreases, disposals or reversals	Balance at 31.12.2019
Cost					
Land	59	–	–	–	59
Buildings	134	4	–	–	138
Technical installations and other items	346	23	15	–	384
Total PP&E in use	**539**	**27**	**15**	**–**	**581**
Under construction and advances	34	17	(2)	(1)	48
Total cost	**573**	**44**	**13**	**(1)**	**629**
Accumulated depreciation					
Buildings	(26)	(3)	–	–	(29)
Technical installations and other items	(300)	(17)	–	–	(317)
Total accumulated depreciation of PP&E	**(326)**	**(20)**	**–**	**–**	**(346)**
Impairment allowance					
Under construction and advances	(1)	–	–	1	–
Total provision for impairment	**(1)**	**–**	**–**	**1**	**–**
Total net cost	**246**	**24**	**13**	**–**	**283**

In 2020 and 2019, IBERDROLA did not capitalise any finance expenses as an increase in the value of property, plant and equipment.

In 2020 and 2019, no amount was recognised for personnel expenses directly or indirectly related to property, plant and equipment in progress and capitalised in the cost of those assets.

In 2020 and 2019, no items of property, plant and equipment were acquired from Group companies and associates, nor were any items of property, plant and equipment sold to Group companies.

IBERDROLA owned no property, plant and equipment outside of Spain in 2020 or 2019.

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At 31 December 2020 and 2019, the cost of fully depreciated Property, plant and equipment in use was EUR 292 million and EUR 282 million, respectively, of which no amount related to buildings.

At 31 December 2020 and 2019, IBERDROLA had no property, plant and equipment securing bank loans.

At 31 December 2020 and 2019, Property, plant and equipment included a total of EUR 86 million and EUR 87 million, respectively, as the carrying amount of IBERDROLA's land and corporate head offices in Madrid, which is held under a finance lease. The amount for which the asset was recognised initially amounted to EUR 104 million, matching the present value of the minimum future payments to be made on the initial recognition date.

The information related to the minimum payments on this finance lease at 31 December 2020 is as follows:

Millions of euros	2020
2021	4
2022	4
2023	4
2024	4
2025	4
2026 onwards	57
Total	**77**

Millions of euros	2020
Financial cost	21
Present value of the payments	56
Total	**77**

The present value of these lease payments is recognised under "Non-current payables – Finance lease payables" and "Current payables – Finance lease payables" in the Statement of financial position.

At 31 December 2020, IBERDROLA had firm commitments to acquire property, plant and equipment amounting to EUR 1 million (EUR 5 million at 31 December 2019).

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9. CATEGORIES AND MEASUREMENT OF FINANCIAL INSTRUMENTS

At 31 December 2020 and 2019 the carrying amount of each category of financial asset and liability, except for equity investments in Group companies and associates, trade and other receivables, trade and other payables, and cash and cash equivalents, is as follows:

	Non-current financial assets					
Millions of euros	Loans and receivables		Derivatives		Total	
Category	31.12.2020	31.12.2019	31.12.2020	31.12.2019	31.12.2020	31.12.2019
Assets held for trading	–	–	–	49	–	49
Loans and receivables	2,461	36	–	–	2,461	36
Hedging derivatives	–	–	15	78	15	78
Total	**2,461**	**36**	**15**	**127**	**2,476**	**163**

	Current financial assets					
Millions of euros	Loans and receivables		Derivatives		Total	
Category	31.12.2020	31.12.2019	31.12.2020	31.12.2019	31.12.2020	31.12.2019
Assets held for trading	–	–	1	12	1	12
Loans and receivables	546	2,307	–	–	546	2,307
Hedging derivatives	–	–	39	43	39	43
Total	**546**	**2,307**	**40**	**55**	**586**	**2,362**

	Non-current financial liabilities							
Millions of euros	Bank borrowings		Derivatives [1]		Other		Total	
Category	31.12.2020	31.12.2019	31.12.2020	31.12.2019	31.12.2020	31.12.2019	31.12.2020	31.12.2019
Liabilities held for trading	–	–	–	11	–	–	–	11
Debts and payables	260	339	–	–	7,212	4,969	7,472	5,308
Hedging derivatives	–	–	–	27	–	–	–	27
Total	**260**	**339**	**–**	**38**	**7,212**	**4,969**	**7,472**	**5,346**

	Current financial liabilities							
Millions of euros	Bank borrowings		Derivatives [1]		Other		Total	
Category	31.12.2020	31.12.2019	31.12.2020	31.12.2019	31.12.2020	31.12.2019	31.12.2020	31.12.2019
Liabilities held for trading	–	–	1	–	–	–	1	–
Debts and payables	1,167	1,335	–	–	6,408	7,018	7,575	8,353
Hedging derivatives	–	–	47	–	–	–	47	–
Total	**1,167**	**1,335**	**48**	**–**	**6,408**	**7,018**	**7,623**	**8,353**

(1) Includes derivatives with third parties and with Group companies and associates.

Fair value in “Bank borrowings”, “Finance lease payables” and “Payables to group companies and associates” (except derivatives with Group companies and associates) in current and non-current liabilities in the Statement of financial position at 31 December 2020 and 2019 amounted to EUR 15,650 million and EUR 14,113 million, respectively. Their carrying amount was EUR 15,022 and EUR 13,587 million, respectively. The fair value of the remaining financial instruments does not differ significantly from their book value.

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Internal Use

Fair value is determined by discounting future cash flow payments using the applicable market rates at the valuation date.

10. INVESTMENTS IN GROUP COMPANIES AND ASSOCIATES

Details of "Non-current investments in Group companies and associates – Equity instruments" in 2020 and 2019 are as follows:

Millions of euros	Balance at 01.01.2020	Additions and allowances	Decreases, disposals or reversals	Valuation of net investment hedges	Balance at 31.12.2020
Non-current					
Investments in group companies	44,445	–	–	(46)	44,399
Investments in associates	1	–	–	–	1
Impairment:					
On investments in group companies and associates	(1,040)	(102)	–	–	(1,142)
Total	**43,406**	**(102)**	**–**	**(46)**	**43,258**

Millions of euros	Balance at 01.01.2019	Additions and allowances	Decreases, disposals or reversals	Valuation of net investment hedges	Balance at 31.12.2019
Non-current					–
Investments in group companies	44,337	57	–	51	44,445
Investments in associates	1	–	–	–	1
Impairment:					
On investments in group companies and associates	(263)	(814)	37	–	(1,040)
Total	**44,075**	**(757)**	**37**	**51**	**43,406**

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Internal Use

The IBERDROLA Group companies and associates and data relating thereto at 31 December 2020 and 2019 are as follows:

						Millions of euros				
Company	Address	Functional currency	Share price at 31.12.2020 in euros	Activity	Percentage of ownership at 31.12.2020	Carrying amount 2020	Capital	Reserves	Profit/(Loss)	Dividends received in 2020
Iberdrola España, S.A.U. (1)	Bilbao	EUR	–	Holding company	100%	9,549	2,921	10,472	1,577	1,103
Iberdrola Participaciones, S.A.U. (2)	Madrid	EUR	–	Holding company	100%	2,307	–	2,058	430	–
Iberdrola Energía, S.A.U. (2)	Madrid	EUR	–	Holding company	100%	2,263	1,478	302	208	–
Hidrola I, S.L.U. (2)	Madrid	EUR	–	Holding company	100%	1,173	395	1,946	392	–
Iberdrola Financiación, S.A.U.	Bilbao	EUR	–	Financial – Holding company	100%	1,038	2,000	(703)	(170)	–
SPW Investments Ltd. (2)	United Kingdom	GBP	–	Holding company	100%	14,265	1	13,287	498	940
Avangrid, Inc. (2)	USA	USD	37.07	Holding company	81.5%	11,259	2	15,446	211	397
Scottish Power Overseas Holdings, Ltd. (2)	United Kingdom	GBP	–	Energy	100%	116	–	108	3	–
Iberdrola Finanzas, S.A.U.	Bilbao	EUR	–	Financial – Holding company	100%	100	100	26	1	–
Iberdrola International, B.V.	Netherlands	EUR	–	Financial – Holding company	100%	–	–	2	11	8
Iberdrola Inversiones 2010, S.A.U. (2)	Bilbao	EUR	–	Holding company	100%	160	144	28	32	–
Iberdrola Energía Internacional, S.L. (2)	Bilbao	EUR	–	Holding company	100%	960	–	1,065	43	–
Neoenergia, S.A. (3)	Brazil	BRL	2.74	Holding company	1.04%	57	–	–	–	1
Other companies	–	–	–	–	–	11	–	–	–	–
Total						**43,258**				**2,449**

Company	Address	Functional currency	Share price at 31.12.2019 in euros	Activity	Percentage of ownership at 31.12.2019	Millions of euros				
						Carrying amount 2019	Capital	Reserves	Profit/(Loss)	Dividends received in 2019
Iberdrola España, S.A.U. (1)	Bilbao	EUR	–	Holding company	100%	9,549	2,921	9,793	1,848	1,098
Iberdrola Participaciones, S.A.U. (2)	Madrid	EUR	–	Holding company	100%	2,307	–	2,073	(59)	–
Iberdrola Energía, S.A.U. (2) (3)	Madrid	EUR	–	Holding company	100%	2,263	1,478	834	213	103
Hidrola I, S.L.U. (2)	Madrid	EUR	–	Holding company	100%	1,173	395	1,677	470	670
Iberdrola Financiación, S.A.U.	Bilbao	EUR	–	Financial – Holding company	100%	1,140	2,000	(237)	(481)	–
SPW Investments Ltd. (2)	United Kingdom	GBP	–	Holding company	100%	14,303	1	14,353	468	1,595
Avangrid, Inc. (2)	USA	USD	45.87	Holding company	81.5%	11,259	2	16,913	538	396
Scottish Power Overseas Holdings, Ltd. (2)	United Kingdom	GBP	–	Energy	100%	116	–	113	3	–
Iberdrola Finanzas, S.A.U.	Bilbao	EUR	–	Financial – Holding company	100%	100	100	26	(1)	–
Iberdrola International, B.V.	Netherlands	EUR	–	Financial – Holding company	100%	–	–	4	7	10
Iberdrola Inversiones 2010, S.A.U. (2)	Bilbao	EUR	–	Holding company	100%	160	144	26	2	–
Iberdrola Energía Internacional, S.L. (2)	Bilbao	EUR	–	Holding company	100%	969	–	1,001	111	–
Neoenergia, S.A. (3)	Brazil	BRL	5.46	Holding company	1%	57	–	–	–	–
Other companies	–	–	–	–	–	10	–	–	–	–
Total						**43,406**				**3,872**

(1) Group holding companies. The information regarding Capital, Reserves and Profit/(Loss) for financial years 2020 and 2019 is presented in consolidated form in accordance with standards for the preparation of consolidated accounts.

(2) Group holding companies. The information regarding Capital, Reserves and Profit/(Loss) for financial years 2020 and 2019 is presented in consolidated form in accordance with International financial reporting standards, as adopted by the European Union (hereinafter, IFRS-EU).

(3) Information for Neoenergia, S.A. in relation to Capital, Reserves and Profit/(Loss) for 2020 and 2019 is presented at Iberdrola Energía, S.A.U.

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Below is a description of the activities performed by IBERDROLA Group through its main country subholding companies:

Company	Activity
Iberdrola España, S.A.U.	Conventional generation, renewable generation, retail supply of electricity and gas, and electricity distribution in Spain.
Iberdrola Participaciones, S.A.U.	Real property and holding of interests in companies.
Iberdrola Energía, S.A.U.	Conventional generation, renewable generation, retail supply of electricity and gas, and transmission and distribution of electricity in Brazil.
Hidrola I, S.L.U.	Conventional generation, renewable generation, and retail supply of electricity in Mexico.
Scottish Power Investments, Ltd.	Renewable generation, retail supply of electricity and gas and transmission and distribution of electricity in the United Kingdom.
Avangrid, Inc.	Renewable generation, transmission and distribution of electricity and gas in the United States.
Iberdrola Energía Internacional, S.L.	Renewable generation and retail supply of electricity and gas, mainly in Australia, Germany, France, Portugal, Greece, Italy and other European countries.

Significant transactions in 2020 and 2019

The most noteworthy transactions in 2020 and 2019 in relation to the holdings owned by IBERDROLA are as follows:

- IBERDROLA's separate Financial statements include a valuation adjustment for the investment held in Iberdrola Financiación, S.A.U. in the amount of EUR 963 million and EUR 861 million at 31 December 2020 and 2019, respectively. Allowances in financial years 2020 and 2019 amounted to EUR 102 million and EUR 814 million, respectively. Valuation adjustments have been calculated as the difference between the carrying amount and fair value of all assets and liabilities of the investment. The business activity of this subsidiary, which consists of securing long-term funds to finance the operations of the IBERDROLA Group's companies, as well as the Group's centralised management of currency risk through derivatives, has been negatively impacted by the performance of long-term interest rates and exchange rates compared to the euro, which in turn has negatively impacted the fair value of this company.

- On 28 June 2019, an Initial Public Offering (IPO) of Neoenergia, S.A. (NEOENERGIA) was announced, whereupon its shares began trading on the Novo Mercado segment of the São Paulo Stock Market. As part of the IPO agreement, Iberdrola Energía, S.A.U. (wholly owned by Iberdrola, S.A.) sold a non-controlling part of its holding, which fell to 50.0000001%. Subsequently, Iberdrola, S.A. increased its stake in NEONERGIA by purchasing 12,618,700 shares to bring its direct stake to 1.040%.

- In 2019 the Company reversed the impairment losses on Iberdrola Participaciones, S.A.U. and Scottish Power Overseas Holdings, Ltd. due to the difference between their carrying amounts and recoverable amounts. The amounts of the reversals of value adjustments amounted to EUR 28 million and EUR 9 million, respectively.

At 31 December 2020, the balance of Group companies and associates included EUR 11,259 million and EUR 2,320 million pertaining to IBERDROLA's interest in AVANGRID and NEOENERGIA (including the direct interest and the indirect interest held through Iberdrola Energía, S.A.A.), respectively, whose listed price at the reporting date was EUR 9,352 million and EUR 1,714 million, respectively.

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Analysis of impairment

At 31 December 2020, the directors ran an impairment test for those investments in which they considered that there were indications of impairment, either because the market price was lower than the carrying amount of the investment (AVANGRID and NEOENERGIA, a subsidiary of Iberdrola Energía, S.A.U.), or because the consolidated equity is lower than the carrying amount of the investment (Scottish Power Investments, Ltd.).

The key assumptions for these tests were as follows, according to the businesses grouped in those interests:

a) Assumptions used in the liberalised business:

- *Facility output*: based on operating hours consistent with those of previous years and in line with expected future trends.

- *Electricity and gas sales prices*: the prices stipulated in the signed purchase and sales agreements have been used, where applicable. For unsold production, futures prices of the markets in which IBERDROLA operates have been used.

- *Electricity and gas sales margin*: expectations as to changes in the number of customers and unit margins have been used, based on knowledge of the markets in which IBERDROLA operates and its relative position in each of them.

- *Investment*: the Company has relied on the best information available on the cost of the investments to be made over the coming years.

- *Operating and maintenance costs*: based on the costs set out in the existing maintenance contracts for the facilities. All other operating costs have been projected in a manner consistent with expected growth.

b) Assumptions used in the regulated business:

- *Regulated remuneration*: the Company has used the remuneration approved for the years in which that remuneration was available, while for subsequent years it has used the appropriate legal mechanisms for updating this remuneration. This process has been applied in a manner consistent with the estimated costs of the corresponding cash-generating units.

- *Investment*: investment plans have been considered that are consistent with the expected growth in demand at each concession and with the estimated future remuneration used.

- *Operating and maintenance costs*: the best available estimate of likely changes in these costs has been considered, on the understanding that they are to be consistent with the remuneration assumed to be received in each year.

c) Assumptions used in the renewable energy business:

- *Facility output*: the operating hours of each wind farm are consistent with their historical output. For this purpose, it is important to take into account the long-term predictability of wind power output, which is also subject to regulatory mechanisms so that the wind farms are able to generate power for as long as prevailing weather and grid conditions allow for this.

- *Electricity sales prices*: the prices stipulated in the purchase and sales agreements signed have been used, where applicable. For unsold production, futures prices of the markets in which the IBERDROLA Group operates have been used. Existing support mechanisms have been taken into consideration in all cases.

- *Investment*: the Company has relied on the best information available on the facilities under development and expected to be commissioned in the coming years, based on the price stipulated in the wind turbine purchase agreements signed with different suppliers, as well as the technical and financial capacity of the IBERDROLA Group to successfully complete the projects in question.

- *Operating and maintenance costs*: the prices set out in the land lease and maintenance agreements signed over the useful life of the facilities have been used.

d) Forecast period and nominal growth rate:

The table below summarises the forecast period of future cash flows and the nominal growth rate (g) used to extrapolate these projections beyond the forecast period for the different groups of cash-generating units.

	2020	
	No. of years	g
Retail supply of electricity and gas in the United Kingdom	10	2.0%
Transmission and distribution of electricity in the United Kingdom	10	2.0%
Renewable energies in the United Kingdom	Useful life	-
Transmission and distribution of electricity and gas in the United States	10	1.0%
Renewable energies in the United States	Useful life	-
Generation and retail supply of electricity in Brazil	Useful life / 10	- / 3.5%
Transmission and distribution of electricity in Brazil	Life of concession	-
Renewable energies in Brazil	Useful life	-

e) Discount rate:

The discount rate calculation methodology used by IBERDROLA was to take the time value of money or risk-free rate of each market and add to that the specific risks of the asset or risk premium of the asset or business in question.

The risk-free rate is effectively that of the 10-year Treasury bond in the market in question, which must have sufficient depth and solvency. For countries whose economies or currencies have insufficient depth and solvency, country risk and currency risk are estimated and the total of all these components is assimilated to the cost of funding without the risk spread of the asset.

The asset risk premium is a product of the specific risks of the asset. Estimated betas are used to calculate the risk premium, based on comparable peer companies engaged in the same principal activity.

The following pre-tax discount rates are used in the impairment tests for the different groups of cash-generating units:

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	Rates – 2020
Retail supply of electricity and gas in the United Kingdom	6.74%
Transmission and distribution of electricity in the United Kingdom	3.88%
Renewable energies in the United Kingdom, onshore/offshore	4.89% - 5.56%
Transmission and distribution of electricity and gas in the United States	4.52%
Renewable energies in the United States, onshore/offshore	5.48% / 7.30%
Generation and retail supply of electricity in Brazil	11.58%
Transmission and distribution of electricity in Brazil	9.32%
Renewable energies in Brazil	10.88%

After analysing the recoverability of its assets, IBERDROLA has concluded that no write-down was necessary at 31 December 2020.

11. EQUITY

11.1 Registered capital

Changes in 2020 and 2019 in the different items of share capital of IBERDROLA are as follows:

	Date of filing at the Mercantile Registry	% Capital	Number of shares	Nominal	Euros
Balance at 01.01.2019			**6,397,629,000**	**0.75**	**4,798,221,750**
Scrip issue	31 January 2019	1.920%	122,828,000	0.75	92,121,000
Reduction in share capital	21 June 2019	4.301%	(280,457,000)	0.75	(210,342,750)
Scrip issue	30 July 2019	1.956%	122,072,000	0.75	91,554,000
Balance at 31.12.2019			**6,362,072,000**	**0.75**	**4,771,554,000**
Scrip issue	4 February 2020	1.439%	91,520,000	0.75	68,640,000
Reduction in share capital	2 July 2020	3.310%	(213,592,000)	0.75	(160,194,000)
Scrip issue	30 July 2020	1.764%	110,061,000	0.75	82,545,750
Balance at 31.12.2020			**6,350,061,000**	**0.75**	**4,762,545,750**

The scrip issues carried out in 2020 and 2019 correspond to the different runs of the *Iberdrola Flexible Remuneration* system approved by the shareholders at the General Shareholders' Meeting. Accordingly, shareholders were free to choose between:

- receiving their remuneration in newly-issued scrip shares;
- transferring some or all of their free-of-charge allocation rights on the market; or
- receiving their remuneration in cash, through delivery of an amount on account of the dividend for the year.

The same characteristics have been maintained for the second application of the *Iberdrola Flexible Remuneration* system which IBERDROLA's Board of Directors will submit to the shareholders at the General Shareholders' Meeting for approval (Note 3).

Additionally, on 18 June 2019 and 1 July 2020, it was resolved to reduce capital through the redemption of treasury shares, which resolutions were approved by the shareholders at their General Meetings held on 29 March 2019 and 2 April 2020, respectively.

There were no changes to IBERDROLA's share capital other than those resulting from the transactions described above. There are no claims on IBERDROLA's share capital other than those established by the Spanish Companies Act (*Ley de Sociedades de Capital*).

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IBERDROLA´s shares are listed for trading on the Spanish electronic trading system (*Mercado Continuo Español*), and included in the IBEX-35 and European Eurostoxx-50 index.

Major shareholders

Since IBERDROLA's shares are represented by the book-entry system, the exact stakes held by its shareholders are not known. The table below summarises major direct and indirect shareholdings in the share capital of IBERDROLA at 31 December 2020 and 2019, as well as the holdings of financial instruments disclosed by the owners of these stakes in compliance with the Royal Decree 1362/2007 of 19 October. This information is based on filings by the owners of the shares in the official registers of the Spanish National Securities Market Commission (*Comisión Nacional del Mercado de Valores*) (hereinafter, CNMV) or the company's financial statements or press releases, and it is presented in the 2020 IBERDROLA Group's Annual Corporate Governance Report.

IBERDROLA treats as a "significant shareholder" any direct or indirect holder of significant equity interests who exerts a significant influence if (i) they have at least one director on the board of directors or equivalent body of the entity, or (ii) they have the ability to exercise the proportional representation system. Therefore, the company treats Qatar Investment Authority as a significant shareholder, and the only shareholder with this status as at 31 December 2020 and 2019.

Holder	% of voting rights 2020			Financial instruments 2020	IBERDROLA directors 2020
	Direct	Indirect	Total		
Qatar Investment Authority (1)	–	8.711	8.711	–	–

Holder	% of voting rights 2019			Financial instruments 2019	IBERDROLA directors 2019
	Direct	Indirect	Total		
Qatar Investment Authority (1)	–	8.694	8.694	–	–

(1) Parent company of Qatar Holding LLC and DIC Holding LLC, direct holders of a 6.277% and 2.434% investment, respectively.

In addition, the breakdown of other companies at 31 December 2020 and 2019 having direct or indirect voting rights higher than 3% of the share capital are as follows:

Holder	% of voting rights 2020			% of voting rights 2019		
	Direct	Indirect	Total	Direct	Indirect	Total
Norges Bank	3.600	–	3.600	3.430	–	3.430
Blackrock, Inc.	–	5.160	5.160	–	5.160	5.160

At 31 December 2020, the direct and indirect stakes in the capital of IBERDROLA held by the members of the Board of Directors are as follows:

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	Number of shares			
Directors	**Direct**	**Indirect**	**Total**	**%**
José Ignacio Sánchez Galán	7,853,483	3,988,562	11,842,045	0.188
Juan Manuel González Serna	47,572	419,711	467,283	0.007
Iñigo Víctor De Oriol Ibarra	1,231,863	–	1,231,863	0.019
Samantha Barber	2,068	–	2,068	–
María Helena Antolín Raybaud	3,639	–	3,639	–
José Walfredo Fernández	–	–	–	–
Manuel Moreu Munaiz	26,554	26,554	53,108	0.001
Xabier Sagredo Ormaza	–	–	–	–
Francisco Martínez Córcoles	645,286	–	645,286	0.010
Anthony Luzzato Gardner	–	–	–	–
Sara de la Rica Goiricelaya	12,684	–	12,684	–
Nicola Mary Brewer	1,000	–	1,000	–
Regina Helena Jorge Nunes	–	–	–	–
Ángel Jesús Acebes Paniagua	7,144	–	7,144	–
Total	**9,831,293**	**4,434,827**	**14,266,120**	**0.225**

Direct and indirect shareholdings of members of the Board of Directors at the date of authorisation for issue of these Financial statements are set out in section A.3. of the Annual Corporate Governance Report.

Powers delegated by the General Shareholders' Meeting

At the General Shareholders' Meeting held on 2 April 2020, the shareholders resolved under items twenty-two and twenty-three on the agenda to delegate powers to the Board of Directors, with express authority to sub-delegate, for a period of five years, to:

- increase share capital on the terms and subject to the limits set out in Section 297.1.b) of the Spanish Companies Act (*Ley de Sociedades de Capital*), with the power to exclude the limited pre-emptive subscription right; and

- issue debentures and bonds exchangeable for shares in the Company or in any other company and/or convertible into shares of the Company, as well as warrants (options to subscribe for new shares in the Company or to acquire existing shares in the Company or in any other company), subject to a maximum limit of EUR 5,000 million. This authorisation includes further powers to: (i) set the terms and conditions and forms of the conversion, exchange or exercise; (ii) increase capital to the extent necessary to meet the conversion requests; and (iii) exclude limited pre-emptive rights in relation to the issues.

Both authorisations have an aggregate limit equal to a maximum nominal amount of 20% of the share capital.

11.2 Share premium

The share premium at 31 December 2020 amounts to EUR 14,361 million. The Consolidated Text of the Spanish Companies Act expressly permits the use of the share premium balance to increase capital and establishes no specific restrictions as to its use.

11.3 Legal reserve

Under the Consolidated Text of the Spanish Companies Act, 10% of profit for each year must be transferred to the legal reserve until the balance of this reserve reaches at least 20% of the share capital.

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The legal reserve, amounting to EUR 969 million, can be used to increase capital provided that the remaining reserve balance does not fall below 10% of the increased amount of share capital. Otherwise, until the legal reserve exceeds 20% of share capital, it can only be used to offset losses, provided that sufficient other reserves are not available for this purpose.

11.4 Revaluation reserves

This reserve, included in the Statement of financial position of the 1996 Financial statements, arose as a result of the revaluation of property, plant and equipment made by IBERDROLA pursuant to Royal Decree-Law 7/1996 of 7 June (Note 4.2).

This reserve may be used, tax free, to offset accumulated losses from previous years, as well as losses incurred in the current or future years and to increase capital. From 1 January 2007, it can be allocated to unrestricted reserves, provided that the capital gain has been realised. The surplus will be deemed to have been realised on the portion on which depreciation has been taken for accounting purposes or if the revalued assets have been transferred or derecognised. If the balance of this account was used in any way other than as specified in the Royal Decree-law 7/1996, it would be subject to tax.

In 2019, the reserve was fully utilised for the purposes of the capital increase carried out on 31 January 2019 (Note 11.1). Accordingly, the reserve was effectively empty at 31 December 2020 and 2019.

11.5 Redeemed capital reserve

In 2020 a capital reduction was effected through the redemption of treasury shares, thus lowering share capital by EUR 160 million and voluntary reserves by EUR 1,918 million, further to the resolution approved by shareholders at their General Shareholders' Meeting of 2 April 2020.

In accordance with Section 335.c of the Consolidated Text of the Spanish Companies Act, IBERDROLA has a restricted "Redeemed capital reserve" of EUR 1,208 million, equivalent to the par value of the reduced share capital.

11.6 Treasury shares

The Company buys and sells treasury shares in accordance with the prevailing law and the resolutions of the General Shareholders Meeting. Such transactions include purchases and sales of IBERDROLA shares and derivatives thereon.

At 31 December 2020 and 2019 the balances of the various instruments are as follows:

	31.12.2020		31.12.2019	
	No. of shares	Millions of euros	No. of shares	Millions of euros
Treasury shares	85,222,122	888	24,376,375	218
Total return swaps	8,209,638	53	11,949,623	78
Accumulators (exercised shares)	11,306,168	107	63,395,734	530
Accumulators (potential shares)	47,016,022	478	70,058,270	602
Put options	42,996,817	451	–	–
Total	**194,750,767**	**1,977**	**169,780,002**	**1,428**

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a) Treasury shares

Changes in treasury shares were as follows in 2020 and 2019:

	No. of shares	Millions of euros
Balance at 01.01.2019	**135,985,344**	**873**
Acquisitions	172,369,618	1,402
Reduction in share capital	(280,457,000)	(2,015)
Disposals	(6,561,151)	(42)
Iberdrola Flexible Remuneration (1)	3,039,564	–
Balance at 31.12.2019	**24,376,375**	**218**
Acquisitions	286,880,467	2,708
Reduction in share capital	(213,592,000)	(1,918)
Disposals	(13,136,001)	(120)
Iberdrola Flexible Remuneration (1)	693,281	–
Balance at 31.12.2020	**85,222,122**	**888**

(1) Shares received

Gains/(losses) obtained by IBERDROLA in 2020 and 2019 on treasury share transactions showed a gain of EUR 5 million and EUR 5 million, respectively, recognised under “Reserves – Other reserves” in the Statement of financial position.

b) Physically settled derivatives

IBERDROLA has recognised these transactions directly in equity under the heading “Treasury shares and own equity investments” and a liability for the obligation to buy back the shares under the “Current payables – Bank borrowings” heading in the Statement of financial position.

- **Total return swaps**

IBERDROLA has swaps on treasury shares with the following features: during the life of the contract IBERDROLA will pay the financial entity 3-month Euribor plus a spread on the underlying notional and will receive the corresponding dividends with respect to the shares paid out to the financial entity. On the expiration date IBERDROLA will buy the shares at the strike price set out in the contract.

The characteristics of these contracts at 31 December 2020 and 2019 are as follows:

2020	No. of shares	Strike price	Expiry date	Interest rate	Millions of euros
Total return swap	8,209,638	6.440	28/07/2021	Euribor 3M + 0.24%	53
Total	**8,209,638**				**53**

2019	No. of shares	Strike price	Expiry date	Interest rate	Millions of euros
Total return swap	5,810,088	6.188	24/07/2020	Euribor 3M + 0.30%	36
Total return swap	6,139,535	6.783	25/07/2020	Euribor 3M + 0.30%	42
Total	**11,949,623**				**78**

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- **Accumulators**

IBERDROLA holds several purchase accumulators on treasury shares. These accumulators are obligations to buy in the future, with a notional amount of zero on the start date. The number of shares to be accumulated depends on the spot price quoted on a range of observation dates throughout the life of the options – in this case, on a daily basis. A strike price is set, and a knockout level above which the structured product is "knocked out" and shares are no longer accumulated.

The accumulation mechanism is as follows:

- when the spot price is below the strike price, two units of the underlying instrument are accumulated;
- when the spot price is between the strike price and the knockout level, only one unit of the underlying instrument is accumulated; and
- when the spot price is above the knockout level, no shares are accumulated.

The characteristics of these contracts at 31 December 2020 and 2019 are as follows:

2020	No. of shares	Average price in the period	Expiry date	Millions of euros
Exercised	11,306,168	9.4737	15/03/2021 to 15/11/2021	107
Potential maximum (1)	47,016,022	10.1760	15/03/2021 to 15/11/2021	478

2019	No. of shares	Average price in the period	Expiry date	Millions of euros
Exercised	63,395,734	8.3656	07/02/2020 to 11/06/2020	530
Potential maximum (1)	70,058,270	8.5994	07/02/2020 to 11/06/2020	602

(1) Maximum number of additional shares that could accumulate under the mechanism described above through to the expiry of the structures (assuming that the spot price over the remaining life of the structure remains below the strike price at all times).

- **Sold put with physical settlement**

IBERDROLA has sold put options on own shares that grant the counterparty the option to sell such shares at the expiration date and at the strike price indicated in the contract.

2020	No. of shares	Average price in the period	Expiry date	Millions of euros (1)
Put options sold	42,996,817	10.8460	29/01/2021 to 31/03/2021	451

(1) The amount is presented net of the premiums collected (EUR 15 million in 2020).

11.7 Valuation adjustments

Changes in this reserve in 2020 and 2019 due to impairment of derivatives classified as cash flow hedges are as follows:

Millions of euros	01.01.2020	Change in fair value	Amounts allocated to income	31.12.2020
Interest rate swaps	(25)	(1)	12	(14)
Tax effect	6	–	(3)	3
Total	**(19)**	**(1)**	**9**	**(11)**

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Millions of euros	01.01.2019	Change in fair value	Amounts allocated to income	31.12.2019
Interest rate swaps	(34)	(2)	11	(25)
Tax effect	8	–	(2)	6
Total	**(26)**	**(2)**	**9**	**(19)**

The breakdown for the years in which this reserve is expected to affect the Income statement is as follows:

Millions of euros	2021	2022	2023	2024	Total
Interest rate swaps	(8)	(2)	(2)	(2)	(14)
Tax effect	2	1	–	–	3
Total	**(6)**	**(1)**	**(2)**	**(2)**	**(11)**

12. LONG-TERM COMPENSATION PLANS

Long-term share-based compensation plans in the settlement period

The main features of the plans are as follows:

Long-term compensation programme	Settled in shares of	Measurement period	Settlement period	Level of achievement [1]
IBERDROLA 2014-2016	IBERDROLA	2014-2016	2017-2019	93.2%
IBERDROLA 2017-2019	IBERDROLA	2017-2019	2020-2022	100%

(1) Level of achievement and settlement approved by the Board of Directors of IBERDROLA on the recommendation of the Remuneration Committee.

Details of the shares awarded under these plans are as follows:

No. of shares	Iberdrola 2014-2016	Iberdrola 2017-2019
Balance at 01.01.2019	**1,594,431**	**6,840,000**
Additions	–	5,000
Cancellations	(26,993)	(3,400)
Deliveries [1] [2]	(1,567,438)	–
Balance at 31.12.2019	**–**	**6,841,600**
Cancellations	–	(30,000)
Deliveries [1] [2]	–	(2,377,168)
Other	–	363,334
Balance at 31.12.2020	**–**	**4,797,766**

(1) These shares include those delivered to executive directors (Note 20) and to senior management (Note 22).

(2) Taxes charged on shares delivered to senior management: EUR 2,383 thousand under the third delivery of the 2014-2016 Strategic Bonus and EUR 3,526 thousand under the first delivery of the 2017-2019 Strategic Bonus.

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Long-term share-based compensation plans in the measurement period

The following long-term share-based remuneration plan was approved by shareholders at the General Shareholders' Meeting during financial year 2020 (item 16 on the agenda):

Long-term compensation programme	Settled in shares of	Measurement period	Settlement period	Shares forecasted [1]
IBERDROLA 2020-2022	IBERDROLA	2020-2022	2023-2025	6,806,800

[1] Foreseeable number of shares to be delivered, depending on the level of success in attaining the related targets. Includes the shares pertaining to all executive directors.

The benchmarks used for the overall assessment of the Company's performance during the measurement period are as follows:

Achievement targets related to	Type of target	Relative weight
Consolidated net profit	Performance	30%
Total shareholder return	Market	20%
Financial strength	Performance	20%
Sustainable Development Goals	Performance	30%

Changes in "Other reserves" in the Statement of financial position for the bonuses described above are as follows:

Millions of euros	Iberdrola 2014-2016	Iberdrola 2017-2019	Iberdrola 2020-2022	Total
Balance at 01.01.2019	**10**	**18**	**–**	**28**
Charges	–	12	–	12
Price effect charged to equity	4	–	–	4
Payments in shares	(14)	–	–	(14)
Balance at 31.12.2019	**–**	**30**	**–**	**30**
Charges	–	12	4	16
Price effect charged to equity	–	8	–	8
Payments in shares	–	(25)	–	(25)
Balance at 31.12.2020	**–**	**25**	**4**	**29**

13. PROVISIONS

13.1 Provisions for non-current employee benefits

The breakdown of this item in the Statement of financial position at 31 December 2020 and 2019 is as follows:

Millions of euros	2020	2019
Remuneration stipulated in Article 48.1 of the By-Laws (Note 18.3)	25	27
Remuneration stipulated in Article 48.4 of the By-Laws (Note 18.3)	18	20
Defined benefit plans	161	192
Non-current benefits	7	6
Restructuring plans	13	12
Total	**224**	**257**

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Each year IBERDROLA estimates the amount of the obligation and the payments for pensions and similar benefits that it will have to meet in the coming year, based on an independent actuarial report. These are recognised as current liabilities in the Statement of financial position.

a) Defined benefit plans and other non-current employee benefits

The IBERDROLA Group's main commitments to providing defined benefits for its employees, in addition to their Social Security benefits, are as follows:

- Employees subject to IBERDROLA's Collective Bargaining Agreement who retired before 9 October 1996 are covered by a defined benefit retirement pension scheme, the actuarial value of which was fully externalised at 31 December 2020 and 2019.

  IBERDROLA has no liability of any kind for this segment of employees and has no claim on any potential excess generated in the assets of this plan above and beyond the defined benefits.

- Also, in relation to serving employees and employees who have retired after 1996 and are subject to IBERDROLA's Collective Bargaining Agreement and members/beneficiaries of the IBERDROLA Pension Plan, risk benefits (e.g. widowhood, permanent disability or orphanhood) which guarantee a defined benefit at the time the event giving rise to such benefits occurs, are instrumented through a multi-year insurance policy. The guaranteed benefit consists of the difference between the present actuarial value of the above mentioned defined benefit at the time of the event and the member's vested rights at the time of the event, if the latter were lower. The premiums on the insurance policy for 2020 and 2019 are recognised under "Personnel expenses" in the Income statement and came to EUR 1 million and EUR 1 million, respectively (Note 18.3).

- IBERDROLA also maintains a provision to cover certain commitments with its employees beyond those indicated above. These further commitments are covered by internal funds linked to social benefits, consisting mainly of free electricity supply, with an annual consumption limit, for retired employees and other long-term benefits, primarily consisting of a long-service bonus for active employees at 10, 20 and 30 years of service.

Changes in provisions for the commitments described in the preceding section in 2020 and 2019 are as follows:

Millions of euros	Electricity tariff	Length of service bonus
Balance at 01.01.2019	**191**	**6**
Normal cost (Note 18.3)	–	1
Finance expense (Note 18.5)	3	–
Actuarial gains and losses:		
To reserves	8	(1)
Payments and other	(10)	–
Balance at 31.12.2019	**192**	**6**
Other costs recognised under "Personnel expenses" (Note 18.3)	(25)	–
Finance expense (Note 18.5)	2	–
Actuarial gains and losses:		
To profit (Note 18.3)	–	1
Payments and other	(8)	–
Balance at 31.12.2020	**161**	**7**

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The main assumptions applied in the actuarial reports that determined the provisions needed to meet the aforementioned commitments at 31 December 2020 and 2019 are as follows:

	2020			
	Discount rate	Wage increase	Price kWh (euros)	Mortality tables
Electricity tariff	0.37%	–	2020: 0.10959 2021 :0.09152 2022: 0.10936 2023: 0.10914 2024: 0.10845 […]	PER 2020 – first segment
Length of service bonus	0.06%	1.00%	–	PER 2020 – first segment

	2019			
	Discount rate	Wage increase	Price kWh (euros)	Mortality tables
Electricity tariff	0.93%	–	2019: 0.121303 2020: 0.112917 2021: 0.118913 2022: 0.116039 2023: 0.115581 […]	PERM/F 2000P
Length of service bonus	0.47%	1.00%	–	PERM/F 2000P

b) Defined contribution plans

Serving employees of IBERDROLA and employees who retired after 9 October 1996, who are beneficiaries under the IBERDROLA pension plan with joint sponsors, are covered by an occupational, defined-contribution retirement pension system independent of the Social Security system.

In accordance with this system and IBERDROLA's Collective Bargaining Agreement, the periodic contribution to be made is calculated as a percentage of the annual pensionable salary of each employee, except for employees joining the Company after 9 October 1996, who are subject from 1 January 2020 to a contributory system where the Company pays 65% and the employee 35% (from 1 January 2019, 62.50% paid by the Company and 37.50% by the employee). For those hired after 20 July 2015 the company pays 1/3 and the employee 2/3 of the total contribution, until the date on which the employee joins the Base Salary Rating (BSR), at which point the same criterion as for employees joining after 9 October 1996 will apply. The Company finances these contributions for all of its current employees.

IBERDROLA's contributions in 2020 and 2019 were EUR 2 million and EUR 2 million, respectively, and are recognised under "Personnel expenses" in the Income statements (Note 18.3).

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c) Restructuring plans

Given the interest shown by some employees in requesting early retirement, IBERDROLA has offered them mutually agreed termination of the employment relationship through individual contract termination agreements. At 31 December 2020 and 2019, the existing provisions in this regard pertain to the following restructuring plans:

	31.12.2020		31.12.2019	
Millions of euros	Provisions	No. of contracts	Provisions	No. of contracts
2012 restructuring plan	–	1	–	1
2014 restructuring plan	3	28	6	39
2015 restructuring plan	–	–	–	1
2016 restructuring plan	–	1	–	1
2017 restructuring plan	4	12	5	13
2019 restructuring plan	1	3	1	3
2020 restructuring plan	5	10	–	–
Total	**13**	**55**	**12**	**58**

The discount to present value of the provisions is charged to the “Finance expense” heading in the Income statement.

Changes in provisions for the commitments described in the preceding section in 2020 and 2019 are as follows:

Millions of euros	2020	2019
Opening balance	**12**	**16**
Charges (Note 18.3)	5	1
Payments and other	(4)	(5)
Closing balance	**13**	**12**

The main assumptions applied in the actuarial reports drawn up to determine the provisions needed to meet the aforementioned commitments of IBERDROLA under the restructuring plans at 31 December 2020 and 2019 are as follows:

	2020		2019	
	Discount rate	CPI	Discount rate	CPI
Collective redundancy procedures and other restructuring plans	0%	0.7% - 1%	0.24%-0.26%	0.70%/1.00%

13.2 Other current and non-current provisions

The details and breakdown of these headings in the Statement of financial position in 2020 and 2019 are as follows:

Millions of euros	2020	2019
Opening balance	**234**	**229**
Charges	31	3
Charge for discount to present value (Note 18.5)	9	9
Provision surplus	(12)	(4)
Charges, payments and other	(2)	(3)
Closing balance	**260**	**234**

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14. BANK BORROWINGS AND FINANCE LEASE PAYABLES

Details of bank borrowings outstanding at 31 December 2020 and 2019, taking into account foreign exchange hedges, are as follows:

		Current	Non-current					
Millions of euros	**Balance at 31.12.2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026 and following**	**Total non-current**
Euros	1,190	1,129	13	2	–	2	44	61
Pounds sterling	236	37	37	37	37	37	51	199
Total	**1,426**	**1,166**	**50**	**39**	**37**	**39**	**95**	**260**
Accrued interest	1	1	–	–	–	–	–	–
Total	**1,427**	**1,167**	**50**	**39**	**37**	**39**	**95**	**260**

		Current	Non-current					
Millions of euros	**Balance at 31.12.2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025 and following**	**Total non-current**
Euros	1,380	1,294	24	12	1	1	48	86
Pounds sterling	293	40	40	40	40	40	93	253
Total	**1,673**	**1,334**	**64**	**52**	**41**	**41**	**141**	**339**
Accrued interest	1	1	–	–	–	–	–	–
Total	**1,674**	**1,335**	**64**	**52**	**41**	**41**	**141**	**339**

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The breakdown by maturity of future unaccrued interest payment commitments at 31 December 2020 and 2019, after factoring in the effect of exchange rate and interest rate hedges and considering that the prevailing interest rates and exchange rates remain constant through to maturity, is as follows:

Millions of euros	2021	2022	2023	2024	2025	2026 and following	Total
Pounds sterling	6	4	3	2	2	1	18
Total	**6**	**4**	**3**	**2**	**2**	**1**	**18**

Millions of euros	2021	2022	2023	2024	2025	2026 and following	Total
Euros	3	–	–	–	–	–	3
Pounds sterling	8	7	5	4	3	3	30
Total	**11**	**7**	**5**	**4**	**3**	**3**	**33**

Loans outstanding at 31 December 2020 and 2019 accrue a weighted average annual interest rate of 3.52% and 2.55%, respectively, once adjusted for the corresponding hedges.

The balances of these loans relate to the amounts drawn down and outstanding at 31 December 2020 and 2019. Additionally, at the end of 2020 and 2019 IBERDROLA had undrawn loans and credit facilities amounting to EUR 5,990 million and EUR 6,030 million, respectively, maturing between 2021 and 2025 and accruing an interbank weighted average interest rate plus 0.28%.

The most significant financial transactions carried out by IBERDROLA in 2020 are as follows:

	2020			
Transaction	Millions of euros	Currency	Option to extend	Maturity
Main transactions for extending existing financing				
Sustainable syndicated credit facility [(1)]	2,979	EUR	-	Feb 2025
Sustainable syndicated credit facility [(1)]	2,321	EUR	-	Feb 2025

(1) Second option to extend the two novated syndicated credit facilities for 1 further year in January 2018 in the amount of EUR 5,300 million. Does not entail any cash inflow.

The most significant financing transactions carried out by IBERDROLA in 2019 are as follows:

	2019			
Transaction	Millions of euros	Currency	Option to extend	Maturity
Main transactions for extending existing financing				
Sustainable syndicated credit facility	2,979	EUR	option +1 year	Feb 2024
Sustainable syndicated credit facility	2,321	EUR	option +1 year	Feb 2024

(1) Extension of the two novated syndicated credit facilities for 1 additional year in January 2018 in the amount of EUR 5,300 million. Does not entail any cash inflow.

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At 31 December 2020 and 2019, IBERDROLA was fully up to date on all its financial debt payments. Consequently, there were therefore no amounts past due prior to 31 December 2020. The terms of the IBERDROLA's borrowings include the usual covenants applied to such agreements.

In relation to covenants regarding credit ratings, IBERDROLA's funding from the European Investment Bank (EIB) amounted to EUR 237 million and EUR 292 million at 31 December 2020 and 2019, respectively. This funding may need to be renegotiated in the event of a significant rating downgrade, possibly to bring the price in line with other financing arranged with the EIB that does not include such covenants. Moreover, these transactions are likely to be declared due and payable in advance or require additional guarantees in the event of a change of control, unless the EIB does not consider the change to be detrimental to its interests.

At the date of authorisation for issue of these Financial statements, IBERDROLA was not in breach of its financial obligations or any kind of obligation that could trigger early repayment of its financial commitments. IBERDROLA considers that the covenant clauses will have no effect on the classification of borrowings as current or non-current in the Statement of financial position.

15. DERIVATIVES

The breakdown of balances at 31 December 2020 and 2019, including valuation of derivative financial instruments at those dates, is as follows:

Millions of euros	2020				2019			
	Current		Non-current		Current		Non-current	
With non-Group third parties	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
INTEREST RATE HEDGES:								
Cash flow hedges								
Interest rate swaps	–	(1)	–	–	–	(3)	–	(1)
Fair value hedges								
Interest rate swaps	–	1	–	–	–	2	–	–
EXCHANGE RATE HEDGES:								
Cash flow hedges								
Currency forwards	6	(1)	–	–	–	(1)	–	–
Fair value hedges								
Currency swaps	22	(40)	6	–	10	2	66	(26)
Hedging of net investment abroad								
Currency swaps	(1)	–	4	–	–	–	–	–
Currency forwards	12	(6)	–	–	32	–	–	–
NON-HEDGING DERIVATIVES:								
Exchange rate derivatives								
Currency forwards	1	–	–	–	10	–	15	–
Commodities derivatives								
Other	–	–	–	–	–	–	28	–
Total	**40**	**(47)**	**10**	**–**	**52**	**–**	**109**	**(27)**

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Millions of euros	2020				2019			
With group companies and associates	Current		Non-current		Current		Non-current	
	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
EXCHANGE RATE HEDGES:								
Cash flow hedges								
Currency forwards	–	–	5	–	1	–	12	–
NON-HEDGING DERIVATIVES:								
Exchange rate derivatives								
Currency forwards	–	(1)	–	–	2	–	6	(11)
Total	**–**	**(1)**	**5**	**–**	**3**	**–**	**18**	**(11)**

The maturity schedule of the notional values of derivative instruments arranged by IBERDROLA and outstanding at 31 December 2020 is as follows:

Millions of euros	2021	2022	2023	2024	2025 and following	Total
INTEREST RATE HEDGES:						
Cash flow hedges						
Interest rate swaps	83	–	–	–	–	83
Fair value hedges						
Interest rate swaps	75	–	–	–	–	75
EXCHANGE RATE HEDGES:						
Cash flow hedges						
Currency forwards	386	–	–	–	263	649
Fair value hedges						
Currency swaps	887	–	19	–	–	906
Hedging of net investment abroad						
Currency swaps	–	–	167	–	–	167
Currency forwards	618	–	–	–	–	618
NON-HEDGING DERIVATIVES:						
Exchange rate derivatives						
Currency forwards	13	7	–	–	–	20
Total	**2,062**	**7**	**186**	**–**	**263**	**2,518**

The information presented in the table above includes notional amounts of derivative financial instruments arranged in absolute terms (without offsetting assets and liabilities or purchase and sale positions) and, therefore, which do not involve a risk assumed by IBERDROLA since this amount only records the basis on which the calculations to settle the derivative are made.

The nominal value of the liabilities for which foreign exchange hedges have been arranged is as follows:

	2020		
Millions of	US dollars	Japanese Yen	Pounds sterling
Type of hedge			
Fair value	600	3,000	325
Cash flows	364	–	–

	2019		
Millions of	US dollars	Japanese Yen	Pounds sterling
Type of hedge			
Fair value	600	3,000	500
Cash flows	375	–	–

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IBERDROLA also engages in interest rate hedging transactions as part of its risk management policy. The purpose of these transactions is to offset the effect that fluctuations in interest rates could have on future cash flows from loans and borrowings with floating rates of interest and on the fair value of fixed-rate loans and borrowings.

The par value of the most significant liabilities for which interest rate hedges have been arranged is as follows:

	2020	
Millions of	**Euros**	**Pounds sterling**
Type of hedge		
Fair value	75	–
Cash flows	–	75

	2019	
Millions of	**Euros**	**Pounds sterling**
Type of hedge		
Fair value	75	–
Cash flows	60	75

16. INFORMATION ON AVERAGE PAYMENT PERIOD TO SUPPLIERS. THIRD ADDITIONAL PROVISION. "REPORTING REQUIREMENT" OF LAW 15/2010 OF 5 JULY

The required information for 2020 and 2019 breaks down as follows:

Number of days	**2020**	**2019**
Average payment period to suppliers	25.0	24.7
Paid transactions ratio	25.2	24.7
Outstanding transactions ratio	22.0	25.3
Millions of euros	**2020**	**2019**
Total payments made	405	597
Total payments due	32	33

The information in the table above has been prepared in accordance with Law 15/2010 of 5 July, amending Law 3/2004 of 29 December, establishing measures to combat late payments in commercial operations and in accordance with the Resolution of 29 January 2016 of Instituto de Contabilidad y Auditoría de Cuentas (Spanish Institute of Accounting and Auditing) on the information to be included in the Notes to the Financial statements in relation to late payments to suppliers in commercial transactions. This information has been drawn up on the basis of the following specifications:

- Ratio of paid operations: amount in days of the ratio between the sum of the products of each of the transactions paid by the number of payment days, and the total amount of payments made during the year.

- Ratio of outstanding payment operations: amount in days of the ratio between the sum of the products of each of the outstanding payment transactions by the number of unpaid days, and the total amount of outstanding payments.

- Suppliers: trade payables generated from debts with suppliers of goods or services included in the current liabilities heading of the Statement of financial position.

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- Property, plant and equipment and finance lease suppliers are excluded from this information.

- Taxes, levies, indemnifications and certain other headings are likewise excluded from this information since they do not qualify as trade transactions.

17. TAXES

17.1 Public entities

The breakdown of taxes receivable and payable in the Statement of financial position at 31 December 2020 and 2019 is as follows:

Millions of euros	2020	2019
Taxes receivable		
VAT	29	–
Corporate income tax	248	99
Withholdings	1	1
Total	**278**	**100**
Taxes payable		
VAT	41	25
Withholdings	4	5
Other taxes	1	1
Social Security	1	1
Total	**47**	**32**

17.2 Income tax

IBERDROLA is the parent company of two tax consolidation groups in Spain: group 2/86 for the whole of Spain and group 02415BSC in Biscay. Up until 2019, IBERDROLA was part of the former, but became part of the latter in 2020 due to legislative changes affecting the Company at individual level.

Group 2/86 consists of 82 companies, while group 02415BSC consists of 24 companies.

In the years prior to 2020, IBERDROLA was involved in a series of corporate restructuring arrangements under the special tax neutrality regime provided for in Chapter VII, Title VII of Spanish Income Tax Law 27/2014 of 27 November. The disclosures required under this law are provided in the Notes to the Financial statements for the years when those transactions were carried out.

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The reconciliation between the parent company's accounting profit and its taxable profit for income tax purposes in 2020 and 2019 is as follows:

	2020	
Millions of euros	**Income statement Increases/(decreases)**	**Income and expense recognised directly in equity Increases/(decreases)**
Income and expenses for the year	2,292	7
Income tax	(39)	4
Permanent differences	(2,444)	–
Temporary differences:	–	–
Arising in the year	(286)	1
Arising in prior years	(64)	(12)
Taxable base (tax result)	**(541)**	**–**

	2019	
Millions of euros	**Income statement Increases/(decreases)**	**Income and expense recognised directly in equity Increases/(decreases)**
Income and expenses for the year	2,849	–
Income tax	(36)	–
Permanent differences	(3,049)	–
Temporary differences:	–	–
Arising in the year	14	10
Arising in prior years	(32)	(11)
Taxable base (tax result)	**(254)**	**(1)**

Permanent differences are due to dividends received (Note 18.1), to changes in valuation adjustments on holdings in Group companies and associates for which no deferred tax asset was recognised (Note 10), and to other expenses that do not qualify as tax-deductible.

The most relevant temporary difference derives from the tax treatment of goodwill arising on the acquisition of equity securities and the tax effect of expenses recognised for pension commitments, and the cost of restructuring plans and other provisions.

17.3 Income tax expense

The breakdown between current and deferred income tax is as follows:

	2020	
Millions of euros	**Income statement**	**Income and expense recognised directly in equity**
Effective tax (Income)/Expense		
Current	(80)	–
Deferred	41	4
Total	**(39)**	**4**

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Millions of euros	2019	
	Income statement	Income and expense recognised directly in equity
Effective tax (Income)/Expense		
Current	(52)	–
Deferred	16	–
Total	**(36)**	**–**

Income tax expense for 2020 and 2019 is as follows:

Millions of euros	2020	2019
Accounting profit before tax	2,253	2,813
Permanent differences	(2,444)	(3,049)
Adjusted accounting profit	**(191)**	**(236)**
Gross tax	(46)	(59)
Deductions [(a)]	(1)	(1)
Adjustment of deferred tax assets and liabilities	(17)	(3)
Other [(b)]	25	27
Income tax expense/(income)	**(39)**	**(36)**

(a) Tax credits accredited by IBERDROLA mainly relate to relief on certain business activities.

(b) In 2020 and 2019 this item related mainly to corporate income tax paid abroad and the posting of provisions.

17.4 Deferred taxes

Changes in “Deferred tax assets” and “Deferred tax liabilities” in 2020 and 2019 are as follows:

Millions of euros	01.01.2020	Credit (charge) to the Income statement	Credit (charge) to “Other reserves”	Credit (charge) to “Valuation adjustments”	31.12.2020
Deferred tax assets:					
Measurement of derivative financial instruments:					
Cash flow hedges	18	–	–	(3)	15
Pensions and similar commitments	75	(10)	(1)	–	64
Tax credits for losses and deductions	222	(6)	–	–	216
Other deferred tax assets	32	(6)	–	–	26
Total	**347**	**(22)**	**(1)**	**(3)**	**321**

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Millions of euros	01.01.2019	Credit (charge) to the Income statement	Credit (charge) to "Other reserves"	Credit (charge) to "Valuation adjustments"	31.12.2019
Deferred tax assets:					
Measurement of derivative financial instruments:					
Cash flow hedges	20	–	–	(2)	18
Pensions and similar commitments	75	(2)	2	–	75
Tax credits for losses and deductions	241	(19)	–	–	222
Other deferred tax assets	33	(1)	–	–	32
Total	**369**	**(22)**	**2**	**(2)**	**347**

Millions of euros	01.01.2020	Credit (charge) to the Income statement	Credit (charge) to "Valuation adjustments"	31.12.2020
Deferred tax liabilities:				
Measurement of derivative financial instruments:				
Cash flow hedges	12	–	–	12
Accelerated depreciation	7	–	–	7
Deferred amounts associated with financial goodwill (art.12.5)	675	45	–	720
Other deferred tax liabilities	39	(26)	–	13
Total	**733**	**19**	**–**	**752**

Millions of euros	01.01.2019	Credit (charge) to the Income statement	Credit (charge) to "Valuation adjustments"	31.12.2019
Deferred tax liabilities:				
Measurement of derivative financial instruments:				
Cash flow hedges	12	–	–	12
Accelerated depreciation	7	–	–	7
Deferred amounts associated with financial goodwill (art.12.5)	675	–	–	675
Other deferred tax liabilities	45	(6)	–	39
Total	**739**	**(6)**	**–**	**733**

The breakdown of taxable income generated by the tax group by business in 2020 and 2019 is as follows:

Millions of euros	31.12.2020 (*)	31.12.2019 (*)
Liberalised business – Spain	(109)	894
Renewables business – Spain	13	264
Networks business – Spain	887	3
Other businesses	(1)	(210)
Corporation	(580)	(298)
Total	**210**	**653**

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Corporate income tax credits and debits at the end of 2020 and 2019 by business between the companies belonging to the tax group are as follows:

Millions of euros	31.12.2020 (*)	31.12.2019 (*)
Liberalised business – Spain	(16)	37
Renewables business – Spain	2	28
Networks business – Spain	101	–
Other businesses	–	(38)
Corporation	(103)	(106)
Total	**(16)**	**(79)**

(*) Amounts of taxable income, credits and debits pertaining to the tax group in which Iberdrola, S.A. is included in each of the years concerned.

17.5 Administrative proceedings

In June 2020, the Spanish tax authority (AEAT) instigated a partial tax inspection (of the period 2012 to 2014) and a general tax inspection (of the period 2015 to 2017) for the main corporate taxes applicable to IBERDROLA Group entities in the consolidated tax group for Spain (no. 2/86).

At year end 2020, these inspection procedures are still ongoing, with the resulting proposed tax assessments and agreements/disputes estimated to be submitted in 2021 and 2022.

17.6 Tax litigation

Among its principles, IBERDROLA seeks to build stronger ties with the tax authorities, based on respect for the law, loyalty, trust, professionalism, collaboration, reciprocation and good faith, notwithstanding any legitimate disputes that may arise due to the interpretation of tax rules. Therefore, when such disputes do arise, IBERDROLA cooperates fully with the authorities, in accordance with the principles of transparency and mutual trust.

All IBERDROLA actions have been analysed by its internal and external advisors, both for this year and for preceding years, and they have determined that these actions have been carried out in accordance with the law and are based on the reasonable interpretation of tax law. The occurrence of contingent liabilities has also been subject to analysis. IBERDROLA generally makes provision for tax litigation when the risk of it being detrimental to its interests is probable, and makes no provision when the risk is possible or remote.

In June 2020 IBERDROLA was notified of the rulings of the Central Tax Appeals Board (TEAC) on the appeals lodged in relation to tax assessments disputed in 2016, arising from the general tax inspection of the consolidated tax group in Spain (no. 2/86) for the period 2008 to 2011.

As regards VAT, the TEAC found in favour of IBERDROLA (rendering the assessments and disagreements null and void), but ruled against the Company in its corporate income tax decision. On 7 July 2020 IBERDROLA appealed these rulings to the Spanish National High Court (*Audiencia Nacional*).

The main adjustments included in the settlement agreements resulting from contested tax assessments related to the quantification of goodwill, subject to tax amortisation and depreciation, for the acquisition of SCOTTISH POWER, the elimination of the exemption applicable to SCOTTISH POWER's dividends received, as the Tax Authority considers that this exemption is incompatible with valuation adjustments for net investment hedges, differences in tax consolidation criteria and the possible existence of circumstances established in Section 15.1 of Spain's General Tax Law in a debtor-swap operation in a number of debt issues.

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Additionally, in December 2020 IBERDROLA was notified of the rulings of the Central Tax Appeals Board (TEAC) on the appeals lodged in relation to tax assessments disputed in 2016, arising from the limited tax inspection of the period 2012 to 2014. The dispute with the public administration focuses on the applicability of the temporary imputation standard established in numerous Supreme Court decisions regarding income received by the Group, resulting from payments made based on rules contrary to law.

This ruling of December 2020 partially upholds IBERDROLA's arguments, accepting its criteria insofar as the taxes declared to be unconstitutional are concerned. IBERDROLA will, in due time and form, appeal the remaining disputed assessments to the National High Court.

The IBERDROLA Group's directors and their tax consultants consider that the current inspection process will not give rise to further material liabilities for the IBERDROLA Group beyond those already recognised at 31 December 2020.

17.7 Other

Update of the financial goodwill situation (Section 12.5 of the Consolidated Text of the Corporate Income Tax Act (Texto Refundido de la Ley del Impuesto sobre Sociedades) (TRLIS)):

No significant changes took place during the period. In previous years, the Spanish authorities applied the aid and grants retrieval procedure envisioned in the General Tax Act, thus recovering from the IBERDROLA Group, in accordance with Section 12.5 of the TRLIS, the sum of EUR 665 million (EUR 576 million in principal and EUR 89 million in late payment interest). IBERDROLA settled the required amount by (i) offsetting part of it against the EUR 363 million received under the 2016 income tax rebate; and (ii) paying EUR 302 million in February 2018. In this case, the Spanish authorities believed that IBERDROLA was subject to Decision Three of the European Commission.

Said amount, in the proportion corresponding to Iberdrola S.A., has been recognised in "Non-current trade and other receivables" in the Statement of financial position. The assets show the amount recoverable from the government for corporate income tax insofar as in the view of IBERDROLA the payments made are higher than the current tax whose recoverability is considered to be probable, subject to the final outcome of the appeals submitted against the three European Commission decisions.

Moreover, the application of the incentive provided in Section 12.5 of the TRLIS generated a taxable temporary difference, resulting in the subsequent recognition of the deferred tax liability recognised. Therefore, if the outcome is ultimately contrary to the Company's interests (something we consider unlikely based on the information currently available), the impact on equity would by substantially mitigated.

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18. INCOME AND EXPENSES

18.1 Revenue

The breakdown of this heading in the Income statements for 2020 and 2019, by category and geographical market, is as follows:

2020		European Union		
Millions of euros	Spain	Euro zone	Other countries	Total
Income from market adjustment of gas contracts	–	–	3	3
	–	**–**	**3**	**3**
Finance income from equity investments in group companies and associates (Notes 10 and 23.2)	1,103	8	1,338	2,449
Finance income from marketable securities and other financial instruments of group companies and associates (Note 23.2)	9	10	2	21
Income from services rendered to group companies (Note 23.2)	265	11	98	374
	1,377	**29**	**1,438**	**2,844**
Total	**1,377**	**29**	**1,441**	**2,847**

2019		European Union			
Millions of euros	Spain	Euro zone	Non-euro zone	Other countries	Total
Gas [1]	392	–	–	–	**392**
Other	2	–	–	–	**2**
Income from market adjustment of gas contracts	–	–	–	28	**28**
	394	**–**	**–**	**28**	**422**
Finance income from equity investments in group companies and associates (Notes 10 and 23.2)	1,871	10	1,595	396	**3,872**
Finance income from marketable securities and other financial instruments of group companies and associates (Note 23.2)	8	9	1	–	**18**
Income from services rendered to group companies (Note 23.2)	139	2	54	61	**256**
	2,018	**21**	**1,650**	**457**	**4,146**
Total	**2,412**	**21**	**1,650**	**485**	**4,568**

[1] The amount in Spain relates mainly to sales to Iberdrola Generación España S.A.U.

On 20 June 2019, Iberdrola, S.A., Iberdrola Generación, S.A.U. and Iberdrola Generación España, S.A.U. reached an agreement with Pavilion Energy Trading & Supply Pte. Ltd. (Pavilion) for the assignment of their contractual position in the portfolio of long-term liquefied natural gas (LNG) supply contracts, maritime transportation and use of gas infrastructure, and other ancillary contracts related to the supply of LNG. The transaction closed on 1 January 2020.

In 2019 IBERDROLA recognised, at their fair value, LNG supply contracts that had not been previously recognised in the Financial statements until the gas was delivered, on the understanding that as at the execution date the requirements justifying the application of the own use criteria had not been met. Consequently, IBERDROLA recognised income amounting to EUR 28 million under “Revenue” in the Income statement for 2019.

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18.2 Supplies

This heading of the Income statement for 2020 and 2019 breaks down as follows:

Millions of euros	2020	2019
Gas purchases	–	392
European Union	–	178
Other countries	–	214
Other purchases	1	1
Total	**1**	**393**

18.3 Employee benefits expense

This heading of the Income statement for 2020 and 2019 breaks down as follows:

Millions of euros	2020	2019
Social security payable by the company	12	11
Charge to provisions for pensions and similar commitments	(18)	3
Defined contributions for the outsourced pension plan	2	2
Remuneration stipulated in Art. 48.1 of the By-Laws	17	17
Remuneration stipulated in Art. 48.4 of the By-Laws	5	9
Other employee expenses	(1)	–
Total	**17**	**42**

18.4 Operating leases

The “External services” heading of the Income statements includes operating lease payments totalling EUR 7 million and EUR 12 million for 2020 and 2019 respectively. Total non-discounted future minimum payments under non-cancellable operating leases outstanding at 31 December 2020 and 2019 are as follows:

Millions of euros	2020
2021	7
2022	6
2023	5
2024	5
2025	3
2026 onwards	2
Total	**28**

Millions of euros	2019
2020	7
2021	7
2022	6
2023	5
2024	4
2025 onwards	5
Total	**34**

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18.5 Finance expenses

This account breaks down as follows in 2020 and 2019:

Millions of euros	2020	2019
Finance expenses related to liabilities at amortised cost:		
With third parties	11	15
With group companies and associates	135	183
Increase/(decrease) in finance expenses from fair value interest rate hedges	(27)	(58)
Increase/(decrease) in finance expenses from cash flow interest rate hedges	3	3
Increase/(decrease) in finance expenses from discontinued hedges	4	4
Other finance expenses	6	7
Discount to present value of provisions (Note 13)	11	12
Total	**143**	**166**

18.6 Finance income

This account breaks down as follows in 2020 and 2019:

Millions of euros	2020	2019
Finance income related to assets at amortised cost:		
Other finance income	23	1
Total	**23**	**1**

18.7 Change in fair value of financial instruments

This account breaks down as follows in 2020 and 2019:

Millions of euros	2020	2019
Fair value measurement of:		
Non-hedging derivatives	(21)	1
Hedging of net investment abroad	(12)	(11)
Inefficiencies in cash flow hedges	22	9
Total income/(expense)	**(11)**	**(1)**

18.8 Exchange differences

The breakdown of exchange gains/losses in the Income statement for 2020 and 2019 is as follows:

Millions of euros	2020	2019
For transactions pending settlement at year end	8	(2)
For transactions not settled during the year	6	(9)
Total income/(expense)	**14**	**(11)**

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18.9 Employees

The average number of employees at IBERDROLA in 2020 and 2019, by professional category, is as follows:

	2020	2019
Honours graduates	615	605
Graduates	55	45
Other	74	74
Total	**744**	**724**

The distribution of IBERDROLA's workforce by gender at the end of 2020 and 2019, by category, is as follows:

	2020			2019		
	Female	Male	Total	Female	Male	Total
Honours graduates	269	364	633	255	348	603
Graduates	28	32	60	23	25	48
Other	61	18	79	56	15	71
Total	**358**	**414**	**772**	**334**	**388**	**722**

In 2020, there were two IBERDROLA employees with a disability greater than or equal to 33 per cent (one employee in 2019).

Legislative Royal Decree 1/2013 of 29 November, enacting the Revised Text of the General Law on the Rights of Persons with Disabilities and their Social Inclusion, requires public and private companies employing 50 or more workers to have jobs reserved for people with disabilities for at least 2% of their workforce.

As IBERDROLA does not meet this reserve, it has opted for a number of alternative measures established by the Royal Decree 364/2005 of 8 April which, on an exceptional basis, governs alternative compliance with the reserve in favour of employees with disabilities. The alternative measures that may be applied by corporations to meet the obligation of an employment reserve in favour of employees with disabilities are as follows:

- A corporate or civil contract with a special employment centre, or with a freelancer with a disability, to supply raw materials, machinery, equipment goods or any other kind of merchandise required for normal operation of the business of companies taking up this measure.

- Donations and sponsorships, always in a monetary format, to enable employment insertion activities to be carried out and jobs to be created for people with disabilities, when the organisation benefiting from these actions is a foundation or a public-interest association the purpose of which is, among other aspects, professional training, employment insertion or the creation of jobs for people with disabilities.

- Creation of a work enclave, after signing the corresponding contract with a special employment centre, in accordance with Royal Decree 290/2004 of 20 February, regulating work enclaves as a means of fostering employment opportunities for people with disabilities.

To fulfil the reserve requirement, IBERDROLA signed contracts with special employment centres to provide services that are ancillary to its usual business in 2020 and 2019.

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19. GUARANTEE COMMITMENTS WITH THIRD PARTIES

IBERDROLA and its subsidiaries are required to provide the bank or corporate guarantees associated with the normal management of the company's activities.

IBERDROLA also extends guarantees to third parties vis-á-vis Iberdrola Energía Internacional, S.L. in some of its commitments relating to the construction and commissioning of its offshore renewable wind farms, and vis-á-vis Iberdrola España S.A.U. in gas purchase and sale agreements in the Generation business.

In 2016, IBERDROLA disputed tax assessments in relation to corporate income tax for the years 2008 to 2011 and value added tax for 2010 and 2011. IBERDROLA filed the corresponding appeals with the Central Tax Appeals Board, seeking the automatic suspension of the enforcement of the tax settlements by furnishing the necessary bank guarantees. In June 2020, IBERDROLA was notified of the court's resolutions dismissing its claims. Contentious-administrative appeals were subsequently lodged against those decisions before the National High Court (filed on 7 July 2020) and suspension of enforcement of the settlements and the guarantees posted for that purpose remain in effect for the time being (Note 17).

IBERDROLA also guarantees the following Group companies: Iberdrola Finanzas, S.A.U., Iberdrola Finance Ireland, DAC, Iberdrola International, B.V. and Iberdrola Financiación, S.A.U., for their various bonds issues and commercial paper, and bank financing and the arrangement of derivatives (ISDA), and for I-DE Redes Eléctricas Inteligentes, S.A.U. (formerly, Iberdrola Distribución Eléctrica, S.A.U.) for financing from the European Investment Bank (EIB).

IBERDROLA considers that any liabilities additional to those existing at 31 December 2020 and 2019 arising from any guarantees extended at 31 December 2020 and 2019 would not be significant.

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20. REMUNERATION OF THE BOARD OF DIRECTORS

20.1 By-law stipulated remuneration in 2020

Article 48 of IBERDROLA's By-Laws provides that the Company shall annually allocate as a bylaw-mandated expense an amount equal to a maximum of 2% of the profit obtained by the consolidated Group during the financial year.

As proposed by the Remuneration Committee, the Board of Directors has resolved to propose to the shareholders at the General Shareholders' Meeting a bylaw-mandated allocation of EUR 17 million in 2020; the same amount as in the previous five financial years.

These amounts have been recognised under "Personnel expenses" in the Income statement (Note 18.3).

a) Fixed remuneration and attendance bonuses

The fixed annual remuneration and attendance bonuses payable to board and committee members in their capacity as such in 2020 and 2019, are as follows:

	Fixed remuneration	Attendance bonus
Millions of euros	2020	2019
Chairman of the Board	0.567	0.004
Vice-Chair of the Board and committee chairs	0.440	0.004
Committee members	0.253	0.002
Board members	0.165	0.002

b) Remuneration of the executive directors for their executive duties

The Board of Directors resolved to maintain the fixed remuneration for the chairman & CEO in 2020 at EUR 2.250 million. It also decided to maintain the existing cap on variable annual remuneration at EUR 3.250 million, which will be paid, if approved, in 2021.

The Board of Directors approved fixed annual remuneration of EUR 1.000 million in 2020 for the Business CEO and set a cap of EUR 1.000 million on the variable annual remuneration thereof, to be paid, if approved, in 2021.

c) Remuneration paid and accrued by the directors of the Company

The fixed remuneration individually accrued by the members of the Board of Directors was as follows in 2020 and 2019, respectively:

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Millions of euros	Salaries	Fixed remuneration (1)	Remuneration for membership of committees (1)	Attendance bonus	Short-term variable remuneration (3)	Remuneration in kind	Total 2020	Total 2019
Chairman of the Board								
José Ignacio Sánchez Galán	2.250	0.567	–	0.100	3.250	0.075	6.242	6.231
Vice-Chair of the Board and committee chairs								
Juan Manuel González Serna	–	0.165	0.275	0.094	–	0.002	0.536	0.486
María Helena Antolín Raybaud	–	0.165	0.275	0.050	–	0.006	0.496	0.499
Xabier Sagredo Ormaza	–	0.165	0.275	0.062	–	0.003	0.505	0.474
Sara de la Rica Goiricelaya	–	0.165	0.171	0.046	–	0.003	0.385	0.218
Committee members								
Iñigo Víctor de Oriol Ibarra	–	0.165	0.088	0.056	–	0.005	0.314	0.310
Samantha Barber	–	0.165	0.192	0.088	–	0.001	0.446	0.524
José Walfredo Fernández	–	0.165	0.088	0.040	–	0.001	0.294	0.294
Manuel Moreu Munaiz	–	0.165	0.088	0.070	–	0.002	0.325	0.315
Francisco Martínez Córcoles (2)	1.000	0.165	–	0.018	1.000	0.033	2.216	2.215
Anthony Luzzatto Gardner	–	0.165	0.088	0.034	–	0.001	0.288	0.284
Nicola Mary Brewer	–	0.123	0.066	0.022	–	0.001	0.212	–
Regina Helena Jorge Nunes	–	0.123	0.066	0.026	–	0.001	0.216	–
Angel Jesús Acebes Paniagua	–	0.032	0.018	0.010	–	0.001	0.061	0.073
Outgoing directors								
Inés Macho Stadler	–	0.042	0.070	0.028	–	0.001	0.141	0.519
Georgina Kessel Martínez	–	0.132	0.071	0.034	–	0.001	0.238	0.326
Denise Mary Holt	–	0.042	0.022	0.014	–	–	0.078	0.294
Total	**3.250**	**2.711**	**1.853**	**0.792**	**4.250**	**0.137**	**12.993**	**13.062**

(1) Remuneration accrued in 2020 in relation to the time effectively spent in office. This amount will not be paid until the approval of 2020 Annual Financial Statements at the 2021 General Shareholders' Meeting.

(2) Only member of the Board of Directors who has no responsibilities on one or more of the five committees attached to the Board.

(3) Amount relates to variable remuneration received in 2020, based on achievement of targets and personal performance in 2019.

d) Civil liability insurance

The premium paid to cover directors' civil liability insurance amounted to EUR 0.319 million and EUR 0.094 million in 2020 and 2019, respectively.

e) Others

The expenses of the Board of Directors in relation to external services and other items amounted to EUR 4.514 million and EUR 1.932 million in 2020 and 2019, respectively.

In 2020 and 2019, a total of EUR 0.116 million and EUR 0.088 million, respectively, was received in premium refunds due to the annual adjustment of the pension insurance policies relating to former members of the Board of Directors.

In 2020, a total of EUR 0.710 million was recognised under bylaw-mandated allocations not allocated in previous years.

20.2 Remuneration through the delivery of Company shares

At the General Shareholders' Meeting held on 31 March 2017 the shareholders approved the *2017-2019 Strategic Bonus* as a long-term incentive pegged to the Company's performance in relation to certain key parameters (Note 12).

The first of these three annual payments was made during the first half of 2020. The chairman & CEO received a total of 633,333 IBERDROLA shares and the Business CEO was awarded a total of 100,000 shares.

20.3 Remuneration for membership of other committees

Remuneration received by executive directors who held the position of director in 2020 at companies that are not wholly owned, directly or indirectly, by IBERDROLA, amounted to EUR 0.307 million.

20.4 Law 11/2018: Non-financial and diversity information

The average remuneration received by directors (excluding remuneration in the form of Company shares) in 2020 and 2019 was as follows, by type and by gender:

	2020		2019	
Millions of euros	Male	Female	Male	Female
Executive	4.383	–	4.374	–
Independent and other external	0.375	0.381	0.358	0.413

20.5 Severance clauses

Severance clauses for executive directors are described in paragraph C.1.39 of the Annual Corporate Governance Report included in the Management Report.

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21. INFORMATION REGARDING COMPLIANCE WITH SECTION 229 OF THE SPANISH COMPANIES ACT

As established in Section 229 of the Spanish Companies Act (*Ley de Sociedades de Capital*), as introduced by Royal Decree-Law 1/2010 of 2 July 2010, and in Law 31/2014 of 3 December 2014, amending the Spanish Companies Act to improve corporate governance, set forth below are the conflicts of interest that the directors have encountered.

The chairman & CEO and the Business CEO were absent during the deliberation of all resolutions related to their system of remuneration and assurance.

Mr Sagredo Ormaza left the room during deliberations on the resolutions involving Kutxabank, S.A., specifically as regards the hiring of Norbolsa Sociedad de Valores, S.A. as agent in relation to the *Iberdrola Flexible Remuneration* optional dividend system.

22. REMUNERATION OF SENIOR MANAGEMENT

Senior managers are those who answer directly to the Company's Board of Directors, its chairman & CEO, and in all cases to the director of the Internal Audit area, as well as any other officer directed by the Board of Directors.

At 31 December 2020, senior management was made up of nine members.

Personnel expenses relating to senior management amounted to EUR 13.1 million and EUR 12.9 million in 2020 and 2019, respectively, and are recognised under "Personnel expenses" in the Income statement for those years.

The remuneration and other benefits received by senior management in 2020 and 2019, respectively, are as follows:

Millions of euros	2020	2019
Remuneration in cash	4.5	4.9
Variable remuneration	5.8	5.3
Remuneration in kind and payments on account not charged	0.4	0.4
Social Security	0.1	0.1
Employer's contribution to pension plan / employee benefits insurance	1.1	1.1
Risk policy (death and permanent disability)	1.2	1.1
Total	**13.1**	**12.9**

In 2020 and 2019, senior officers who sat on the boards of companies that were not wholly owned by IBERDROLA, whether directly or indirectly, received EUR 0.8 million and EUR 1.1 million, respectively, from those companies.

In the first half of 2019, the third of the three annual payments under the *2014-2016 Strategic Bonus* was made (Note 12), once it had been confirmed that the recipients were eligible for the remuneration. Members of senior management received a total of 418,340 shares under this payment.

In the first half of 2020, the first of the three annual payments under the *2017-2019 Strategic Bonus* was made (Note 12) once the level of achievement of the relevant targets had been calculated. As a result, members of senior management received a total of 533,329 shares.

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The General Shareholders' Meeting of 2 April 2020 agreed upon the *2020-2022 Strategic Bonus* (see Note 12), pegged to the Company's performance over the 2020-2022 horizon. The bonus is aimed at 300 beneficiaries and seeks to reward financial, business and sustainable development performance. An expected 1,584,000 shares will be delivered over three years to senior managers, depending on their success in attaining the targets.

Severance clauses for members of senior management and other executive officers are described in paragraph C.1.39 of the Annual Corporate Governance Report, included within the Management Report.

In 2020 and 2019, there were no further transactions concluded with senior officers.

23. RELATED-PARTY TRANSACTIONS AND BALANCES

The following transactions take place within the normal course of business and are carried out under normal market conditions.

23.1 IBERDROLA balances with group companies and associates

a) Financial balances with group companies and associates

Loans to Group companies and associates

Current and non-current "Loans to group companies and associates" in the Statement of financial position at 31 December 2020 and 2019 are as follows:

	2020			2019		
Millions of euros	**Current**	**Non-current**	**Total**	**Current**	**Non-current**	**Total**
Avangrid, Inc (USD)	–	2,447	2,447	–	–	–
ScottishPower Renewable Energy, Ltd.	22	11	33	21	32	53
Unpaid accrued interest	7	–	7	4	–	4
Total	**29**	**2,458**	**2,487**	**25**	**32**	**57**

On 14 December 2020, IBERDROLA granted Avangrid Inc. a loan for a nominal amount of USD 3 billion. This loan will mature occur when the first of the following events occurs: (i) the Company exercises its right to subscribe to any capital increase that the borrower may undertake; (ii) the existence of a change of control over the borrower; (iii) where the loan is no longer needed due to a change in the borrower's business plan. The loan bears interest at market rates.

The above transactions are denominated in euros, except where a different currency is specified.

The average nominal interest rate on these loans was 0.46% and 0.76% at 31 December 2020 and 2019, respectively.

The maturity schedule for the loans is as follows:

Years	Millions of euros
2021	29
2022	11
2025 and following	2,447
Total	**2,487**

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Other financial assets/liabilities with Group companies and associates

Current and non-current "Other financial assets" and "Other financial liabilities" with Group companies and associates in the Statement of financial position at 31 December 2020 and 2019 are as follows:

	2020		2019	
Millions of euros	**Receivables**	**Payables**	**Receivables**	**Payables**
Non-current				
Iberdrola Finance Ireland, DAC	–	90	–	101
Iberdrola Financiación, S.A.U.	–	5,464	–	3,000
Iberdrola Finanzas, S.A.U.	–	794	–	925
Iberdrola International, B.V.	–	861	–	940
Total	**–**	**7,209**	**–**	**4,966**

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Millions of euros	2020 Receivables	2020 Payables	2019 Receivables	2019 Payables
Current				
Ailes Marine, S.A.S.	61	–	–	–
Avangrid, Inc. (US dollars)	91	–	99	–
Baltic Eagle Gmbh	–	23	42	–
Eolicas de Euskadi, S.A.U.	–	50	–	54
Fincalia Agropecuaria Siglo XXI, S.L.	–	1	36	–
Hidrola I, S.L.U.	–	482	669	22
I_DE Redes Eléctricas Inteligentes, S.A.U.	–	154	157	–
Iberdrola Clientes Internacional, S.L.	–	15	245	–
Iberdrola Clientes, S.A.U.	–	20	–	214
Iberdrola Cogeneración, S.L.U.	–	5	–	31
Iberdrola Comercialización de Último Recurso, S.A.U.	60	–	36	–
Iberdrola Energie France, S.A.S.	7	–	38	–
Iberdrola España, S.A.U.	–	401	–	451
Iberdrola Financiación, S.A.U.	–	1,302	–	4,354
Iberdrola Finanzas, S.A.U.	–	200	–	23
Iberdrola Generación España, S.A.U.	–	938	–	50
Iberdrola Generación Nuclear, S.A.U.	–	282	–	281
Iberdrola Generación S.A.U.	–	61	253	–
Iberdrola Generación Térmica, S.L.U.	–	18	91	–
Iberdrola Inmobiliaria, S.A.	–	113	–	147
Iberdrola International, B.V.	–	10	–	94
Iberdrola Inversiones 2010, S.A.U.	–	48	–	41
Iberdrola Participaciones, S.A.U.	–	978	115	–
Iberdrola Re, S.A.	–	139	–	130
Iberdrola Renovables Andalucía, S.A.U.	24	–	–	37
Iberdrola Renovables Castilla y León, S.A.	–	80	–	110
Iberdrola Renovables Castilla-La Mancha, S.A.U.	18	–	–	58
Iberdrola Renovables Deutschland, GmbH.	3	–	73	–
Iberdrola Renovables Energía, S.A.U.	–	248	–	53
Iberdrola Renovables France, SAS	1	–	60	–
Iberdrola Renovables Galicia, S.A.U.	–	17	–	85
Iberdrola Renovables Internacional, S.L.	–	30	–	177
Iberdrola Renovables Offshore Deutschland, GmbH.	–	247	–	153
Iberenova Promociones, S.A.U.	–	5	–	36
Inversiones Financieras Perseo, S.L.	–	49	–	20
Parep 1 PTY, Ltd.	–	46	–	–
Proyecto Núñez de Balboa, S.L.	–	14	108	–
Scottish Power, Ltd. (pounds sterling)	148	–	65	–
Other	102	333	194	252
Accrued interest	–	77	–	74
Total	**515**	**6,386**	**2,281**	**6,947**

Except for the loans granted by Iberdrola International B.V., Iberdrola Finance Ireland, DAC., Iberdrola Financiación, S.A.U. and Iberdrola Finanzas, S.A.U. mentioned below, most of the balances arose under normal transactions related to IBERDROLA's own cash management process. These balances have no set maturity and they accrue interest pegged to market rates that is paid quarterly or annually.

At 31 December 2020 and 2019, Iberdrola International B.V., Iberdrola Finance Ireland DAC., Iberdrola Financiación, S.A.U. and Iberdrola Finanzas, S.A.U. had granted loans to IBERDROLA for the amount of various debt issues in different currencies made by those Group companies with the guarantee of IBERDROLA, as well as current account transactions.

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The maturities and currencies of those balances at 31 December 2020 and 2019 are as follows:

		Current			Non-current			
Millions of euros	**Balance at 31.12.2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026 and following**	**Total non-current**
Euros	7,105	1,530	38	3,002	71	–	2,464	5,575
US dollars	846	6	–	–	–	286	554	840
Pounds sterling	769	–	220	–	549	–	–	769
Yen	25	–	–	25	–	–	–	25
Total	**8,745**	**1,536**	**258**	**3,027**	**620**	**286**	**3,018**	**7,209**
Accrued interest	77	77	–	–	–	–	–	–
Total	**8,822**	**1,613**	**258**	**3,027**	**620**	**286**	**3,018**	**7,209**

		Current			Non-current			
Millions of euros	**Balance at 31.12.2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025 and following**	**Total non-current**
Euros	7,586	4,390	86	38	3,001	71	–	3,196
US dollars	1,013	93	–	–	–	–	920	920
Pounds sterling	825	1	–	235	–	589	–	824
Yen	26	–	–	–	26	–	–	26
Total	**9,450**	**4,484**	**86**	**273**	**3,027**	**660**	**920**	**4,966**
Accrued interest	73	73	–	–	–	–	–	–
Total	**9,523**	**4,557**	**86**	**273**	**3,027**	**660**	**920**	**4,966**

The breakdown by maturity of future unaccrued interest payment commitments at 31 December 2020 and 2019, after factoring in the effect of exchange rate and interest rate hedges and considering that the prevailing interest rates and exchange rates remain constant through to maturity, is as follows:

Millions of euros	**2021**	**2022**	**2023**	**2024**	**2025**	**2026 and following**	**Total**
Euros	20	56	54	53	52	812	**1,047**
US dollars	44	55	55	55	47	391	**647**
Pounds sterling	45	54	41	41	–	–	**181**
Total	**109**	**165**	**150**	**149**	**99**	**1,203**	**1,875**

Millions of euros	**2020**	**2021**	**2022**	**2023**	**2024**	**2025 and following**	**Total**
Euros	1	1	3	1	1	–	**7**
US dollars	47	47	61	61	61	481	**758**
Pounds sterling	45	49	57	43	43	–	**237**
Total	**93**	**97**	**121**	**105**	**105**	**481**	**1,002**

As explained in Note 5, balances in non-euro currencies are hedged for exchange rate risk.

At 31 December 2020 and 2019, these borrowings accrued a weighted average annual interest rate of 1.93% and 2.07%, respectively, after considering the corresponding hedges.

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b) Trade balances with Group companies and associates

The breakdown of IBERDROLA's payables and receivables with Group companies and associates at 31 December 2020 and 2019 is as follows:

	2020		2019	
Millions of euros	Receivables	Payables	Receivables	Payables
Current				
Avangrid Management Company, LLC	33	1	33	1
Iberdrola Generación España, S.A.U.	–	–	36	–
Neoenergia, S.A.	16	–	16	–
Other	13	11	15	2
Total	**62**	**12**	**100**	**3**

Most of the balances above arise from transactions undertaken in the normal course of business.

c) Derivatives – Group companies and associates

The breakdown of derivatives arranged by IBERDROLA with Group companies and associates at 31 December 2020 and 2019 is as follows:

	2020		2019	
Millions of euros	Assets	Liabilities	Assets	Liabilities
Non-current				
Iberdrola Financiación, S.A.U.	4	–	12	–
Iberdrola Generación Térmica, S.L.U.	–	–	6	10
Other	1	–	–	1
Total	**5**	**–**	**18**	**11**
Current				
Iberdrola Financiación, S.A.U.	–	–	1	–
Iberdrola Generación Térmica, S.L.U.	–	–	2	–
Iberdrola Re, S.A.	–	1	–	–
Total	**–**	**1**	**3**	**–**

23.2 Transactions between IBERDROLA and related parties

The following transactions take place within the normal course of business and are carried out under normal market conditions.

The most noteworthy transactions in 2020 and 2019 are as follows:

Transactions with significant shareholders (Note 11)

	Significant shareholders	
	2020	2019
Millions of euros	Qatar Investment Authority	Qatar Investment Authority
Other transactions		
Dividends and other distributed earnings (1)	224	3

(1) The amounts recognised as dividends and other distributed earnings in 2020 and 2019 pertain to the *Iberdrola Flexible Remuneration* system and the General Shareholders' Meeting attendance bonus, if eligible.

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Transactions with other related parties

Millions of euros	2020		2019	
	Group entities or subsidiaries	Jointly controlled companies	Group entities or subsidiaries	Jointly controlled companies
Expenses and income				
Finance expenses	136	–	184	–
Leases	–	4	–	4
Services received	68	–	22	–
Other expenses	2	–	–	–
Total expenses	**206**	**4**	**206**	**4**
Finance income (Note 18.1)	21	–	18	–
Dividends received (Note 18.1)	2,449	–	3,872	–
Services rendered (Note 18.1)	374	–	256	–
Sale of inventories (Note 18.1)	–	–	392	–
Total income	**2,844**	**–**	**4,538**	**–**
Other transactions				
Purchase of tangible, intangible and other assets	–	–	1	–

Balances with other related parties

Millions of euros	2020			2019		
	Group entities or subsidiaries	Jointly controlled companies	Associates	Group entities or subsidiaries	Jointly controlled companies	Associates
Receivables						
Trade and other receivables	62	–	–	100	–	–
Total	**62**	**–**	**–**	**100**	**–**	**–**
Payables	–	–	–	–	–	–
Trade and other payables	12	–	–	3	–	–
Total	**12**	**–**	**–**	**3**	**–**	**–**

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23.3 Transactions with directors and senior management

	2020		2019	
Millions of euros	**Directors**	**Senior management**	**Directors**	**Senior management**
Dividends and other distributed earnings (1)	1	–	–	–

(1) The amounts recognised as dividends and other distributed earnings in 2020 and 2019 pertain to the *Iberdrola Flexible Remuneration* system and the General Shareholders' Meeting attendance bonus, if eligible.

24. FEES FOR SERVICES PROVIDED BY THE STATUTORY AUDITORS

Fees paid for services provided in 2020 and 2019 by the main auditor (KPMG Auditores, S.L.) are as follows:

Millions of euros	2020	2019
Auditing services	3	3
Other audit-related services provided: (*)	2	1
Total	**5**	**4**

(*) Relates to limited reviews of financial reporting and comfort letter reports for debt issues and other agreed-upon procedures reports required by the regulator.

25. SUBSEQUENT EVENTS

The main events following the close of the year were as follows:

Iberdrola Flexible Remuneration

On 8 January 2021, the following terms governing the second scrip issue (*Iberdrola Flexible Remuneration*) were approved by shareholders at the General Shareholders' Meeting of IBERDROLA held on 2 April 2020, under item 12 on the agenda:

- The maximum number of shares to be issued under the capital increase is 90,715,157.
- The number of free-of-charge allocation rights required to receive one new share is 70.
- The maximum par value of the capital increase is EUR 68,036,368.
- The gross *Interim Dividend* per share amounts to EUR 0.168.

At the end of the trading period for the free-of-charge allocation rights:

- During the period established for this purpose, the holders of 1,583,410,921 shares in the Company opted to receive the *Interim Dividend*. Thus, the gross amount paid out under the *Interim Dividend* was EUR 266 million. As a result, those shareholders expressly waived 1,583,410,921 free-of-charge allocation rights and, therefore, the right to receive 22,620,156 new shares.

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- Furthermore, the final number of new common shares with a par value of EUR 0.75 each to be issued was 68,095,000, yielding a nominal capital increase (under this issue) of EUR 51 million, raising IBERDROLA's pre-issue share capital by 1.07%.

- Following this share capital increase, IBERDROLA's share capital amounts to EUR 4,813,617,000, represented by 6,418,156,000 common shares, each with a par value of EUR 0.75 and all fully subscribed for and paid up.

- Following fulfilment of the pertinent legal requirements (especially verification of those requirements by the Spanish National Securities Market Commission), the new shares were admitted for trading on the continuous market of the Madrid, Barcelona, Bilbao and Valencia Stock Exchanges, through the Automated Quotation System (Continuous Market), on 9 February 2021. Regular trading of the new shares commenced on 10 February 2021.

Amendment of the Spanish General Chart of Accounts (Plan General de Contabilidad)

On 30 January 2021, Royal Decree 1/2021 of 12 January was published, amending the General Chart of Accounts enacted by Royal Decree 1514/2007 of 16 November, the General Chart of Accounts for Small and Medium-sized Enterprises enacted by Royal Decree 1515/2007 of 16 November, the Standards for the Preparation of Consolidated Financial Statements enacted by Royal Decree 1159/2010 of 17 September, and the Rules for the Adaptation of the General Chart of Accounts to Non-Profit Entities enacted by Royal Decree 1491/2011 of 24 October. Meanwhile, the Resolution of 10 February 2021 of the Spanish Accounting and Auditing Institute (Instituto de Contabilidad y Auditoría de Cuentas) was published on 13 February 2021, issuing rules for the recognition, valuation and preparation of annual accounts in relation to the recognition of income from goods delivered and services rendered.

The resulting changes apply to financial years beginning on or after 1 January 2021 and focus on the criteria for recognising, measuring and breaking down revenues from the delivery of goods and services, financial instruments, hedge accounting, valuation of commodities inventories traded by the relevant intermediaries and the definition of fair value.

Accordingly, the separate Financial statements for the first financial year beginning on or after 1 January 2021 will be presented along with comparative information, although there is no obligation to restate the information for the previous year. Comparative information will only be shown again if all the criteria approved by the Royal Decree can be applied without incurring a retrospective bias, without prejudice to the exceptions set out in the transitional provisions.

The Royal Decree will generally take retroactive effect, albeit with alternative practical solutions. However, the rules on hedge accounting are prospective, the financial instrument classification criteria can be applied prospectively as well, and the sales and service revenue criteria can be applied prospectively to contracts that started on or after 1 January 2021.

The Company"s directors are currently assessing the applicable transition options and the accounting impacts of these changes, although at the date of authorisation for issue of these Financial statements there is not yet sufficient information available to conclude on the results or findings of this analysis.

Other

In relation to the stake held in Hidrola I, S.L.U. (parent company of the business in Mexico), on 29 January 2021 the Mexican Government delivered to Congress an *Iniciativa Preferente* (priority initiative) with the aim of amending the current electricity market rules contained in the Electricity Industry Law (*Ley de la Industria Eléctrica*, or LIE). The proposed changes include plans to modify the order in which electricity is delivered to the system. Meanwhile, the contracts signed between the Federal Electricity Commission (CFE) and Independent Energy Producers (IEPs) and also the self-supply regime may undergo a subsequent review by the Mexican Government.

26. EXPLANATION ADDED FOR THE TRANSLATION TO ENGLISH

These Financial statements are presented on the basis of accounting principles generally accepted in Spain.

Consequently, certain accounting practices applied by the Company may not conform with generally accepted accounting principles in other countries.

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APPENDIX

ADDITIONAL INFORMATION FOR 2020 REGARDING COMPANIES THAT BELONG TO STATE TAX GROUP 2/86 AND BISCAY REGIONAL TAX GROUP 02415BSC

The following list names the companies that pay tax under the tax consolidation regime:

Companies of the State Tax Group 2/86	Activity
LIBERALISED BUSINESS	
Energyworks Aranda, S.L.	Energy
Energyworks Carballo, S.L.	Energy
Energyworks Cartagena, S.L.	Energy
Energyworks Fonz, S.L.	Energy
Energyworks Milagros, S.L.	Energy
Energyworks Monzón, S.L.	Energy
Energyworks San Millán, S.L.	Energy
Energyworks Villarrobledo, S.L.	Energy
Iberdrola Clientes, S.A.U.	Retail supplier
Curenergía Comercializador de Último Recurso, S.A.U.	Retail supplier
Iberdrola Generación España, S.A.U.	Energy
Iberdrola Generación Nuclear, S.A.U.	Energy
Iberdrola Generación Térmica, S.L.U.	Energy
Iberdrola Operación y Mantenimiento, S.A.U.	Services
Iberdrola Servicios Energéticos, S.A.	Retail supplier
Productos y Servicios de Confort, S.A.	Services
Tarragona Power, S.L.U.	Energy
RENEWABLES BUSINESS	
Anselmo León Hidráulica, S.L.	Energy
Biovent Energía, S.A.	Energy
Ciener, S.A.U.	Energy
Electra Sierra de San Pedro, S.A.	Energy
Eléctricas de la Alcarria, S.L.	Energy
Eme Hueneja Cuatro, S.L.	Energy
Energía de Castilla y León, S.A.	Energy
Energías Eólicas de Cuenca, S.A.U.	Energy
Energías Fotovoltaicas de Puertollano, S.L.	Energy
Energías Renovables de Belona, S.L.	Energy
Energías Renovables de Circe, S.L.	Energy
Energías Renovables de Febe, S.L.	Energy
Energías Renovables de Hermes, S.L.	Energy
Energías Renovables de la Región de Murcia, S.A.U.	Energy
Energías Renovables de Tione, S.L.	Energy
Iberdrola Generación, S.A.U.	Energy
Fincalia Agropecuaria, S.L.	Energy
Fincalia Agropecuaria siglo XXI, S.A.	Energy
Iberdrola Renovables Galicia, S.A.U.	Energy
Iberdrola Renovables Andalucía, S.A.U.	Energy
Iberdrola Renovables Aragón, S.A.U.	Energy
Iberdrola Renovables Canarias, S.A.U.	Energy
Iberdrola Renovables Castilla – La Mancha, S.A.U.	Energy
Iberdrola Renovables Castilla y León, S.A.	Energy
Iberdrola Renovables Energía, S.A.U.	Holding company
Iberenova Promociones, S.A.U.	Energy
Iberjalón, S.A.	Energy
ICARO Renovables,S.A.	Energy
Minicentrales del Tajo, S.A.	Energy

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Companies of the State Tax Group 2/86	Activity
Parque Eólico Cruz del Carrutero, S.L.	Energy
Parque Eólico Panondres, S.L.	Energy
Peache Energías Renovables, S.A.	Energy
Producciones Energéticas Asturianas, S.L.	Energy
Producciones Energéticas de Castilla y León, S.A.	Energy
Proyecto Nuñez de Balboa, S.L.	Energy
PV I Ataulfo, S.L.	Energy
Renovables de Buniel, S.L.	Energy
Sistemas Energéticos Altamira, S.A.U.	Energy
Sistemas Energéticos Chandrexa, S.A.	Energy
Sistemas Energéticos del Moncayo, S.A.	Energy
Sistemas Energéticos Jaralón, S.A.	Energy
Sistemas Energéticos La Gomera, S.A.U.	Energy
Sistemas Energéticos Loma del Viento, S.A.	Energy
Sistemas Energéticos de la Linera, S.A.U.	Energy
Sistemas Energéticos La Muela, S.A.	Energy
Sistemas Energéticos Mas Garullo, S.A.	Energy
Sistemas Energéticos Nacimiento, S.A.U.	Energy
Sistemas Energéticos Serra de Lourenza, S.A.	Energy
Sistemas Energéticos Tacica de Plata, S.A.U.	Energy
Sistemas Eólicos de Muñó, S.L.	Energy
Sistemes Energetics Savalla del Comtat, S.A.U.	Energy
NETWORKS BUSINESS	
Anselmo León Distribución, S.L.	Energy
Anselmo León, S.A.U.	Holding company
Distribuidora de Energía Eléctrica Enrique García Serrano, S.L.	Energy
Distribuidora Eléctrica Navasfrías, S.L.	Energy
Electro-Distribuidora Castellano-Leonesa, S.A.	Energy
Empresa Eléctrica del Cabriel, S.L.	Energy
Herederos María Alonso Calzada – Venta de Baños, S.L.	Energy
San Cipriano de Rueda Distribución, S.L.	Energy
OTHER BUSINESSES	
Engineering	
Adicora Servicios de Intermediación de Ingeniería, S.L.U.	Engineering
Iberdrola Ingeniería y Construcción, S.A.U.	Engineering
Real Property	
Arrendamiento de Viviendas Protegidas Siglo XXI, S.L.	Real Property
Iberdrola Inmobiliaria Patrimonio, S.A.U.	Real Property
Iberdrola Inmobiliaria, S.A.	Real Property
CORPORATION	
CarteraPark, S.A.U.	Dormant
Iberdrola Financiación, S.A.U.	Financial

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Companies of the Biscay Regional Tax Group 02415BSC	Activity
LIBERALISED BUSINESS	
Spain and Portugal	
Energyworks Vit-Vall, S.L.	Energy
Iberdrola Clientes Internacional, S.A.U.	Holding company
Iberdrola Cogeneración, S.L.U.	Holding company
Iberduero, S.L.U.	Energy
RENEWABLES BUSINESS	
Spain	
Eólicas de Euskadi, S.A.U.	Energy
Iberdrola Renovables Internacional, S.A.U.	Holding company
NETWORKS BUSINESS	
Spain	
Iberdrola Infraestructuras y Servicios de Redes, S.A.	Services
Iberdrola Redes España, S.A.U.	Holding company
I-DE Redes Eléctricas Inteligentes, S.A.U.	Energy
Sociedad Distribuidora de Electricidad de Elorrio, S.A.	Energy
OTHER BUSINESSES	
Engineering	
Iberdrola Ingeniería de Explotación, S.A.U.	Engineering
Ingeniería, Estudios y Construcciones, S.A.	Engineering
Innovation	
Iberdrola Servicios de Innovación, S.L.	Other activities
Inversiones Financieras Perseo, S.L.	Holding company
Other businesses	
Iberdrola Inversiones 2010, S.A.U.	Holding company
Iberdrola Participaciones, S.A.	Holding company
CORPORATION	
Hidrola I, S.L.U.	Holding company
Iberdrola, S.A.	Holding company
Iberdrola Corporación, S.A.	Dormant
Iberdrola España, S.A.U.	Holding company
Iberdrola Finanzas, S.A.U.	Financial
Iberdrola Finance Ireland, DAC	Financial
Iberdrola Energía, S.A.	Holding company
Iberdrola Energía Internacional, S.A.U.	Holding company

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MANAGEMENT REPORT – 2020

1. BUSINESS PERFORMANCE

IBERDROLA is a holding company and therefore its earnings are chiefly produced by dividends and income from financing granted and services rendered to investees.

In the first half of 2019, it sold its portfolio of long-term liquefied natural gas (LNG) supply contracts to Pavilion Energy Trading & Supply Pte. Ltd., thus marking an end to that activity.

2. SIGNIFICANT EVENTS IN 2020

2.1 Key figures from the Income statement of IBERDROLA

In 2020, revenue amounted to EUR 2,847 million, of which EUR 2,449 million related to dividends received from Group companies and associates, EUR 21 million to finance income from financing subsidiaries, EUR 374 million to income from services provided to Group companies, and EUR 3 million to the discontinued gas business.

Supplies during the year totalled EUR 1 million, in connection with the wholesale supply of gas subsequently delivered to Iberdrola Generación España, S.A.U.

Total operating income for the year came to EUR 2,370 million, comprising other operating income of EUR 1 million, operating expenses of EUR 191 million, personnel expenses of EUR 116 million, amortisation and depreciation of EUR 70 million, and impairment and disposals of non-current assets of EUR 102 million, mainly due to valuations changes in the investments held in Iberdrola Financiación, S.A.U.

Net finance expense amounted to EUR 117 million, largely due to debts held with Group companies and associates.

Profit for the year before tax was EUR 2,253 million, while corporate income tax generated income of EUR 39 million, yielding net profit for the year of EUR 2,292 million, versus EUR 2,849 million in 2019.

Notably, two circumstances had a significant impact on the Income statement for the period:

- Dividends received from subsidiaries in 2020 were down EUR 1,423 million on the amount received in 2019, amounting to EUR 2,449 million compared to EUR 3,872 million received in 2019. Dividends received from Group companies and associates are described in Note 10. Changes in dividends received from the country subholding companies compared to the previous year are as follows:

Millions of euros	Chg. 2020 vs 2019
Iberdrola España, S.A.	5
Avangrid, Inc.	1
Neoenergia, S.A.	1
Iberdrola International, B.V.	(2)
Iberdrola Energía, S.A.U.	(103)
SPW Investments Ltd.	(655)
Hidrola I, S.L.	(670)
Total	**(1,423)**

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- Finance income for 2020 was up EUR 60 million on the previous year, mainly on the back of: an increase in finance income of EUR 22 million, a reduction in finance expenses of EUR 23 million, plus an improvement in exchange differences of EUR 25 million, despite the worst relative performance of "Change in fair value of financial instruments", which was down EUR 10 million.

2.2 Statement of financial position

At 31 December 2020 IBERDROLA had negative working capital of EUR 6,601 million, which will be covered by funds generated from its business and dividends received from its subsidiaries.

2.3 Compliance with Section 262.1 of the Spanish Companies Act (*Ley de Sociedades de Capital*) in relation to the average period for payment to suppliers

As set forth in Note 16, the Company's average period for payment to suppliers in financial year 2020 was 25 days. This period represents faster turnaround in payment than the maximum payment period provided by law.

3. MAIN RISK FACTORS ASSOCIATED WITH THE ACTIVITIES OF THE COMPANY

The IBERDROLA Group, of which the Company is the parent, is exposed to various inherent risks in the countries, industries and markets in which it operates and the businesses it carries out, which could prevent it from achieving its objectives and successfully pursuing its strategies. The Company performs its corporate business activities indirectly through the ownership of shares or other equity investments in other companies (country subholding companies, which in turn perform their activities through their head of business companies). Therefore, the Company's main risk factors are related to its investees, as described in the section Main risks and uncertainties of the Management Report attached to the consolidated Financial Statements of the IBERDROLA Group for 2020.

Aware of the importance of this matter, the Company's Board of Directors undertakes to develop all of its capabilities to ensure that the significant risks inherent to all of the Group's activities and businesses are appropriately identified, measured, managed and controlled, and has established, through the Group's *General Risk Control and Management Policy*, the basic mechanisms and principles necessary for appropriate management of the risk/opportunity ratio with a level of risk that enables it to:

- attain the strategic goals set by the Group with controlled volatility,
- provide the maximum level of assurance to the shareholders,
- contribute to the attainment of the Sustainable Development Goals (SDGs) approved by the UN, with a special focus on goals seven and thirteen,
- protect the results and reputation of the Group,
- defend the interests of shareholders, customers, other stakeholders with a vested interest in the progress of the Company, and society in general,
- ensure corporate stability and financial strength in a sustained fashion over time, and
- disseminate a risk culture among the Group's employees through communication and training.

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In pursuing this commitment, the Board of Directors and its Executive Committee rely on the support of the Audit and Risk Supervision Committee, which, as an advisory body, monitors and reports upon the appropriateness of the assessment system and internal control of significant risks, with the support of the Group's Risk Management and Internal Assurance Division, which reports functionally to the committee, and in coordination with the audit committees existing at other Group companies.

Every action aimed at controlling and mitigating risks will conform to the following main principles of conduct:

a) Integrate the risk/opportunity vision into the Company's management, through a definition of the strategy and the risk appetite and the inclusion of this variable in strategic and operating decisions.

b) Segregate functions, at the operating level, between risk-taking areas and areas responsible for the analysis, control and monitoring of such risks, ensuring an appropriate level of independence.

c) Guarantee the proper use of risk-hedging instruments and the maintenance of records thereof as required by applicable law.

d) Inform regulatory agencies and the principal external players, in a transparent fashion, regarding the risks facing the Group and the operation of the systems developed to control such risks, maintaining suitable channels that favour communication.

e) Ensure appropriate compliance with the corporate governance regulations established by the Company through its Governance and Sustainability System and the updating and continuous improvement of such system within the framework of best international practices in relation to transparency and good governance, and implement the monitoring and measurement of all such aspects.

f) Act at all times in compliance with the values enshrined in the *Code of Ethics* and under the principles of *zero tolerance* for any of the unlawful acts and fraud situations set out in the *Crime Prevention Policy* and *Anti-Corruption and Anti-Fraud Policy* and the principles and good practices contained in the *Corporate Tax Policy*.

The *General Risk Control and Management Policy* and the basic principles underpinning it take the form of the three lines of defence model, articulated through a comprehensive risk control and management system, supported by a Risk Committee at the Group level and based upon a sound definition and allocation of duties and responsibilities at various level (operational and control) and upon suitable supporting procedures, methodologies and tools, including the following:

a) A structure of policies, guidelines and limits, including the corresponding mechanisms for their approval and deployment, which review and dictate the risk appetite to be assumed each year in both qualitative and quantitative terms, in accordance with the objectives set out in the multi-year plan and the related annual budgets, both at Group level and for its main subsidiaries.

b) The ongoing identification of significant risks and threats based on their possible impact on key management objectives and the Financial statements (including contingent liabilities and other off-balance sheet risks).

c) The analysis of such risks, both at each corporate business or function and taking into account their combined effect on the Group as a whole.

d) The measurement and control of risks by following procedures and standards which are homogeneous and common to the Group as a whole.

e) The analysis of risks associated with new investments, as an essential element of decision-making based upon profitability/risk.

f) The maintenance of a system for monitoring and controlling compliance with policies, guidelines and limits, by means of appropriate procedures and systems, including the contingency plans needed to mitigate the impact of the materialisation of risks.

g) The ongoing evaluation of the suitability and efficiency of applying the system and the best practices and recommendations in the area of risks for eventual inclusion thereof in the model.

h) The audit of the system by the Internal Audit Division.

In addition, the *General Risk Control and Management Policy* is further developed and supplemented by the policies listed below, which are also subject to approval by the Company's Board of Directors.

Structure of the Group's Risk Policies:

a) Corporate Risk Policies:

- Corporate Credit Risk Policy.
- Corporate Market Risk Policy.
- Operational Risk in Market Transactions Policy.
- Insurance Policy.
- Investment Policy.
- Financing and Financial Risk Policy.
- Treasury Share Policy.
- Risk Policy for Equity Interests in Listed Companies.
- Purchasing Policy.
- Information Technology Policy.
- Cybersecurity Risk Policy.
- Occupational Safety and Health Risk Policy.
- Reputational Risk Framework Policy.

b) Risk Policies for the various businesses of the Group:

- Risk Policy for the Liberalised Businesses of the IBERDROLA Group.
- Risk Policy for the Renewable Energy Businesses of the IBERDROLA Group.
- Risk Policy for the Networks Businesses of the IBERDROLA Group.
- Risk Policy for the Real Estate Business of the IBERDROLA Group.

The *General Risk Control and Management Policy*, as well as a summary of the Corporate Risk Policies and a summary of the specific risk policies for the various Group businesses, are available on the corporate website (www.iberdrola.com).

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In order to align the risk impact with the established risk appetite, the Executive Committee of the Board of Directors, acting upon a proposal of the business or corporate divisions involved and upon a prior report from the Group's Risk Committee, annually reviews and approves specific guidelines regarding risk limits in the corporate risk policies.

The country subholding companies are responsible for adopting the Group's risk policies and implementing their application, approving the guidelines regarding specific risk limits, taking into account the characteristics and particularities of the businesses in each country.

The governing bodies of the head of business companies of each country or region must approve specific risk limits applicable to each of them and implement the necessary control systems to ensure compliance.

Listed country subholding companies and those with significant minority interests, by virtue of their own special framework of strengthened autonomy, have their own risk policies approved by their competent bodies, aligned with those of the IBERDROLA Group.

The risk factors to which the Group is generally subject are listed below:

a) Corporate Governance Risks: the Company assumes the need to safeguard the interests of the Company and the strategy of sustained maximisation of the economic value of the Company and its long-term success, in accordance with the Group's corporate interest, culture and corporate vision, taking into account the legitimate public and private interests that converge in the conduct of all business activities and particularly, among those of the various stakeholders, those of the communities and regions in which the Company operates and those of its employees.

b) Market risks: defined as the exposure of the Group's results and equity to changes in market prices and variables, such as exchange rates, interest rates, electricity prices, commodity prices (gas and other fuel), CO_2 emission allowances and other mechanisms to support renewable energies, prices of financial assets and other variables.

c) Credit risks: defined as the possibility that a counterparty fails to perform its contractual obligations, thus causing an economic or financial loss to the Group. Counterparties can be end customers, counterparties in financial or energy markets, partners, suppliers or contractors.

d) Business Risks: defined as the uncertainty regarding the performance of key variables inherent to the business, such as the characteristics of demand, weather conditions, the strategies of different players, and others.

e) Political and Regulatory Risks: those arising from regulatory changes made by the various regulators, such as changes in the remuneration of regulated activities or in the required conditions of supply, or in environmental or tax regulations, including risks related to political changes that could affect legal security and the legal framework applicable to the Group's businesses in each jurisdiction, the nationalisation or expropriation of assets, the cancellation of operating licences and the early termination of government contracts.

f) Operational, technological, environmental, social and legal risks: relate to direct or indirect economic losses caused by external events or inadequate internal processes, including those arising from:

- Technological failures, human error and technological obsolescence.
- Cybersecurity and information systems.
- Those associated with climate change and pandemics.

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- Fraud and corruption.

- Litigation, arbitration and criminal proceedings.

g) Reputational risks: potential negative impact on the Company's value where its performance falls short of the expectations of stakeholders, as defined in the *Stakeholder Engagement Policy*, including behaviour or conduct that might involve corruption.

Given the multidimensional nature of the risks, the taxonomy defined in the system envisions additional classification variables for improved monitoring, control and reporting of these risks through the monitoring tools. These additional categories include:

- Classification of risks as Structural, Hot Topics and Emerging, the last of which is understood as possible new threats with an as yet uncertain impact and undefined probability, but which are growing and could eventually become material for the Group.

- Inclusion of secondary risk factors, such as financial or governance, sustainability and environmental (ESG), corruption, tax, third party, health or cybersecurity, among others.

The Audit and Risk Supervision Committee of the Board of Directors periodically monitors the evolution of the Company's risks:

- It reviews the Group's quarterly risk reports, which include monitoring compliance with risk limits and indicators and updated key risk maps, submitted by the Group's head of risk management and internal assurance.

- It also coordinates and reviews the risk reports sent at least semi-annually by the audit and compliance committees of the Group's main subsidiaries, including the subholding companies for the main countries or regions in which the Group operates. These reports, along with presentations given in person by the Group's head of risks and internal assurance, are used to draw up a risk report for the Board of Directors at least semi-annually.

For more information, see the *Risk Control and Management Systems* section of the *2020 Corporate Governance Report* and the risks section of the *Integrated Report – February 2021*. Furthermore, Note 5 to the Financial Statements explains the *Financing and Financial Risk Policy*.

4. NON-FINANCIAL INFORMATION AND DIVERSITY

IBERDROLA is a holding company. As a result, there are no environmental items to be included in the Report as required by the Spanish General Chart of Accounts (*Plan General de Contabilidad*).

The Company and its subsidiaries are exempt from presenting the *statement of non-financial information* referred to in Section 262 of the Spanish Companies Act and Section 49 of the Commercial Code, as both the Company and its subsidiaries are included in a separate report titled *Statement of non-financial information. Sustainability Report, consolidated, of IBERDROLA, S.A. and its subsidiaries for 2020.* Said document has been verified by an independent assurance provider and is subject to the same requirements in terms of approval, deposit and publication as the IBERDROLA Group's consolidated Management Report.

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5. RESEARCH AND DEVELOPMENT ACTIVITIES

Innovation is IBERDROLA's primary tool to guarantee the Company's sustainability, efficiency and competitiveness.

IBERDROLA is today the *Utility of the future* due to its innovative strategy, extended to all its business units and areas of activity. Thanks to a constant commitment to innovation, IBERDROLA is the most innovative Spanish utility, the second at European level and the third at worldwide level, in accordance with the European Commission's classification. This position was reached thanks to the talent, experience and effort of 34,000 people in more than 40 countries.

In 2020 IBERDROLA channelled EUR 30 million into R&D activities. These funds were largely used for the main business units: more renewables, more structured smart grids, and more consumer solutions. Moreover, the continued development of the digital transition by providing the system with intelligence has been crucial.

6. TREASURY SHARES AND REDUCTION IN SHARE CAPITAL

At the General Shareholders' Meeting held on 8 April 2016, the shareholders resolved to expressly authorise the Board of Directors, with powers of substitution, pursuant to the provisions of Section 146 of the Spanish Companies Act, to carry out the derivative acquisition of shares of Iberdrola, S.A. under the following conditions:

- Acquisitions may be made directly by the Company or indirectly through its subsidiaries under the same terms and conditions as those set forth in this resolution. The subsidiaries which carry out regulated activities pursuant to the provisions of Law 24/2013 of 26 December on the Electricity Sector and Law 34/1988 of 7 October on the Hydrocarbon Sector are excluded from this authorisation.

- Acquisitions may be made by means of purchase and sale transactions, swaps or any other transaction permitted by law.

- Acquisitions may be made up to the maximum threshold allowed by law at any time.

- Such acquisitions may not be made at a price higher than the market price or lower than the par value of the shares.

- This authorisation is granted for a period of five years as from the approval of this resolution.

- As a result of the acquisition of shares, including those which the Company or the person acting in their own name but on behalf of the Company has previously acquired and held in treasury, the resulting shareholders' equity cannot decrease below the amount of the share capital plus the restricted reserves required under law or the by-laws, all as provided in Section 146.1.b) of the Spanish Companies Act.

The resolution expressly provides that the shares acquired under the aforementioned authorisation can be disposed of or redeemed or used for the remuneration systems provided for in paragraph three of Section 146.1.a) of the Spanish Companies Act. They may also be used to develop programmes that encourage the acquisition of interests in the Company's share capital, such as dividend reinvestment plans, loyalty bonuses and other similar instruments.

Movement in treasury shares of IBERDROLA in 2020 and 2019 mainly involved the redemption of said shares and their application to employee remuneration systems, as follows:

Treasury shares	No. of shares	Nominal (millions of euros)	Cost of treasury shares (millions of euros)	Average price per share (euros)	Total shares	% of capital
Balance at 01.01.2019	**135,985,344**	**102**	**873**	**6.42**	**6,397,629,000**	**2.13**
Acquisitions	172,369,618	129	1,402	8.13	-	-
Reduction in share capital	(280,457,000)	(210)	(2,015)	7.19	-	-
Disposals	(6,561,151)	(5)	(42)	6.42	-	-
Iberdrola Flexible Remuneration (1)	3,039,564	2	–	–	-	-
Balance at 31.12.2019	**24,376,375**	**18**	**218**	**8.94**	**6,362,072,000**	**0.38**
Acquisitions	286,880,467	215	2,708	9.44	-	-
Reduction in share capital	(213,592,000)	(160)	(1,918)	8.98	-	-
Disposals	(13,136,001)	(10)	(120)	9.12	-	-
Iberdrola Flexible Remuneration (1)	693,281	1	–	–	-	-
Balance at 31.12.2020	**85,222,122**	**64**	**888**	**10.42**	**6,350,061,000**	**1.34**

(1) Shares received

7. SUBSEQUENT EVENTS

Events occurring after the close of the financial year are described in Note 25 of the Notes.

ANNUAL CORPORATE GOVERNANCE REPORT – 2020

The disclosures contained in this section of the Management Report are the same as the disclosures in the Annual Corporate Governance Report sent separately to the Spanish National Securities Market Commission for publication at www.cnmv.es.

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ANNUAL CORPORATE GOVERNANCE REPORT OF LISTED PUBLIC LIMITED COMPANIES

ISSUER IDENTIFICATION DETAILS

YEAR-END DATE 31/12/2020

TAX IDENTIFICATION CODE (C.I.F.) A-48010615

Company Name: IBERDROLA, S.A.

Registered Office: Plaza Euskadi número 5
48009 Bilbao - Biscay - Spain

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ANNUAL CORPORATE GOVERNANCE REPORT OF LISTED PUBLIC LIMITED COMPANIES

A OWNERSHIP STRUCTURE

A.1 Complete the table below with details of the company's share capital:

Date of last change	Share capital (euros)	Number of shares	Number of voting rights
29/07/2020	4,762,545,750	6,350,061,000	6,350,061,000

Indicate whether there are different classes of shares with different associated rights:

Yes ☐ No X

Remarks
On 2 February 2021, the share capital was increased to 4,813,617,000 euros, represented by 6,418,156,000 ordinary shares having a nominal value of 0.75 euro each, belonging to a single class and series, which are fully subscribed and paid up.

A.2 List the company's significant direct and indirect shareholders at year end, excluding directors:

Name or company name of shareholder	% of voting rights attached to the shares		% of voting rights through financial instruments		% of total voting rights
	Direct	Indirect	Direct	Indirect	
BLACKROCK, INC.	0.00	5.14	0.00	0.02	5.16
NORGES BANK	3.60	0.00	0.00	0.00	3.60
QATAR INVESTMENT AUTHORITY	0.00	8.71	0.00	0.00	8.71

Remarks
Data at 31/12/2020. According to available information, the approximate breakdown of the interests in the share capital by type of shareholder is as follows: - Foreign investors 69.79% - Domestic entities 8.17% - Domestic retail investors 22.04%

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Breakdown of the indirect holding:

Name or company name of the indirect owner	Name or company name of the direct owner	% of voting rights attached to the shares	% of voting rights through financial instruments	% of total voting rights
BLACKROCK, INC.	BLACKROCK GROUP	5.14	0.02	5.16
QATAR INVESTMENT AUTHORITY	QATAR HOLDING LLC	6.28	0.00	6.28
QATAR INVESTMENT AUTHORITY	DIC HOLDING LLC	2.43	0.00	2.43

Indicate the most significant changes in the shareholder structure during the year:

Most significant movements		
Name or company name of shareholder	Date of change	Description of change
NORGES BANK	07-01-2020	Interest decreased to below 3%
NORGES BANK	13-01-2020	Interest increased to above 3%
BLACKROCK, INC.	18-06-2020	Voting rights attributed to the shares decreased to below 5%
BLACKROCK, INC.	19-06-2020	Voting rights attributed to the shares increased to above 5%
BLACKROCK, INC.	26-06-2020	Voting rights attributed to the shares decreased to below 5%
BLACKROCK, INC.	03-07-2020	Voting rights attributed to the shares increased to above 5%

The sources of the information provided are the notices sent by the shareholders to the CNMV and to the Company itself, the information contained in their respective annual reports and press releases, and the information that the Company obtains from Iberclear.

Pursuant to the provisions of Section 23.1 of Royal Decree 1362/2007 of 19 October, further developing Law 24/1988 of 28 July on the Securities Market, in connection with the transparency requirements relating to the information on issuers whose securities have been admitted to trading on an official secondary market or other regulated market in the European Union, it is deemed that the holder of a significant interest is a shareholder controlling at least 3% of voting rights.

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A.3 Complete the following tables on members of the company's Board of Directors holding voting rights on the company's shares:

Name or company name of director	% of voting rights attached to the shares		% of voting rights through financial instruments		% of total voting rights	% voting rights that can be transmitted through financial instruments	
	Direct	Indirect	Direct	Indirect		Direct	Indirect
MR JUAN MANUEL GONZÁLEZ SERNA		0.01			0.01		
MS MARÍA HELENA ANTOLÍN RAYBAUD							
MS SARA DE LA RICA GOIRICELAYA							
MR FRANCISCO MARTÍNEZ CÓRCOLES	0.01				0.01		
MR XABIER SAGREDO ORMAZA							
MS SAMANTHA BARBER							
MR MANUEL MOREU MUNAIZ							
MR JOSÉ IGNACIO SÁNCHEZ GALÁN	0.12	0.06			0.18		
MR IÑIGO VÍCTOR DE ORIOL IBARRA	0.02				0.02		
MR JOSÉ WALFREDO FERNÁNDEZ							
MR ANTHONY L. GARDNER							
MS NICOLA MARY BREWER							

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MS REGINA HELENA JORGE NUNES							
MR ÁNGEL JESÚS ACEBES PANIAGUA							

Total percentage of voting rights held by the Board of Directors	0.22

Remarks
The data reflected in this section is at the date of approval of this report. Pursuant to the provisions of the 2017-2019 Strategic Bonus approved at the General Shareholders' Meeting and the evaluation by the Board of Directors, after a report from the Remuneration Committee, of the level of achievement of the objectives to which it is linked, the chairman & CEO may receive up to a maximum of 1,900,000 shares for his performance during the 2017-2019 period, to be paid, if appropriate, in three equal parts in 2020 (already paid), 2021 and 2022. The Business CEO may receive a maximum of 300,000 shares, to be paid, if appropriate, in three equal parts in 2020 (already paid), 2021 and 2022. Each of the deliveries of shares is subject to confirmation by the Board of Directors, after a report from the Remuneration Committee, that the circumstances on which the performance evaluation was based remain in effect. A new Strategic Bonus for the 2020-2022 period was approved by the shareholders at the General Shareholders' Meeting held on 2 April 2020. Pursuant thereto, the chairman & CEO may receive up to a maximum of 1,900,000 shares based on the evaluation of the Company's performance during said period, to be paid, if appropriate, in 2023, 2024 and 2025. The Business CEO may receive up to a maximum of 300,000 shares, to be paid, if appropriate, in 2023, 2024 and 2025.

A.4 If applicable, indicate any family, commercial, contractual or corporate relationships that exist among significant shareholders to the extent that they are known to the company, unless they are insignificant or arise in the ordinary course of business, with the exception of those reported in section A.6:

Name or company name of related party	Nature of relationship	Brief description
No data		

A.5 If applicable, indicate any commercial, contractual or corporate relationships that exist between significant shareholders and the company and/or its group, unless they are insignificant or arise in the ordinary course of business:

Name or company name of related party	Nature of relationship	Brief description
No data		

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A.6 Describe the relationships, unless insignificant for both parties, that exist between significant shareholders or shareholders represented on the Board and directors, or their representatives in the case of directors that are legal persons.

Explain, if applicable, how the significant shareholders are represented. Specifically, indicate those directors appointed to represent significant shareholders, those whose appointment was proposed by significant shareholders, or who are linked to significant shareholders and/or companies in their group, specifying the nature of such relationships or ties. In particular, mention the existence, identity and post of any directors of the listed company, or their representatives, who are in turn members or representatives of members of the Board of Directors of companies that hold significant shareholdings in the listed company or in group companies of these significant shareholders.

Name or company name of related director or representative	Name or company name of related significant shareholder	Company name of the group company of the significant shareholder	Description of relationship / post
No data			

Remarks
There are no directors appointed on behalf of significant shareholders or directors connected thereto or proposed by them for appointment.

A.7 Indicate whether the company has been notified of any shareholders' agreements that may affect it, in accordance with the provisions of Articles 530 and 531 of the Spanish Corporate Enterprises Act. If so, describe them briefly and list the shareholders bound by the agreement:

Yes ☐ **No X**

Indicate whether the company is aware of any concerted actions among its shareholders. If so, provide a brief description:

Yes ☐ **No X**

If any of the aforementioned agreements or concerted actions have been amended or terminated during the year, indicate this expressly:

A.8 Indicate whether any individual or company exercises or may exercise control over the company in accordance with Article 5 of the Securities Market Act. If so, identify them:

Yes ☐ **No X**

A.9 Complete the following table with details of the company's treasury shares:

At the close of the year:

Number of direct shares	Number of indirect shares (*)	Total percentage of share capital
85,222,122		1.34

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(*) Through:

Name or company name of direct shareholder	Number of direct shares
No data	

Explain any significant changes during the year:

Explain significant changes
The Company sent to the CNMV three updates to its treasury share position in 2020 as a result of a change in the number of voting rights arising from corporate transactions: • On 6 February notices were provided of direct acquisitions of a total of 26,939,845 shares (0.417%), coinciding with the increase in capital resulting from the "Iberdrola Flexible Remuneration" programme. • On 8 July notices were provided of direct acquisitions of a total of 61,703,939 shares (0.989%), coinciding with the reduction in capital. • On 6 August notices were provided of direct acquisitions of a total of 196,191 shares (0.003%), coinciding with the increase in capital resulting from the "Iberdrola Flexible Remuneration" programme. During financial year 2020 the Company also provided two more notices arising from consecutive direct acquisitions of own shares due to said acquisitions exceeding 1% of voting rights since the preceding notice: • On 18 February notices were provided of direct acquisitions of a total of 75,462,635 shares (1.169%). • On 27 March notices were provided of direct acquisitions of a total of 66,415,807 shares (1.029%). In addition, on 4 January 2021 the Company notified the CNMV of direct acquisitions of own shares in the total amount of 80,216,494 shares (1.263%).

A.10 Provide a detailed description of the conditions and terms of the authority given to the Board of Directors to issue, repurchase, or dispose of treasury shares.

The shareholders acting at the General Shareholders' Meeting held on 13 April 2018 resolved to expressly authorise the Board of Directors, with the power of substitution, pursuant to the Companies Act (*Ley de Sociedades de Capital*), to carry out the derivative acquisition of shares of Iberdrola on the following terms: a) Purchases may be made by Iberdrola directly, or indirectly through its subsidiaries. Subsidiaries carrying out regulated activities are excluded pursuant to the provisions of the Electricity Industry Act (*Ley del Sector Eléctrico*) and the Hydrocarbons Act (*Ley de Hidrocarburos*).

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b) Purchases will be made using purchase/sale or swap transactions or any other means allowed by law.
c) Purchases may be made up to the maximum sum permitted by law (i.e. 10% of the share capital).
d) Purchases may not be made at a higher price than that quoted on the Stock Exchange or at a price lower than the share's nominal value.
e) The authorisation was granted for a period not to exceed five years as from the approval of the resolution.
f) As a result of the acquisition of shares, including those that the Company or the person acting in their own name but on behalf of the Company has previously acquired and held in treasury, the resulting shareholders' equity cannot decrease to below the amount of the share capital plus the restricted reserves required under law or the by-laws.

The shares, if any, purchased as a result of the aforementioned authorisation could be used for either transfer or retirement or could be applied to the remuneration systems provided for in the Companies Act; added to the foregoing alternatives was the possible development of programmes fostering the acquisition of interests in the Company, such as, for example, dividend reinvestment plans, loyalty bonuses or similar instruments.

Furthermore, at the General Shareholders' Meeting held on 2 April 2020, the shareholders resolved to authorise the Board of Directors to increase share capital upon the terms and within the limits set forth in Section 297.1.b) of the Companies Act. It was in turn authorised to issue debentures exchangeable for and/or convertible into shares and warrants in an amount of up to 5,000 million euros within a period of 5 years. Both authorisations included the power to exclude preemptive rights up to an overall maximum of 10% of the share capital.

A.11 Estimated floating capital: CAPITAL MANAGEMENT

	%
Estimated floating capital:	80.97%

A.12 Indicate whether there are any restrictions (articles of association, legislative or of any other nature) placed on the transfer of shares and/or any restrictions on voting rights. In particular, indicate the existence of any type of restriction that may inhibit a takeover of the company through acquisition of its shares on the market, as well as such regimes for prior authorisation or notification that may be applicable, under sector regulations, to acquisitions or transfers of the company's financial instruments.

Yes X **No** ☐

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Description of restrictions
Those having an interest equal to or greater than 3% of the capital or voting rights of two or more companies that have the status of principal operator in certain markets or sectors (including the generation and supply of electricity) may not exercise rights in excess of such percentage in more than one entity. Article 29.2 of the By-Laws provides that no shareholder may cast a number of votes greater than those corresponding to shares representing 10% of the share capital. According to Article 28, a shareholder may not exercise their right to vote at the General Shareholders' Meeting if the resolution to be approved is intended to: (a) relieve the shareholder of an obligation or grant the shareholder a right; (b) provide the shareholder with any kind of financial assistance, including the provision of guarantees in favour thereof; or (c) release the shareholder, if a director, from obligations arising from the duty of loyalty as provided by law. Article 50 of the By-Laws provides that the by-law restrictions against the exercise of voting rights by shareholders affected by conflicts of interest established in Article 28 above and the limitation on the maximum number of votes that may be cast by a single shareholder contained in sections 2 and 4 of Article 29 above shall be deprived of effect upon the occurrence of certain circumstances in the case of a takeover bid. Furthermore, Section 527 of the Companies Act provides that at listed companies (*sociedades anónimas cotizadas*), the by-law provisions that directly or indirectly set, as a general rule, the maximum number of votes that may be cast by a single shareholder, by the companies belonging to the same group or by those acting in concert with the foregoing shall be of no effect when, following a takeover bid, the bidder has reached a percentage that is equal to or greater than 70% of the voting share capital, unless such bidder is not subject to equivalent breakthrough measures or has not adopted them. Pursuant to U.S. law, due to the business carried out by Avangrid, Inc. (a company belonging to the Iberdrola group) in that country, the acquisition of an interest giving rise to the holding of 10% or more of the share capital of Iberdrola will be subject to the prior approval of certain U.S. regulatory authorities. Pursuant to Australia's Foreign Acquisitions and Takeovers Act 1975 (Cth) (FATA), the acquisition of an interest in at least 20% of the share capital of Iberdrola by a person, alone or with one or more associates, may require prior approval by the Australian Treasurer, due to Iberdrola group's ownership of Infigen Energy and other Australian renewable energy assets. Furthermore, the Australian Treasurer also has powers under the FATA in certain circumstances if prior approval is not obtained where a person alone or with one or more associates acquires an interest in: (i) at least 10% in Iberdrola; (ii) at least 5% of Iberdrola and has entered into a legal arrangement relating to that person's business and Iberdrola or its business; or (ii) any percentage of Iberdrola's share capital, and the person, alone or with one or more associates, is in a position to influence or participate in Iberdrola's central management and control. Among the measures adopted by the Spanish Government in view of the economic consequences of the COVID-19 pandemic, as from 18 March 2020 the prior approval of the Council of Ministers is required for the acquisition of a stake equal

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to or greater than 10% of the share capital of Spanish companies in the energy infrastructure and energy supply sectors, among others, by residents of countries outside the EU and EFTA (Sect. 7 *bis* of Law 19/2003, of 4 July), and from 19 November 2020 until 30 June 2021 this will also apply to foreign direct investments in listed companies in Spain from residents of countries other than the EU and the EFTA if the value of the investment exceeds 500 million euros (sole transitional provision of Royal Decree-law 34/2020 of 17 November).

A.13 Indicate whether the general shareholders' meeting has resolved to adopt measures to neutralise a takeover bid by virtue of the provisions of Law 6/2007.

Yes ☐ **No** X

If so, explain the measures approved and the terms under which such limitations would cease to apply:

A.14 Indicate whether the company has issued shares that are not traded on a regulated EU market.

Yes ☐ **No** X

If so, indicate each share class and the rights and obligations conferred.

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B GENERAL SHAREHOLDERS' MEETING

B.1 Indicate whether there are any differences between the minimum quorum regime established by the Spanish Corporate Enterprises Act for General Shareholders' Meetings and the quorum set by the company, and if so give details.

Yes X **No** ☐

	% quorum different from that established in Article 193 of the Spanish Corporate Enterprises Act for general matters	% quorum different from that established in Article 194 of the Spanish Corporate Enterprises Act for special resolutions
Quorum required at 1st call	0.00	66.67
Quorum required at 2nd call	0.00	60.00

Description of differences
Article 21.2 of the By-Laws increases the quorum required to hold a valid meeting "in order to adopt resolutions regarding a change in the object of the Company, transformation, total split-off, dissolution of the Company, and the amendment of this section 2", in which case "shareholders representing two-thirds of subscribed share capital with voting rights must be in attendance at the first call to the General Shareholders' Meeting, and shareholders representing sixty per cent of such share capital must be in attendance at the second call".

B.2 Indicate whether there are any differences between the company's manner of adopting corporate resolutions and the regime provided in the Spanish Corporate Enterprises Act and, if so, give details:

Yes X **No** ☐

Describe how it is different from the regime provided in the Spanish Corporate Enterprises Act.

	Qualified majority different from that established in Article 201.2 of the Spanish Corporate Enterprises Act for matters referred to by Article 194.1 of said Act	Other matters requiring a qualified majority
% established by the company for the adoption of resolutions	75.00	75.00

Describe the differences
Article 52 of the By-Laws provides that all resolutions intended to eliminate or amend the provisions contained in title IV (breakthrough of restrictions in the event of takeover bids), in Article 28 (conflicts of interest), and in sections 2 to 4 of Article 29 (limitation upon the maximum number of votes that a shareholder may cast) shall require the affirmative vote of three-fourths (3/4) of the share capital present in person or by proxy at a General Shareholders' Meeting.

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B.3 Indicate the rules for amending the company's articles of association. In particular, indicate the majorities required for amendment of the articles of association and any provisions in place to protect shareholders' rights in the event of amendments to the articles of association.

In addition to the provisions of Section 285 *et seq.* of the Companies Act, the By-Laws of Iberdrola contain Articles 21.2 (qualified quorum) and 52 (qualified majority) mentioned in sections B.1 and B.2 above.

B.4 Give details of attendance at General Shareholders' Meetings held during the reporting year and the two previous years:

	Attendance data				
Date of general meeting	% physically present	% present by proxy	% distance voting		Total
			Electronic voting	Other	
13/04/2018	0.33	71.44	0.27	4.05	76.09
Of which floating capital:	0.23	62.90	0.27	4.05	67.45
29/03/2019	9.00	61.40	0.33	3.39	74.12
Of which floating capital:	0.55	61.17	0.33	3.39	65.44
02/04/2020	0.00	69.69	1.53	5.82	77.04
Of which floating capital:	0.00	58.01	1.41	5.82	65.24

Remarks

The 2020 Meeting was held online, without the physical presence of the shareholders. The shareholders were able to attend and vote online during the Meeting, as well as to electronically vote prior to the Meeting (votes reflected in the "Electronic vote" column). They were also able to vote remotely before the Meeting through depositories and custodians, the postal channel and the telephone channel (votes reflected in the "Others" column).

In the columns corresponding to the 2019 Meeting and the 2018 Meeting, the "Other" column also includes absentee votes received through shareholder service points set up by the Company in various cities. These premises were not made available in 2020.

Free float percentages have been calculated by dividing the shares represented in person and by proxy less those belonging to significant shareholders and directors participating at each Meeting, according to the information available in the list of attendees, by the total shares outstanding as at the date of the Meeting. For these purposes, significant interests deposited in omnibus accounts (not opened in the name of the owners of such interests) are not subtracted from the shares present in person or by proxy, except in cases in which the significant shareholder notified the Company of the shareholder's participation in the Meeting.

B.5 Indicate whether any point on the agenda of the General Shareholders' Meetings during the year was not approved by the shareholders for any reason.

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Yes ☐ No X

B.6 Indicate whether the articles of association contain any restrictions requiring a minimum number of shares to attend General Shareholders' Meetings, or to vote remotely:

Yes ☐ No X

B.7 Indicate whether it has been established that certain decisions, other than those established by law, entailing an acquisition, disposal or contribution to another company of essential assets or other similar corporate transactions must be submitted for approval to the General Shareholders' Meeting.

Yes X No ☐

Explain the decisions that must be submitted to the General Shareholders' Meeting, other than those established by law
Sections t), u) and v) of Article 17 of the By-Laws provide that the shareholders acting at a General Shareholders' Meeting will decide the following issues, among others: t) The transfer to controlled entities of core activities that were previously carried out by the Company itself, while maintaining full control thereof. u) The acquisition, transfer or contribution of key assets from or to another company. v) The approval of transactions having an effect equivalent to liquidation of the Company.

B.8 Indicate the address and manner of access on the company's website to information on corporate governance and other information regarding General Shareholders' Meetings that must be made available to shareholders through the company website.

https://www.iberdrola.com/corporate-governance

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C STRUCTURE OF THE COMPANY'S ADMINISTRATION

C.1 Board of Directors

C.1.1 Maximum and minimum number of directors established in the articles of association and the number set by the general meeting:

Maximum number of directors	14
Minimum number of directors	9
Number of directors set by the general meeting	14

C.1.2 Complete the following table on Board members:

Name or company name of director	Representative	Category of director	Position on the board	Date first appointed	Date of last appointment	Election procedure
MR JUAN MANUEL GONZÁLEZ SERNA		Independent	Vice-Chair	31/03/2017	31/03/2017	Resolution of Shareholders at General Meeting
MS MARÍA HELENA ANTOLÍN RAYBAUD		Independent	Director	26/03/2010	29/03/2019	Resolution of Shareholders at General Meeting
MS SARA DE LA RICA GOIRICELAYA		Independent	Director	29/03/2019	29/03/2019	Resolution of Shareholders at General Meeting
MR FRANCISCO MARTÍNEZ CÓRCOLES		Executive	Director	31/03/2017	31/03/2017	Resolution of Shareholders at General Meeting
MR XABIER SAGREDO ORMAZA		Independent	Director	08/04/2016	29/03/2019	Resolution of Shareholders at General Meeting
MS SAMANTHA BARBER		Other external	Director	31/07/2008	02/04/2020	Resolution of Shareholders at General Meeting
MR MANUEL MOREU MUNAIZ		Independent	Director	17/02/2015	29/03/2019	Resolution of Shareholders at General Meeting
MR JOSÉ IGNACIO SÁNCHEZ GALÁN		Executive	Chairman/CEO	21/05/2001	29/03/2019	Resolution of Shareholders at General Meeting
MR IÑIGO VÍCTOR DE ORIOL IBARRA		Other external	Director	26/04/2006	02/04/2020	Resolution of Shareholders at General Meeting

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MR JOSÉ WALFREDO FERNÁNDEZ		Independent	Director	17/02/2015	29/03/2019	Resolution of Shareholders at General Meeting
MR ANTHONY L. GARDNER		Independent	Director	13/04/2018	13/04/2018	Resolution of Shareholders at General Meeting
MS NICOLA MARY BREWER		Independent	Director	02/04/2020	02/04/2020	Resolution of Shareholders at General Meeting
MS REGINA HELENA JORGE NUNES		Independent	Director	02/04/2020	02/04/2020	Resolution of Shareholders at General Meeting
MR ÁNGEL JESÚS ACEBES PANIAGUA		Independent	Director	20/10/2020	20/10/2020	Interim appointment (co-option)

Total number of directors	14

Indicate any cessations, whether through resignation or by resolution of the general meeting, that have taken place in the Board of Directors during the reporting period:

Name or company name of director	Category of the director at the time of cessation	Date of last appointment	Date of cessation	Specialised committees of which he/she was a member	Indicate whether the director left before the end of his or her term of office
MS INÉS MACHO STADLER	Other external	08/04/2016	02/04/2020	Executive Committee and Remuneration Committee	YES
MS DENISE MARY HOLT	Independent	29/03/2019	02/04/2020	Audit and Risk Supervision Committee	YES
MS GEORGINA KESSEL MARTÍNEZ	Independent	13/04/2018	20/10/2020	Audit and Risk Supervision Committee	YES

Reason for cessation when this occurs before the end of the term of office and other observations; information on whether the director has sent a letter to the remaining members of the board and, in the case of cessation of non-executive directors, explanation or opinion of the director dismissed by the general meeting
Ms Georgina Kessel Martínez and Ms Denise Mary Holt left the Board of Directors in accordance with the succession plan for non-executive directors provided for in the Corporate Governance Policy and in the Board of Directors Diversity and Member Selection Policy after reaching the age of seventy. Ms Inés Macho Stadler resigned after fourteen years as a director at the end of her third term, after she lost her status as an independent director. All of them sent a corresponding letter to the chairman of the Board of Directors.

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C.1.3 Complete the following tables on the members of the Board and their categories:

EXECUTIVE DIRECTORS

Name or company name of director	Post in organisation chart of the company	Profile
MR JOSÉ IGNACIO SÁNCHEZ GALÁN	Chairman & CEO	Salamanca, Spain, 1950. Other current positions and professional activities He is the chairman of the boards of directors of the country subholding companies of the Iberdrola group in the United Kingdom (Scottish Power Ltd.), the United States (Avangrid, Inc., a NYSE-listed company) and Brazil (Neoenergia, S.A., a company listed on the BOVESPA). He is a member of the group of top utility executives of the World Economic Forum (Davos), which he has chaired, and of the Steering Committee of the European Round Table of Industrialists and of the J.P. Morgan International Council. Academic training He graduated as an Industrial Engineer from the Technical Engineering School of Universidad Pontificia Comillas (Madrid). He has received honorary doctorate degrees from the universities of Salamanca, Edinburgh, and Strathclyde (Glasgow). He has been on the faculty of Escuela Técnica Superior de Ingeniería (ICAI), and is currently a visiting professor at the University of Strathclyde, chairman of the Social Council of the University of Salamanca, a member of the Dean's Advisory Council of the Massachusetts Institute of Technology (MIT) and a trustee of the Comillas-ICAI University Foundation. Noteworthy experience in the energy and industrial engineering sector He has served as chief operating officer of Industria de Turbo Propulsores, S.A. (ITP) and as

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		chairman of the European aerospace consortium Eurojet, headquartered in Germany. He has also held various positions at Sociedad Española del Acumulador Tudor, S.A. (now, Exide Group), engaged in the manufacture and sale of batteries. <u>Noteworthy experience in other industries</u> He has been chief executive officer of Airtel Móvil, S.A. (now, Vodafone España, S.A.U.) and a member of the Supervisory Board of Nutreco Holding N.V., a listed company in The Netherlands, active in the food industry. <u>Other information</u> Amongst other recognitions, in 2020 he received the Management Leadership Award of the Spanish Association for Quality (AEC) and the Economic Personality of the Year Award from elEconomista. In 2019 he was selected as one of the five best-performing CEOs in the world and the top in the utilities sector by Harvard Business Review, and he was recognised by Bloomberg as one of the 30 most influential leaders in the fight against climate change. That year he also received the National Innovation and Design Award in the Innovative Career category from the Spanish Ministry of Science, Innovation and Universities, an Honourable Mention for his professional career from the Colegio Oficial de Ingenieros Industriales de Madrid, and the designation of Universal Spaniard by Fundación Independiente. In 2018 he was appointed as an Honorary Member of the Spanish Institute of Engineering. In 2017 he was named Best Chief Executive Officer (CEO) within the utilities category (for the eleventh time) by the Institutional Investor Research Group.

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		In 2014 he was distinguished by Queen Elizabeth II with the title Commander of the Most Excellent Order of the British Empire and received the international Responsible Capitalism award from the First Group. In 2011 he was named Best CEO of European utilities and of Spanish listed companies in investors relations, according to the Thomson Extel Survey. In 2008 he was named Business Leader of the Year by the Spain-U.S. Chamber of Commerce and was awarded the 2008 International Economy Prize by Fundación Cristóbal Gabarrón. In 2006 he was named Best CEO of the Year at the Platts Global Energy Awards. He was given the Award for Best CEO in Investor Relations by IR Magazine for three years in a row (2003-2005).
MR FRANCISCO MARTÍNEZ CÓRCOLES	Business CEO	Alicante, Spain, 1956. <u>Other current positions and professional activities</u> He is chairman of Iberdrola España, S.A., and Iberdrola Energía Internacional, S.A. (Sociedad Unipersonal), as well as a director of Iberdrola México, S.A. de C.V. He is also a member of Merit of the National Association of Engineers of the Escuela Técnica Superior de Ingeniería (ICAI). <u>Academic training</u> Industrial Engineer specialising in Electricity from the ICAI (Universidad Pontificia Comillas, Madrid) and Master in Business Management from IESE Business School (Universidad de Navarra). <u>Noteworthy experience in the energy and industrial engineering sector</u> He spent his professional career at Compañía Sevillana de Electricidad, S.A. until joining Hidroeléctrica Española, S.A., and then, after the merger with

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		Iberduero, S.A., Iberdrola, S.A., where he has been director of the Production Market, director of the Wholesale Energy Markets Business Unit, and general director of the Liberalised Energy Business of the group, with overall responsibility for all of the Wholesale, Retail and Energy Management businesses of the Iberdrola group. In June 2014 he was appointed Business CEO of the Iberdrola group, with overall responsibility for all of the group's businesses worldwide. He has held the position of chairman of Elektro Holding, S.A., of Iberdrola Generación, S.A. (Sociedad Unipersonal), of Iberdrola Generación México, S.A. de C.V. and of Scottish Power Generation Holdings Ltd. and has been a member of the board of Compañía Operadora del Mercado Eléctrico Español, S.A., Elcogas, S.A. and Iberdrola Ingeniería y Construcción, S.A. (Sociedad Unipersonal). He was also a member of the Board of Directors of the Spanish Electric Industry Association (*Asociación Española de la Industria Eléctrica*) (UNESA). <u>Noteworthy experience in other industries</u> He began his professional career at the Systems Division of Arthur Andersen. He has been a member of the advisory board of the International University of Bremen (Germany) and vice president of the Energy and Natural Resources Committee of the Spanish Institute of Engineering. <u>Other information</u> He has been awarded the Javier Benjumea Prize of the National Association of Engineers of ICAI in its XVII edition and with the Gold Medal of the Spanish Nuclear Society.

Total number of executive directors	2
Percentage of Board	14.29

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EXTERNAL PROPRIETARY DIRECTORS

Name or company name of director	Name or company name of the significant shareholder represented by the director or that nominated the director	Profile
No data		

EXTERNAL INDEPENDENT DIRECTORS

Name or company name of director	Profile
MR JUAN MANUEL GONZÁLEZ SERNA	Madrid, Spain, 1955. Other current positions and professional activities He is the chairman of Cerealto Siro Foods, a business group in the food sector, and a member of the Governing Board of the Spanish Commercial Coding Association (*Asociación Española de Codificación Comercial*) (AECOC). He is a founding trustee and chairman of Fundación Grupo SIRO as well as a member of the Executive Committee and trustee of Fundación SERES, an honorary member of the General Assembly of the Spanish Paralympics Committee, a trustee of the Fundación Casa Ducal de Medinaceli, and honorary president of Empresa Familiar de Castilla y León. Academic training Degree in Law, Economics and Business Studies from the Instituto Católico de Administración y Dirección de Empresas (ICADE) of Universidad Pontificia Comillas (Madrid) and Masters in Business Administration (MBA) from the Instituto de Estudios Superiores de la Empresa de la Universidad de Navarra (IESE Business School). Noteworthy experience in the energy and industrial engineering sector He has been an independent director of Iberdrola España, S.A. (Sociedad Unipersonal) and of Iberdrola Renovables, S.A., as well as chair of the Appointments and Remuneration Committee of the latter company. Noteworthy experience in other industries He also has extensive experience in the finance, venture capital and health sectors. He is a

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	member of the advisory board of Rabobank in Spain and Europe and has been a member of the board of Banco Urquijo Sabadell Banca Privada, S.A. and of Sociedad para el Desarrollo Industrial de Castilla y León, Sociedad de Capital Riesgo, S.A. (SODICAL, now Ade Capital Social, Sociedad de Capital Riesgo de Régimen Común, S.A.). He is also a member of the board of directors of the HM Hospitales Group.
MS MARÍA HELENA ANTOLÍN RAYBAUD	Toulon, France, 1966. <u>Other current positions and professional activities</u> She is vice-chair of the Board of Directors and member of the Management Committee of Grupo Antolín Irausa, S.A. She is also the president of the Spanish Association of Automotive Equipment and Component Manufacturers (*Asociación Española de Fabricantes de Equipos y Componentes para Automoción*) (Sernauto), vice president of the Excellence in Management Club (*Club de Excelencia en la Gestión*), a member of the Advisory Board of SabadellUrquijo Banca Privada, a member of the Executive Committee of the Spanish Confederation of Business Organisations (*Confederación Española de Organizaciones Empresariales*) (CEOE), a board member of France Foreign Trade (*Comercio Exterior de Francia*), Spain section, and a member of the Plenary Committee of the Spanish Chamber of Commerce. <u>Academic training</u> Degree in International Business and Business Administration from Eckerd College, St. Petersburg, Florida (United States), and a Master of Business Administration from Anglia University, Cambridge (United Kingdom) and from Escuela Politécnica de Valencia (Spain). <u>Noteworthy experience in the energy and industrial engineering sector</u> She has served as an external independent director of Iberdrola Renovables, S.A. and a member of its Related-Party Transactions Committee. She has been in charge of the corporate Industrial and Strategy Divisions of Grupo Antolín Irausa, S.A., where she has also been a director of Human Resources and the head of Total Quality.
MS SARA DE LA RICA GOIRICELAYA	Bilbao, Spain, 1963. <u>Other current positions and professional activities</u>

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	She is a director of Fundación ISEAK (Initiative for Socio-economic Analysis and Knowledge), a member of the Think Tank of AMETIC (*Asociación Multisectorial de Empresas de la Electrónica, las Tecnologías de la Información y la Comunicación, de las Telecomunicaciones y de los Contenidos Digitales*), and an honorary member of the Spanish Economics Association (*Asociación Española de Economía*). She is also an associate researcher for CreAM (Centre for Research and Analysis of Migration - University College of London) and IZA (Institute of Labor Economics - Bonn). She is a member of the Economic Affairs Advisory Commission, which advises the Third Vice-President of the Government of Spain and Minister for the Economy and Digital Transformation, as well as member of the Advisory Commission to the Ministry of Work and Social Economy on the matter of Minimum Interprofessional Salary. <u>Academic training</u> With a PhD in Economics from the University of the Basque Country and currently a professor at this institution, she has dedicated a large portion of her professional life to the study of and search for solutions on issues such as immigration, the labour market, gender equality and poverty. She regularly publishes academic articles in domestic and international magazines dealing with economic subjects, mainly related to labour, and participates in conferences and seminars and supervises graduate students in their dissertations. <u>Noteworthy experience in the energy and industrial engineering sector</u> She has been a member of the Appointments Committee of Iberdrola, S.A. She has also been an independent director of Iberdrola España, S.A. (Sociedad Unipersonal), the country subholding company of the energy businesses in Spain. <u>Noteworthy experience in other industries</u> She has been president of the European Society for Population Economics and a member of its Executive Committee, chair of the Committee on the Situation of Women in Economics (COSME), and a member of the Economic and Social Council (CES). She has also been the secretary of the Spanish Economics Association (AEE). She has also been a member of the Scientific Advisory Board of Fundación Gadea and of the

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	Scientific Committee of the Basque Institute for the Evaluation of the Educational System (IVEI-ISEI). Furthermore, she has been a member of the Board of Directors of Basquetour, Turismoaren Euskal Agentzia, Agencia Vasca de Turismo, S.A., a government-owned company of the Department of Tourism, Trade and Consumption of the Basque Government, created to lead the promotion and implementation of the competitiveness strategy of Basque tourism. She has worked on editorial boards and/or research project review boards. In 2018 she was given the "2018 Basque Economist Award" (*Ekonomistak Saria 2018*) by the Basque Association of Economists (*Colegio Vasco de Economistas*).
MR XABIER SAGREDO ORMAZA	Portugalete, Spain, 1972. <u>Other current positions and professional activities</u> He is chair of the Board of Trustees of Bilbao Bizkaia Kutxa Fundación Bancaria-Bilbao Bizkaia Kutxa Banku Fundazioa and of BBK Fundazioa. He is also a trustee of Biocruces Sanitary Research Institute, of the Bilbao Museum of Fines Arts and of the Guggenheim Foundation, at which he also serves as member of the Executive Committee. He is a member of the Board of Directors of the Orkestra Basque Institute of Competitiveness and of the Management Council of Universidad de Deusto, and is a visiting professor at various institutions. <u>Academic training</u> Degree in Economics and Business from Universidad del País Vasco, with a major in Finance, and holder of postgraduate degrees in various areas. <u>Noteworthy experience in the energy and industrial engineering sector</u> He has been a director of Iberdrola Generación, S.A. (Sociedad Unipersonal) and a member of its Audit and Compliance Committee. He was a director of Iberdrola Distribución Eléctrica, S.A. (Sociedad Unipersonal), at which he has held the position of chair of the Audit and Compliance Committee. <u>Noteworthy experience in other industries</u> He has been the director of the Expansion and Assets area of the credit institution Ipar Kutxa, managing director of the concessionaire Transitia

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	and a member of the Board of the Bilbao Port Authority. In addition, he has been chair and vice-chair of the Board of Directors of Caja de Ahorros Bilbao Bizkaia Kutxa, Aurrezki Kutxa eta Bahitetxea (BBK) and chair of its Audit Committee, as well as chair of the Board of Trustees of Fundación Eragintza.
MR MANUEL MOREU MUNAIZ	Pontevedra, Spain, 1953. Other current positions and professional activities He is president of the Seaplace, S.L., sole director of H.I. de Iberia Ingeniería y Proyectos, S.L. and of Howard Ingeniería y Desarrollo, S.L., a director of Tubacex, S.A. and a member of the Spanish Committee of Lloyd's Register EMEA. He is a professor of the Master's Programme in Oil at Universidad Politécnica de Madrid (ETSIM), of the Maritime Master's Programme of Instituto Marítimo Español and of Universidad Pontificia Comillas. Academic training Doctorate in naval engineering from Escuela Técnica Superior de Ingenieros Navales (ETSIN) of the Universidad Politécnica de Madrid, and Master's degree in Oceanic Engineering from the Massachusetts Institute of Technology (MIT). Noteworthy experience in the energy and industrial engineering sector He has been a member of the Sustainable Development Committee of Iberdrola, S.A., of the Board of Directors of Iberdrola Renovables, S.A. and a director and member of the Audit and Compliance Committee of Gamesa Corporación Tecnológica, S.A. (now Siemens Gamesa Renewable Energy, S.A.). Noteworthy experience in other industries He has been a member of the board of Metalships and Docks, S.A., Neumáticas de Vigo, S.A. and Rodman Polyships, S.A., dean of the Colegio Oficial de Ingenieros Navales y Oceánicos de Madrid y de España, president of the Spanish Institute of Engineering, and a professor of the Escuela Técnica Superior de Ingenieros Navales of the Universidad Politécnica de Madrid and for the Repsol's Masters programme in oil.
MR JOSÉ WALFREDO FERNÁNDEZ	Cienfuegos, Cuba, 1955. Other current positions and professional activities

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	He is a partner of Gibson, Dunn & Crutcher and a member of the board of directors of the Council of the Americas and the Center for American Progress. Academic training Degree in History from Dartmouth College (New Hampshire, United States), and Juris Doctor from Columbia University (New York, United States). Noteworthy experience in the energy and industrial engineering sector He has been Assistant Secretary of State for Economic, Energy and Business Affairs for the United States. He has also been an independent director of Iberdrola USA, Inc. He has also been an independent director of Iberdrola USA, Inc. Noteworthy experience in other industries He has served on the boards of Dartmouth College, NPR Station WBGO-FM, the Middle East Institute and Ballet Hispánico of New York and of non-governmental institutions such as Acción Internacional. He has also been the State Department's representative on the Committee on Foreign Investment in the United States. Other information He was named one of the "World's Leading Lawyers" by Chambers Global for his M&A work, an "Expert" by the International Financial Law Review, one of the "World's Leading Privatization Lawyers" by Euromoney, and "Embajador de la Marca España" (Ambassador of the Spain Brand).
MR ANTHONY L. GARDNER	Washington D.C., United States, 1963. Other current positions and professional activities He is a member of the Private Equity team of Brookfield Business Partners LP, senior adviser at the consulting firm Brunswick Group, LLP and senior counsel in the law firm Sidley Austin LLP, where he works in the International Trade and Privacy and Cybersecurity areas. He is also an adviser to the Bill and Melinda Gates Foundation and a member of the advisory boards of the Centre for European Reform, the German Marshall Fund and the European Policy Centre. Academic training He studied Government at Harvard University and International Relations at the University of Oxford.

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	He holds a Juris Doctor degree from Columbia Law School and a Masters in Finance from London Business School. Noteworthy experience in the energy and industrial engineering sector He has been a member of the Sustainable Development Committee of Iberdrola, S.A. He has also been an independent director of Scottish Power, Ltd and a member of that company's Audit and Compliance Committee. Noteworthy experience in other industries He was the US ambassador to the European Union from 2014 to 2017. Prior to that appointment, for six years he was the managing director at Palamon Capital Partners, a private equity firm based in London. He was also the director of one of the finance departments of Bank of America and of GE Capital, as well as director in the international acquisitions group of GE International. He has worked as an attorney at international law firms in London, Paris, New York and Brussels. He has dedicated more than twenty years of his career to US-European affairs, as a government official, lawyer and investor. As Director for European Affairs on the National Security Council (1994-1995), he worked closely with the US Mission to the European Union to launch the New Transatlantic Agenda. He previously worked with the Treuhandanstalt (German Privatisation Ministry) in Berlin, the Stock Exchange Operations Committee in Paris and as secondee for the European Commission in Brussels. He was also a member of the board of directors of Brookfield Business Partners L.P.
MS NICOLA MARY BREWER	Taplow, United Kingdom, 1957 Other current positions and professional activities Non-executive director of Aggreko plc. Academic training Educated at the Belfast Royal Academy and read English at the University of Leeds, graduating with a BA in 1980, then taking a Doctorate in linguistics in 1988. Granted an Honorary Doctorate of Laws from the University of Leeds in 2009. Noteworthy experience in the energy and industrial engineering sector

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	She has held the position of independent director at Scottish Power Ltd., the country subholding company of the energy businesses in the United Kingdom. <u>Noteworthy experience in other industries</u> She was a diplomat until 2014, having been the Founding Director of the Diplomatic Academy of the Foreign and Commonwealth Office ("FCO") of the British government. In 2009, she succeeded Mr Paul Boateng as British High Commissioner to South Africa, Swaziland and Lesotho, completing her mission in September 2013. In December 2006, she was appointed by open competition as the first Chief Executive of the newly established Equality and Human Rights Commission, the successor body to the Commission for Racial Equality, the Disability Rights Commission and the Equal Opportunities Commission, taking up her new position in 2007 and standing down in 2009. In 2004, she was appointed Director-General for Europe at the FCO, leading the FCO's contribution to the UK's 2005 Presidency of the European Union, advising the Foreign Secretary and the Minister on the European Union and other European policy issues. She served as the FCO's Director for Global Issues from 2001 to 2002, and then as Director-General for Regional Programmes at the Department for International Development (DfID), the DfID board member supervising the UK's overseas bilateral aid programmes. She joined the FCO in 1983, completing overseas postings in South Africa, India, France and Mexico. She was appointed Companion of the Order of St Michael and St George (CMG) in the 2003 New Year Honours and Dame Commander of the Order of St Michael and St George (DCMG) in the 2011 Birthday Honours. She was vice-provost (international) at University College London from 2014 to 2020.
MS REGINA HELENA JORGE NUNES	São Paulo, Brazil, 1965 <u>Other current positions and professional activities</u> She is a partner of RNA Capital and a member of the risk and capital committee of the Bank of Brazil. She is also an independent director of IRB-

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	Brasil Resseguros, S.A. and is a member of its Risk & Solvency Committee and of its Investments, Capital Structure and Dividend Committee. <u>Academic training</u> Degree in Business Administration from Mackenzie University. She attended courses in Trade Finance and Corporate Finance at the School of Continuing Studies at New York University, Leadership at Columbia University and International, Global and Multinational Business Development at INSEAD Fontainebleau. <u>Noteworthy experience in the energy and industrial engineering sector</u> She has held the position of independent director at Neoenergia S.A., the country subholding company of the energy businesses in Brazil. She has been an independent director and member of the audit committee of Companhia Distribuidora de Gás do Rio de Janeiro (CEG), the main activity of which is the distribution and retail sale of natural gas in the State of Rio de Janeiro (Brazil). <u>Noteworthy experience in other industries</u> She has more than 30 years of experience in the domestic and international financial market. She has been a member of the advisory board of Mercado Eletrônico, a company dedicated to electronic B2B commerce. She served for 20 years at S&P Global Ratings. She was president of operation in Brazil and Argentina, and was Head of the Southern Cone in Latin America, Deputy-Head in Latin America, board member of BRC Ratings (Colombia) and head of Global Development Markets. Before joining S&P, she also worked at other financial institutions such as Chase Manhattan and Citibank in the areas of credit and risk analysis. At the Commercial Bank of New York, she led the Correspondent Banking and Risk (Trade Finance) Areas focused on Latin America. For three years, she was an independent consultant in Brazil, having worked on privatisation programmes, investments of international funds in the Brazilian market, M&A and financial engineering projects.
MR ÁNGEL JESÚS ACEBES PANIAGUA	Ávila, Spain, 1958 <u>Other current positions and professional activities</u> He is chairman and founding partner of MA Abogados Estudio Jurídico, S.L.P., as well as sole director and professional partner of Doble A

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	Estudios y Análisis, S.L.P. He is also a trustee of Fundación para el Análisis y Estudios Sociales (FAES) and of Fundación Universitaria Teresa de Ávila. Academic training Degree in Law from Universidad de Salamanca. Noteworthy experience in the energy and industrial engineering sector As a lawyer, he has advised companies in the energy and the industrial and technology sectors, among others. From 2012 to 2019 he was an independent director of Iberdrola, S.A. (during part of that period, he was also a member of the Executive Committee and of the Appointments Committee). After the IPO flotation of Bankia, S.A., he was a director of Banco Financiero y de Ahorros, S.A. ("BFA"), acting as chairman of its Audit and Compliance Committee. He also has significant knowledge of the regulatory area due to his work as a member of the Council of Ministers of the Government of Spain, a senator and a national deputy. Noteworthy experience in other industries He has served on the board of Caja Madrid Cibeles, S.A., which manages the investments of Grupo Caja Madrid in other companies with activities in the financial and insurance sectors, as well as the retail banking sector outside of Spain. In the institutional arena, he has been Minister for Public Administrations, Minister of Justice, and Minister of the Interior of the Spanish Government.

Total number of independent directors	10
Percentage of Board	71.43

Indicate whether any director classified as independent receives from the company or any company in its group any amount or benefit other than remuneration as a director, or has or has had a business relationship with the company or any company in its group during the past year, whether in his or her own name or as a significant shareholder, director or senior executive of a company that has or has had such a relationship.

If so, include a reasoned statement by the Board explaining why it believes that the director in question can perform his or her duties as an independent director.

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Name or company name of director	Description of the relationship	Reasoned statement
No data		

OTHER EXTERNAL DIRECTORS

Identify the other external directors, indicate the reasons why they cannot be considered either proprietary or independent, and detail their ties with the company or its management or shareholders:

Name or company name of director	Reasons	Company, manager or shareholder to which or to whom the director is related	Profile
MR IÑIGO VÍCTOR DE ORIOL IBARRA	More than 12 years have passed since appointment	IBERDROLA	Madrid, Spain, 1962. Academic training Bachelor of Arts in International Business from Schiller International University (Madrid), a graduate of the Executive Corporate Management Programme of IESE Business School, and Certified European Financial Analyst (CEFA) from Instituto Español de Analistas Financieros. Noteworthy experience in the energy and industrial engineering sector He has been chair of Electricidad de La Paz, S.A. (Bolivia), of Empresa de Luz y Fuerza Eléctrica de Oruro, S.A. (Bolivia) and of Iberoamericana de Energía Ibener, S.A. (Chile), as well as a member of the board of Empresa de Alumbrado Eléctrico de Ceuta, S.A., Neoenergia S.A. (Brazil) and of Empresa Eléctrica de Guatemala, S.A. He has also been a member of the Appointments Committee and of the Sustainable Development Committee of Iberdrola, S.A., director of Corporate Governance for the Americas of Iberdrola, S.A., director of Management Control at Amara, S.A., and a financial

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			analyst in the Financial Division and the International Division of Iberdrola, S.A. Noteworthy experience in other industries He has been chair of Empresa de Servicios Sanitarios de Los Lagos, S.A. (ESSAL) in Chile.
MS SAMANTHA BARBER	More than 12 years have passed since appointment	IBERDROLA	Dunfermline, Scotland, 1969. Other current positions and professional activities She is the chair of Scottish Ensemble, member of the Board of Scottish Water and chair of its Remuneration Committee, mentor member of Critical Eye, and member of the GlobalScot Network and of the Advisory Board for the Imperial College London MBA. She also performs advisory and business coaching work. Academic training Bachelor of Arts in Applied Foreign Languages and European Politics from the University of Northumbria, Newcastle (England, United Kingdom) and Post-Graduate degree in EU Law from the University of Nancy (France). Noteworthy experience in the energy and industrial engineering sector She has been chair of the Sustainable Development Committee of Iberdrola, S.A., as well as a member of the Advisory Council of Scottish Power Ltd. following the integration of the Scottish company into the Iberdrola group. Noteworthy experience in other industries She has been a consultant within the European Parliament, where she provided support to the Economic and Monetary Affairs Committee, a board

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			member of Business for Scotland, chief executive of Scottish Business in the Community and vice chair of the business-led 2020 Leadership Group on Climate Change in Scotland. She has also been a member of the Advisory Board of Breakthrough Breast Cancer and of the Board of Directors of Right Track Scotland, an organisation dedicated to advancing educational, training and employment opportunities for youths at risk of social exclusion. Other information She was chosen as one of the "Top 100 Women to Watch" according to the FTSE list and Cranfield University, and was a finalist and earned second place in the annual Director of the Year Awards 2012 of IoD Scotland NED.

Total number of other external directors	2
Percentage of Board	14.29

Indicate any changes that have occurred during the period in each director's category:

Name or company name of director	Date of change	Previous category	Current category
MS SAMANTHA BARBER	31/07/2020	Independent	Other external

Remarks
The change in category is due to the passage of twelve years since appointment.

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C.1.4 Complete the following table with information relating to the number of female directors at the close of the past four years, as well as the category of each:

	Number of female directors				% of total directors for each category			
	Year 2020	Year 2019	Year 2018	Year 2017	Year 2020	Year 2019	Year 2018	Year 2017
Executive					0.00	0.00	0.00	0.00
Proprietary					0.00	0.00	0.00	0.00
Independent	4	5	4	5	40.00	50.00	44.00	50.00
Other External	1	1	1		50.00	50.00	50.00	0.00
Total:	5	6	5	5	35.71	42.86	35.71	35.71

C.1.5 Indicate whether the company has diversity policies in relation to its Board of Directors on such questions as age, gender, disability, education and professional experience. Small and medium-sized enterprises, in accordance with the definition set out in the Spanish Auditing Act, will have to report at least the policy that they have implemented in relation to gender diversity.

Yes X **No ☐** **Partial policies ☐**

If so, describe these diversity policies, their objectives, the measures and the way in which they have been applied and their results over the year. Also indicate the specific measures adopted by the Board of Directors and the nomination and remuneration committee to achieve a balanced and diverse presence of directors.

If the company does not apply a diversity policy, explain the reasons why.

Description of policies, objectives, measures and how they have been applied, and results achieved
The Company's Governance and Sustainability System, and particularly the Board of Directors Diversity and Member Selection Policy, provides that any type of bias entailing any kind of discrimination shall be avoided in the candidate selection process. In particular, it provides that any bias that hinders the appointment of female directors and that might impede achieving the Company's goal that the number of female directors accounts for at least forty per cent of the total number of members of the Board of Directors in the year 2022, shall be avoided. The Regulations of the Appointments Committee give this committee the duty to ensure compliance with the above-described goal. Five of the fourteen members of the Board of Directors are currently women. Two of them chair two of the four consultative committees. On 31 July 2008 the Board of Directors resolved to appoint Ms Samantha Barber as an independent director (currently other external) on an interim basis to fill a vacancy; such appointment was ratified by the shareholders at the General Shareholders' Meeting held on 20 March 2009.

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The shareholders at the General Shareholders' Meeting held on 26 March 2010 approved the appointment of Ms María Helena Antolín Raybaud with the classification of independent director. She is chair of the Appointments Committee. The shareholders acting at the General Shareholders' Meeting held on 29 March 2019 approved the appointment of Ms Sara de la Rica Goiricelaya as an independent director. She is currently the chair of the Sustainable Development Committee. The shareholders acting at the General Shareholders' Meeting held on 2 April 2020 approved the appointment of Ms Nicola Mary Brewer and Ms Regina Helena Jorge Nunes as independent directors. At 31 December 2020 women represent 40% of the independent directors on the Board of Directors.

C.1.6 Describe the measures, if any, agreed upon by the nomination committee to ensure that selection procedures do not contain hidden biases which impede the selection of female directors and that the company deliberately seeks and includes women who meet the target professional profile among potential candidates, making it possible to achieve a balance between men and women. Also indicate whether these measures include encouraging the company to have a significant number of female senior executives:

Explanation of measures
The Board of Directors Diversity and Member Selection Policy ensures that the proposed appointments of directors are based on a prior analysis of the needs of the Board of Directors. In particular, the candidates must be respectable and qualified persons, widely recognised for their expertise, competence, experience, qualifications, training, availability and commitment to their duties. In particular, they must be irreproachable professionals, whose conduct and professional track record is aligned with the principles set forth in the Code of Ethics and with the corporate values contained in the Purpose and Values of the Iberdrola group. In the selection of candidates, it also endeavours to ensure a diverse and balanced composition of the Board of Directors overall, such that decision-making is enriched and multiple viewpoints are contributed to the discussion of the matters within its purview. To this end, the selection process shall promote a search for candidates with knowledge and experience in the main countries and sectors in which the group does or will do business. The directors must also have sufficient knowledge of the Spanish and English languages to be able to perform their duties. In turn, the Regulations of the Appointments Committee give this committee the responsibility of ensuring that when new vacancies are filled or new directors are appointed, the selection procedures are free from any implied bias entailing any kind of discrimination and, in particular, from any bias that might hinder the selection of female directors.

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As shown in the previous section, Iberdrola deliberately seeks to include women with the appropriate professional profile among potential candidates. In addition, the Equal Opportunity and Reconciliation Policy establishes among the main principles of conduct that Iberdrola endorse and promote the promotion of gender equality within the group as regards access to employment, training, professional advancement and working conditions, as an expression of the social and cultural reality, and particularly to promote mechanisms and procedures for selection and professional development that facilitate the presence of the underrepresented gender with the necessary qualifications in all areas of the organisation in which it is underrepresented, particularly including the implementation of specific training and professional development monitoring programmes for women that encourage the group to have a significant number of female executive officers. Furthermore, the benchmark objectives for the variable remuneration of the executive directors include increasing the presence of women in top positions and closing the pay gap. In this regard, the Director Remuneration Report 2020 reports on the level of achievement of this objective.

If in spite of any measures adopted there are few or no female directors or senior managers, explain the reasons for this:

Explanation of reasons
Not applicable

C.1.7 Explain the conclusions of the nomination committee regarding verification of compliance with the policy aimed at promoting an appropriate composition of the Board of Directors.

The Appointments Committee believes that Iberdrola is applying the Board of Directors Diversity and Member Selection Policy in a fully consistent manner and that the composition of its Board of Directors is balanced and diverse. It likewise believes that the 2022 objectives with respect to female presence are achievable.

C.1.8 If applicable, explain the reasons for the appointment of any proprietary directors at the request of shareholders with less than a 3% equity interest:

Name or company name of shareholder	Reason
No data	

Indicate whether the Board has declined any formal requests for presence on the Board from shareholders whose equity interest is equal to or greater than that of others at whose request proprietary directors have been appointed. If so, explain why the requests were not granted:

Yes ☐ **No** X

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C.1.9 Indicate the powers, if any, delegated by the Board of Directors to directors or Board committees:

Name or company name of director or committee	Brief description
MR JOSÉ IGNACIO SÁNCHEZ GALÁN	The chairman & CEO, as an individual decision-making body, has all the powers that may be delegated under the law and the By-Laws.
Executive Committee	All the powers inherent to the Board of Directors, except for those powers that may not be delegated pursuant to law or the Governance and Sustainability System.

C.1.10 Identify any members of the Board who are also directors, representatives of directors or managers in other companies forming part of the listed company's group:

Name or company name of director	Company name of the group entity	Position	Does the director have executive powers?
MR JOSÉ IGNACIO SÁNCHEZ GALÁN	AVANGRID, INC.	Chair	No
MR JOSÉ IGNACIO SÁNCHEZ GALÁN	NEOENERGIA S.A.	Chair	No
MR JOSÉ IGNACIO SÁNCHEZ GALÁN	SCOTTISH POWER LTD.	Chair	No
MR FRANCISCO MARTÍNEZ CÓRCOLES	IBERDROLA ESPAÑA, S.A.U.	Chair	No
MR FRANCISCO MARTÍNEZ CÓRCOLES	IBERDROLA ENERGÍA INTERNACIONAL, S.A.U.	Chair	No
MR FRANCISCO MARTÍNEZ CÓRCOLES	IBERDROLA MÉXICO, S.A. DE C.V.	Director	No

C.1.11 List any directors or representatives of legal-person directors of your company who are members of the Board of Directors or representatives of legal-person directors of other companies listed on regulated markets other than group companies of which the company has been informed:

Name or company name of director	Company name of the listed entity	Position
MR MANUEL MOREU MUNAIZ	TUBACEX, S.A.	Director
MS NICOLA MARY BREWER	AGGREKO PLC	Director
MS REGINA HELENA JORGE NUNES	IRB-BRASIL RESSEGUROS, S.A.	Director

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C.1.12 Indicate whether the company has established rules on the maximum number of company boards on which its directors may sit, explaining if necessary and identifying where this is regulated, if applicable:

Yes X **No** ☐

Explanation of the rules and identification of the document where this is regulated
Pursuant to the Regulations of the Board of Directors, individuals or legal entities serving as directors in more than five companies, of which no more than three may have shares trading on domestic or foreign stock exchanges, may not be appointed as directors. Positions within holding companies are excluded from the calculation. Furthermore, companies belonging to the same group shall be deemed to be a single company.

C.1.13 Indicate the remuneration received by the Board of Directors as a whole for the following items:

Remuneration accruing in favour of the Board of Directors in the financial year (thousands of euros)	19,831
Amount of pension rights accumulated by directors currently in office (thousands of euros)	
Amount of pension rights accumulated by former directors (thousands of euros)	

Remarks
This amount includes the remuneration received (5,493 thousand euros) by all of their directors for their performance as such during financial year 2020 (fixed remuneration, attendance fees and other items) as well as salaries, annual variable remuneration and the shares received by the executive directors in payment of the first period of the 2017-2019 Strategic Bonus, all of which is duly described in the Annual Director Remuneration Report.

C.1.14 Identify members of senior management who are not also executive directors and indicate their total remuneration accrued during the year:

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Name or company name	Position
MS SONSOLES RUBIO REINOSO	Internal Audit Director
MR SANTIAGO MARTÍNEZ GARRIDO	Director of Legal Services
MR ARMANDO MARTÍNEZ MARTÍNEZ	Director of the Networks Business
MR ASÍS CANALES ABAITUA	Director of Purchasing and Insurance
MR XABIER VITERI SOLAUN	Director of the Renewable Energy Business
MR AITOR MOSO RAIGOSO	Director of the Liberalised Business
MR JUAN CARLOS REBOLLO LICEAGA	Risk Management and Internal Assurance Director
MR PEDRO AZAGRA BLÁZQUEZ	Corporate Development Director
MR JOSÉ SAINZ ARMADA	General Finance, Control and Resources Director (CFO)
MS MARÍA DOLORES HERRERA PEREDA	Director of Compliance

Number of women in senior management	2
Percentage of total senior management	20.00%

Total remuneration of senior management (thousands of euros)	22,140

Remarks
The appointment of the Director of Compliance Ms María Dolores Herrera Pereda as a member of senior management was approved on 23 February 2021. Her remuneration during 2020 has not been included in the amount set out above as total remuneration of senior management. The amount of the fixed and variable remuneration of the officers not included in senior management was 46,439 thousand euros. This figure does not include the shares delivered for the first payment of the 2017-2019 Strategic Bonus.

C.1.15 Indicate whether the Board regulations were amended during the year:

Yes X **No** ☐

Description of amendment(s)
As part of the ongoing review of Iberdrola's Governance and Sustainability System, in addition to some technical improvements, amendments have been made to the Regulations of the Board of Directors, including in order to: (i) update the definition of social dividend, (ii) adjust the text thereof to the updated recommendations of the Good Governance Code of Listed Companies and the Iberdrola Group Non-Financial Information Preparation Policy; (iii) further developing the regulation of meetings of the Board of Directors held at several interconnected places; (iv) provide for remote attendance of one or more directors at onsite meetings; (v) regulate in greater detail the directors' duty of confidentiality; (vi) replace references to notices of significant events (*hechos relevantes*) with the new types of notices established by the CNMV; and (vii) incorporate the change in name

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from the Corporate Governance System to the Governance and Sustainability System.

C.1.16 Specify the procedures for selection, appointment, re-election and removal of directors. List the competent bodies, steps to follow and criteria applied in each procedure.

1. APPOINTMENT AND RE-ELECTION OF DIRECTORS

The appointment, re-election, and removal of directors is within the purview of the shareholders at the General Shareholders' Meeting.

Vacancies that occur may be filled by the Board of Directors on an interim basis until the next General Shareholders' Meeting.

The Appointments Committee must advise the Board of Directors regarding the most appropriate configuration thereof and of its committees as regards size and equilibrium among the various classes of directors existing at any time. This is in any event based on the conditions that candidates for director must meet pursuant to the Board of Directors Diversity and Member Selection Policy.

The following may not be appointed as directors or as individuals representing a corporate director:

a) Domestic or foreign companies competing with the Company in the energy industry or other industries, or the directors or members of senior management thereof, or such persons, if any, as are proposed by them in their capacity as shareholders.

b) Individuals or legal entities serving as directors in more than five companies, of which no more than three may have shares trading on domestic or foreign stock exchanges. Positions within holding companies are excluded from the calculation. Furthermore, companies belonging to the same group shall be deemed to be a single company.

c) Persons who, during the two years prior to their appointment, have occupied high-level positions in Spanish government administrations that are incompatible with the simultaneous performance of the duties of a director of a listed company under Spanish national or autonomous community law, or positions of responsibility with entities regulating the energy industry, the securities markets or other industries in which the group operates.

d) Individuals or legal entities that are under any other circumstance of disqualification or prohibition governed by provisions of a general nature, including those that have interests in any way opposed to those of the Company or the group.

The Board of Directors and the Appointments Committee, within the scope of their powers, shall endeavour to ensure that the candidates proposed are respectable and qualified persons, widely recognised for their expertise,

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competence, experience, qualifications, training, availability, and commitment to their duties.

It falls upon the Appointments Committee to propose the independent directors, as well as to report upon the proposals relating to the other classes of directors.

If the Board of Directors deviates from the proposals and reports of the Appointments Committee, it shall give reasons for so acting and shall record such reasons in the minutes.

2. REMOVAL OF DIRECTORS

Directors shall serve in their position for a term of four years, so long as the shareholders acting at the General Shareholders' Meeting do not resolve to remove them and they do not resign from their position.

The Appointments Committee shall inform the Board of Directors regarding proposed removals due to breach of the duties inherent to the position of director or due to a director becoming affected by supervening circumstances of mandatory resignation or withdrawal. It may also propose the removal of directors in the event of disqualification, structural conflict of interest or any other reason for resignation or cessation of office, pursuant to law or the Governance and Sustainability System.

The Board of Directors may propose the removal of an independent director before the passage of the period provided for in the By-Laws only upon sufficient grounds, evaluated by the Board of Directors after a report from the Appointments Committee, or as a consequence of takeover bids, mergers or other similar corporate transactions resulting in a significant change in the structure of the Company's share capital, as recommended by the Good Governance Code of Listed Companies.

C.1.17 Explain to what extent the annual evaluation of the Board has given rise to significant changes in its internal organisation and in the procedures applicable to its activities:

Description of amendment(s)
The Iberdrola group has an ongoing commitment to the development of its corporate governance. Along these lines, Iberdrola evaluates the operation of its governance bodies on an annual basis, and based on the conclusions obtained, identifies the principal areas of work for the coming year. More than 96% of the areas of work defined in the evaluation process from the prior year were met during 2020. The milestones that took place during financial year 2020 include the following: 1. COVID-19:

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- New internal regulation to adapt the governance decision-making bodies to the COVID-19 situation.
- Monitoring of the impact of COVID-19 on the Iberdrola group and on the markets in which it operates.

2. Environmental, social and governance issues during the year:

- Reformulation and reorganisation of the Corporate Governance System into a Governance and Sustainability System, based on environmental, social and governance standards.
- Regular staggered renewal of the Board of Directors with the appointments of Ms Nicola Mary Brewer, Ms Regina Helena Jorge Nunes and Mr Ángel Jesús Acebes Paniagua.
- Supervision of the implementation by the subsidiaries of the Proposed Purpose and Values of the Iberdrola group.
- Review of the new features included in the update of the CNMV Good Governance Code of Listed Companies and update of the Corporate Governance System (now the Governance and Sustainability System).

Describe the evaluation process and the areas evaluated by the Board of Directors with or without the help of an external advisor, regarding the functioning and composition of the Board and its committees and any other area or aspect that has been evaluated.

Description of the evaluation process and areas evaluated
The Appointments Committee coordinates the evaluation of the operation of the Board of Directors and of the committees thereof on an annual basis, and submits to the full Board of Directors the results of said evaluation together with a proposed action plan or with any recommendations to correct any potential detected deficiencies. The evaluation process has a broad scope, including new aspects that were added to the scope in 2019 after the publication of Technical Guide 1/2019 on Nomination and Remuneration Committees published by the CNMV. The evaluation for financial year 2020 used PricewaterhouseCoopers Asesores de Negocios, S.L. (PwC) as an external adviser in the process. The scope of the process in 2020 included the evaluation of the Board of Directors, of its committees, of the chairman & CEO and of each of the other directors of the Company from the viewpoint of the following dimensions of the study: (i) compliance with internal rules and with the CNMV Good Governance Code of Listed Companies, (ii) monitoring of corporate governance trends, and (iii) analysis of achievement of potential areas for progress defined in evaluations from prior years. The evaluation of the chairman & CEO was led by the vice-chair/lead independent director. This process included a comparative analysis of (i) 23 domestic and international companies considered to have best practices, and (ii) customary comparable companies.

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This evaluation used more than 380 best practices indicators, which were assessed using objective and verifiable evidence. All of this was supplemented with interviews of the directors by the vice-chair/lead independent director in line with the recommendations of the Good Governance Code of Listed Companies and of Technical Guide 1/2019 on Nomination and Remuneration Committees published by the CNMV.

The process concluded with a Continuous Improvement Plan, with indicators that are evaluated for compliance the following financial year.

The conclusions of the evaluation process reflect compliance with practically all of the indicators, with an alignment of more than 96% in the application of the latest international trends and in the development of the areas for improvement identified during prior financial years.

The Continuous Improvement Plan 2021 deriving from the 2020 evaluation process focuses on advancing in the following areas, among others:

Operational aspects

- Continue with training programmes for the consultative committees in order to delve further into topics of interest and provide more varied presentations.
- Update the annual work plan of the committees every six months to ensure compliance in all areas of the Continuous Improvement Plan.

Agenda of the Board of Directors

- Implementation of strategy and preparation of corporate information based on environmental, social and corporate governance (ESG) criteria.
- Emerging business areas and contribution to sustainability and decarbonisation.
- Strengthening innovation and digitalisation.
- Monitoring diversity and inclusion.

At the same time, it is proposed to continue with the further development of the capacities of the committees, particularly:

- To continue improving the Internal Control over Non-Financial Information (ICNFR) System to a level of robustness similar to that of financial reporting.
- To continue adjusting published sustainability-related information to new standards and trends (Sustainability Accounting Standards Board, the Task Force on Climate-related Financial Disclosures, etc).
- Regular refreshment of the appointments matrix.

On 23 February 2021 the Board of Directors approved the results of the evaluation of financial year 2020 and the Continuous Improvement Plan for financial year 2021.

C.1.18 Provide details, for years in which the evaluation was carried out with the help of an external advisor, of the business relationships that the external advisor or company in its group maintains with the company or any company in its group.

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Iberdrola has been assisted by an outside consultant for the last eleven years. In 2020 PwC's business relations with the Iberdrola group worldwide were approximately 23.1 million euros.
The total amount of billing by PwC for consulting services provided to the Board of Directors and the Office of the Secretary thereof in 2020 was 379 thousand euros.

C.1.19 Indicate the cases in which directors are obliged to resign.

Directors must submit their resignation from the position and formally resign from their position upon the occurrence of any of the instances of disqualification, lack of competence, structural and permanent conflict of interest or prohibition against performing the duties of director provided by law or the Governance and Sustainability System.

In this connection, the Regulations of the Board of Directors provide that the directors must submit their resignation to the Board of Directors in the following cases:

a) When, due to supervening circumstances, they are involved in any circumstance of disqualification or prohibition provided by law or the Governance and Sustainability System.

b) When, as a result of any acts or conduct attributable to the director, serious damage is caused to the value or reputation of the Company or there is a risk of criminal liability for the Company or any of the companies of the group.

c) When there are situations that affect them, whether or not related to their conduct within the Company itself, that might harm the good standing or reputation thereof.

d) When they cease to deserve the respectability or to have the capability, expertise, competence, availability or commitment to their duties required to be a director of the Company.

   In particular, when the activities carried out by the director, or the companies directly or indirectly controlled by the director, or the individuals or legal entities that are shareholders of or related to any of them, or the individual representing a corporate director, may compromise the competence of the director.

e) When they are seriously reprimanded by the Board of Directors because they have breached any of their duties as directors.

f) When their continuance in office on the Board of Directors may for any reason, either directly, indirectly, or through persons related thereto, jeopardise the faithful and diligent performance of their duties in furtherance of the corporate interest.

g) When the reasons why the director was appointed cease to exist and, in particular, in the case of proprietary directors, when the shareholder or shareholders who proposed, requested, or decided the appointment

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thereof totally or partially sell or transfer their equity interest, with the result that such equity interest ceases to be significant or sufficient to justify the appointment. h) When an independent director unexpectedly falls under supervening circumstances that prevent the director from being considered as such pursuant to the provisions of law. The resignation provisions set forth under f) and g) above shall not apply when, after a report from the Appointments Committee, the Board of Directors believes that there are reasons that justify the director's continuance in office, without prejudice to the effect that the new supervening circumstances may have on the classification of the director.

C.1.20 Are qualified majorities other than those established by law required for any particular kind of decision?

Yes X **No** ☐

If so, describe the differences.

Description of differences
The Regulations of the Board of Directors require a majority of at least two-thirds of the directors present at the meeting in person or by proxy to approve the amendment thereof. The Regulations of the Board of Directors also state that directors must tender their resignation to the Board of Directors if they are seriously reprimanded thereby because they have breached any of their duties as directors, by resolution adopted by a two-thirds majority of the directors.

C.1.21 Explain whether there are any specific requirements, other than those relating to directors, for being appointed as chairman of the Board of Directors.

Yes ☐ **No X**

C.1.22 Indicate whether the articles of association or Board regulations establish any limit as to the age of directors:

Yes ☐ **No X**

Remarks
The Regulations of the Board of Directors provide that the standards to take into account for selecting candidates for the position of director shall include, by way of guidance only, the appropriateness of the directors generally not exceeding the age of seventy years. Each of the non-executive directors has undertaken to tender their resignation to the Board of Directors at the first meeting it holds after they reach seventy years of age.

C.1.23 Indicate whether the articles of association or Board regulations establish any term limits for independent directors other than those required by law or any other additional requirements that are stricter than those provided by law:

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Yes ☐ No X

C.1.24 Indicate whether the articles of association or Board regulations establish specific rules for appointing other directors as proxy to vote in Board meetings, if so the procedure for doing so and, in particular, the maximum number of proxies that a director may hold, as well as whether any limit has been established regarding the categories of director to whom votes may be delegated beyond the limits imposed by law. If so, briefly describe these rules.

Pursuant to the By-Laws, all of the directors may cast their vote and give their proxy in favour of another director, provided, however, that non-executive directors may only do so in favour of another non-executive director.

The Regulations of the Board of Directors require that directors attend the meetings of the Board of Directors and when they cannot do so personally they must grant their proxy to another director, to whom they must give the appropriate instructions.

Directors may not grant a proxy in connection with matters in respect of which they have any conflict of interest.

The proxy granted shall be a special proxy for the Board meeting in question and may be communicated by any means allowing for the receipt thereof.

There is no maximum number of proxies provided per director.

C.1.25 Indicate the number of meetings held by the Board of Directors during the year. Also indicate, if applicable, the number of times the Board met without the chairman being present. Meetings where the chairman gave specific proxy instructions are to be counted as attended.

Number of board meetings	9
Number of board meetings held without the chairman's presence	0

Indicate the number of meetings held by the coordinating director with the other directors, where there was neither attendance nor representation of any executive director:

Number of meetings	1

Indicate the number of meetings held by each Board committee during the year:

Number of meetings held by the Audit and Risk Supervision Committee	11
Number of meetings held by the Sustainable Development Committee	11
Number of meetings held by the Appointments Committee	8
Number of meetings held by the Remuneration Committee	11
Number of meetings held by the Executive Committee	16

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Remarks
Pursuant to the provisions of art. 45 of the By-Laws, the lead independent director coordinates, meets with and reflects the concerns of the non-executive directors, and also directs the periodic evaluation of the chairman of the Board of Directors and leads any process for the succession thereof. In the exercise of these powers, the lead independent director has held meetings with all of the non-executive directors, which meetings dealt with the evaluation of the chairman & CEO as well as initiatives to improve the performance of each of the directors.

C.1.26 Indicate the number of meetings held by the Board of Directors during the year with member attendance data:

Number of meetings in which at least 80% of directors were present in person	9
Attendance in person as a % of total votes during the year	100.00
Number of meetings with attendance in person or proxies given with specific instructions, by all directors	9
Votes cast in person and by proxies with specific instructions, as a % of total votes during the year	100.00

Remarks
The Board of Directors has held 2 of its 9 meetings in writing and without a meeting. The attendance of each and every one of the directors at the meetings of the Board of Directors and its committees during financial year 2020 is detailed in the Annex to this Report.

C.1.27 Indicate whether the individual and consolidated financial statements submitted to the Board for issue are certified in advance:

Yes X **No** ☐

Identify, if applicable, the person(s) who certified the individual and consolidated financial statements of the company for issue by the Board:

Name	Position
MR JOSÉ IGNACIO SÁNCHEZ GALÁN	Chairman & CEO
MR JOSÉ SAINZ ARMADA	General Finance, Control and Resources Director (CFO)

Remarks
The Iberdrola group has established a certification process by which those responsible for financial information in the different areas of the Company (i.e. those responsible for the subholding companies and global corporate areas) certify that: (i) the financial information they deliver to Iberdrola for purposes of consolidation does not contain any material errors or omissions and provides a fair view of the results and

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the financial condition within their area of responsibility, and (ii) they are responsible for establishing the Internal Control Over Financial Reporting (ICFR) system within their area of responsibility and have found, upon evaluation, that the system is effective. The text of these certifications is inspired by the form of certification established in Section 302 of the U.S. Sarbanes-Oxley Act.

The culmination of the process is a joint certification that the chairman & CEO and the CFO submit to the Board of Directors.

The process is carried out by means of electronic signature in a software application which manages the areas of responsibility and time periods and which serves as a repository of all the documentation generated, allowing for periodic review by the supervision and control bodies of the group.

C.1.28 Explain the mechanisms, if any, established by the Board of Directors to ensure that the financial statements it presents to the General Shareholders' Meeting are prepared in accordance with accounting regulations.

The Regulations of the Audit and Risk Supervision Committee provide that it shall have the following duties, among others:

- Supervise (on an ongoing basis and specifically at the request of the Board of Directors) the process of preparing and presenting regulated financial information relating to the Company, both individual and consolidated with its subsidiaries, reviewing compliance with legal requirements, the proper delimitation of the scope of consolidation and the correct application of accounting standards, and submit recommendations or proposals to the Board of Directors to safeguard the integrity thereof.
- Supervise the clarity and integrity of the financial information regarding the Company and its group based on available sources of internal information (including reports from the Internal Audit Area and the Risk Management and Internal Assurance Division, reports from other areas or departments, or the analysis and opinion of the Company's management team itself) and external information (including reports from experts or information received from the statutory auditor), and reach its own conclusion as to whether the Company has properly applied the accounting policies.
- Establish appropriate relationships with the statutory auditor to receive information regarding matters that might entail a threat to the independence thereof, for examination by the Committee, and any other information related to the development of the audit procedure, as well as such other communications as are provided for in the laws on statutory audit and in other legal provisions on auditing.
- The Committee must receive written confirmation from the statutory auditors on an annual basis of their independence in relation to the Company or entities directly or indirectly related thereto, as well as a detailed breakdown of information on additional services of any kind provided to and the corresponding fees received from such entities by such statutory auditors or by persons or entities related thereto, pursuant to the legal provisions governing the auditing of accounts.

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- On an annual basis, prior to the audit report, issue a report containing an opinion on whether the independence of the statutory auditors is compromised, which shall be made available to the shareholders upon the terms set forth in the Regulations for the General Shareholders' Meeting. This report shall contain a reasoned assessment of the provision of each and every one of the additional services other than the legal audit referred to in the preceding point, considered individually and as a whole, and in relation to the rules on independence or the legal provisions regarding the statutory audit.
- Report in advance to the Board of Directors regarding the financial information that the Company must disclose on a regular basis because of its status as a listed company; the Committee shall make sure that the interim statements are prepared in accordance with the same accounting standards as the annual accounts and, for such purpose, it shall consider the appropriateness of a limited review by the statutory auditor.
- Review the contents of the audit reports on the accounts and of the reports on the limited review of interim accounts, if any, as well as other mandatory reports to be prepared by the statutory auditor, prior to the issuance thereof, in order to avoid qualified reports.
- Assess the results of each audit of accounts and supervise the response of the members of senior management to the recommendations made therein.
- Act as a channel of communication between the Board of Directors and the statutory auditors, causing them to hold an annual meeting with the Board of Directors to report thereto on the work performed and the accounting status and risks of the Company.
- Evaluate any proposal made by the members of senior management regarding changes in accounting practices.
- Analyse the reasons why the Company may itemise certain alternative information on returns in its public information instead of the measures directly defined by accounting rules, the extent to which useful information is provided to investors and the level of compliance thereof with best practices and international recommendations in this area.
- Obtain information on significant adjustments identified by the statutory auditor or that result from revisions made by the Internal Audit Area and the position of the management team regarding said adjustments.
- Timely and properly attend to, answer and take into account any requests sent thereto by the National Securities Market Commission during the current financial year or in prior years, ensuring that the same types of incidents previously identified in said requests are not repeated in the financial statements.

In turn, the Regulations of the Board of Directors provide that:

- The Board of Directors shall meet with the statutory auditors at least once per year in order to receive information regarding the work performed and regarding the accounting status and risks of the Company.
- The Board of Directors shall use its best efforts to definitively prepare the accounts such that there is no room for qualifications by the statutory auditors. However, when the Board of Directors believes that

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its opinion must prevail, it shall provide a public explanation of the content and scope of the discrepancy.

Pursuant to the above-cited rules, the Audit and Risk Supervision Committee reports throughout the year on the process of preparing and presenting and the clarity and integrity of the financial information (separate and consolidated) prior to the approval thereof by the Board of Directors and its submission to the National Securities Market Commission. The reports of the Committee, which the chair thereof presents to the full Board of Directors, are mainly intended to disclose such aspects, if any, as may give rise to qualifications in the audit report of Iberdrola and its consolidated group, making the appropriate recommendations to avoid any such qualifications.

Accordingly, the Committee submitted to the Board of Directors the following reports regarding the annual and half-yearly financial reports and the Interim Management Statements of the Company for financial year 2020:

- Report dated 27 April 2020 on the Interim Management Statement for the first quarter of 2020.
- Report dated 20 July 2020 on the financial information for the first half of 2020.
- Report dated 19 October 2020 on the Interim Management Statement for the third quarter of 2020.
- Report dated 22 February 2021 regarding the annual accounts of Iberdrola and its consolidated group for financial year 2020.

As disclosed in the information about Iberdrola posted on the website of the National Securities Market Commission (www.cnmv.es), the audit reports on the individual and consolidated annual accounts prepared by the Board of Directors have historically been issued without qualifications.

C.1.29 Is the secretary of the Board also a director?

Yes ☐ **No** X

If the secretary is not a director, complete the following table:

Name or company name of the secretary	Representative
MR JULIÁN MARTÍNEZ-SIMANCAS SÁNCHEZ	

C.1.30 Indicate the specific mechanisms established by the company to safeguard the independence of the external auditors, and any mechanisms to safeguard the independence of financial analysts, investment banks and rating agencies, including how legal provisions have been implemented in practice.

MECHANISMS TO PRESERVE THE INDEPENDENCE OF THE AUDITOR.
The Regulations of the Audit and Risk Supervision Committee and the Statutory Auditor Contracting and Relations Policy, included within the Company's Governance and Sustainability System, provide that:

- The Committee's relations with the Company's statutory auditor shall respect the independence thereof.

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- The Audit and Risk Supervision Committee must discuss with the statutory auditor any circumstance that might give rise to a threat to the independence thereof and evaluate the effectiveness of the protective measures adopted, as well as understand and evaluate the set of relationships between the Iberdrola group and the statutory auditor and its network that entail the provision of non-audit services or any other type of relationship.
- The Committee shall request from the statutory auditor an certification of independence of the firm as a whole and of the members of the team participating in the process of auditing the annual accounts of the Iberdrola group from the Company or entities directly or indirectly connected thereto, as well as a detailed breakdown of information regarding additional services (other than auditing) of any kind provided by the statutory auditor or by persons connected thereto, pursuant to the legislation governing the audit of accounts. In addition, the statutory auditor shall include in such certification a statement in which it reports on compliance with the application of the internal procedures of quality assurance and protection of independence that have been implemented.
- The statutory auditor shall provide to the Committee annual information regarding the profiles and the track record of the persons making up the audit teams working for the Company and the Iberdrola group, with specific mention of the changes in the composition of such teams compared to the immediately preceding financial year.
- On an annual basis and prior to the issuance of the audit report, the Committee shall issue a report setting forth an opinion on the independence of the statutory auditor. This report must contain an assessment of the possible impact on the independence of the statutory auditor of each and every one of the additional services (other than the legal audit) of any kind provided by the statutory auditor or by persons connected thereto, considered individually and as a whole.
- The Committee shall monitor the internal procedures for assuring quality and safeguarding independence implemented by the statutory auditor.
- The Committee shall not submit a proposal to the Board of Directors, and the Board of Directors shall not submit a proposal to the shareholders at the General Shareholders' Meeting, for appointment as statutory auditor of firms for which it has evidence that they are affected by any circumstance of lack of independence, prohibition or disqualification pursuant to the legal provisions governing the audit of accounts, and in any event if the fees that the Company intends to pay it for any and all services are greater than five percent of its total domestic income during the last financial year.
- The Committee shall receive information on the hiring by any of the companies of the Iberdrola group of professionals coming from the statutory auditor.

The Audit and Risk Supervision Committee has also established a restrictive policy on the non-audit services by the statutory auditor to the Iberdrola group that can be authorised. Likewise, pursuant to the Regulations of the Audit and Risk Supervision Committee, in order for the Committee to authorise the provision of said services, it must assess whether the audit firm is the most appropriate firm to provide them based on its knowledge and experience, and in this case shall analyse: (i) the nature thereof and the

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circumstances and context in which it occurs, (ii) the status, position or influence of the provider of the service and other relations thereof with the Company; (iii) the effects thereof; and (iv) whether said services could threaten the independence of the auditor and, if applicable, the establishment of measures eliminating or reducing these threats to a level that does not compromise the independence thereof.

As regards financial year 2020:

- Iberdrola's statutory auditor, "KPMG Auditores, S.L." ("**KPMG**") appeared on fourteen occasions before the Audit and Risk Supervision Committee and on one occasion before the Board of Directors to report on various matters relating to the audit process. During these appearances, the statutory auditor did not report issues that might put its independence at risk.
- On 19 February 2020 KPMG sent to the Committee written confirmation of its independence with regard to the audit of the financial information for financial year 2019.
- On 20 July 2020 KPMG sent to the Committee written confirmation of its independence with regard to the limited review of the financial information as at 30 June 2020.
- On 17 February 2021 KPMG sent to the Committee written confirmation of its independence with regard to the audit of the financial information for financial year 2020.
- In the letters described above, the statutory auditor represents that it has implemented internal policies and procedures designed to provide reasonable assurance that KPMG and its personnel maintain their independence when so required by applicable legal provisions.
- The hiring of the statutory auditor for non-audit services is approved in advance by the Committee. Furthermore, prior to approval thereof, the director of Internal Audit, and if necessary the audit committee and internal audit division of the group company receiving the services, must state that the provision thereof does not generate threats to the independence of the statutory auditor. In requests for services directed by the Committee, the statutory auditor must confirm that there are no restrictions on independence for the performance of the work in question.
- In its statement of independence dated 17 February 2021, KPMG reported that one KPMG professional was hired by the Company since the date of its previous report on independence. However, they have confirmed that this professional was not the main auditor responsible for the audit work of the group's financial information, was not a statutory auditor and did not participate or have the ability to influence the final result of the audit work, for which reason KPMG considers that this hiring does give rise to any of the disqualifications provided for in Law 22/2015 of 20 July on the Auditing of Accounts, nor has it given rise to a threat that has compromised their independence as auditors. In its statement of independence dated 17 February 2021, KPMG also added that it had no evidence that any member of the teams participating in the audit of the financial statements for financial year 2020 had joined as a professional of Iberdrola or of the companies of its group.
- On 22 February 2021 the Committee submitted its report to the Board of Directors regarding the independence of the Company's statutory auditor. The Committee concluded that the statutory auditor

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performed its audit work with independence from Iberdrola and from the companies of its group.

MECHANISMS TO PRESERVE THE INDEPENDENCE OF FINANCIAL ANALYSTS, INVESTMENT BANKS AND RATING AGENCIES.

The principles which form the basis of the relations of the Company with financial analysts, investment banks, and rating agencies are contained in the Policy regarding Communication and Contacts with Shareholders, Institutional Investors and Proxy Advisors and are transparency, equal treatment, non-discrimination, truthfulness, and trustworthiness of the information supplied.

The Finance, Control and Resources Division, through the Investor Relations and Communication Division, manages their requests for information and requests submitted by institutional or retail investors (in the case of retail investors, through the Shareholders' Office). The Finance, Control and Resources Division gives mandates to investment banks. The Corporate Development Division gives the appropriate advisory mandates to investment banks within the scope of its activities, in coordination with the Finance, Control and Resources Division.

The independence of financial analysts is protected by the Investor Relations and Communications Division, which ensures the objective, fair, and non-discriminatory treatment thereof.

The Company has various communication channels to deliver on principles of transparency, equal treatment and non-discrimination, always in strict compliance with regulations regarding the securities market:

- Personalised assistance for analysts, investors and rating agencies.
- Publication of the information relating to quarterly results and other specific events, such as those relating to the submission of the Business Prospects or to corporate transactions.
- E-mail through the corporate website (accionistas@iberdrola.com).
- Toll-free line for shareholders (+34 900 100 019).
- In-person and broadcasted presentations.
- Release of announcements and news.
- Visits to Company facilities.

C.1.31 Indicate whether the company changed its external auditor during the year. If so, identify the incoming and outgoing auditors:

Yes ☐ No X

If there were any disagreements with the outgoing auditor, explain their content:

Yes ☐ No X

C.1.32 Indicate whether the audit firm performs any non-audit work for the company and/or its group and, if so, state the amount of fees it received for such work and express this amount as a percentage of the total fees invoiced to the company and/or its group for audit work:

Yes X No ☐

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	Company	Group companies	Total
Amount invoiced for non-audit services (thousands of euros)	1,535	1,977	3,512
Amount invoiced for non-audit work/Amount for audit work (in %)	53.00	9.30	14.50

Remarks
83% (1,277 thousand euros) of the amount of non-audit work (1,535 thousand euros) corresponds to services relating to the limited review of interim financial information.

C.1.33 Indicate whether the auditors' report on the financial statements for the preceding year contains a qualified opinion or reservations. If so, indicate the reasons given to shareholders at the general meeting by the chairman of the audit committee to explain the content and extent of the qualified opinion or reservations.

Yes ☐ **No X**

C.1.34 Indicate the number of consecutive years for which the current audit firm has been auditing the company's individual and/or consolidated financial statements. Also, indicate the number of years audited by the current audit firm as a percentage of the total number of years in which the financial statements have been audited:

	Individual	Consolidated
Number of consecutive years	4	4

	Individual	Consolidated
Number of years audited by the current audit firm/number of years in which the company has been audited (in %)	14.81%	14.81%

C.1.35 Indicate whether there is a procedure for directors to be sure of having the information necessary to prepare the meetings of the governing bodies with sufficient time; provide details if applicable:

Yes X **No** ☐

Details of the procedure
The Regulations of the Board of Directors provide that the required support shall be provided for new directors to become rapidly and adequately acquainted with the Company and its group, such that they can actively perform their duties as such and, if so appointed, as members of any of the committees of the Board of Directors as from their appointment as such. To this end, an Orientation Programme shall be made available to them through the directors' website.

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They shall also be provided with the information needed to perform their duties, and access to training materials and sessions that allow them to continuously update their knowledge shall be encouraged.

The regulations of the consultative committees also provide that they shall have a periodic training plan that ensures the refreshment of knowledge relating to the purview of each of them.

In order to improve their knowledge of the group, presentations are made to the directors regarding the businesses thereof. In addition, a portion of each meeting of the Board of Directors tends to be dedicated to a presentation on economic, legal or political/social issues of importance to the group.

The directors have access to a specific application, the directors' website, that facilitates performance of their duties and the exercise of their right to receive information. This website includes information deemed appropriate for preparation of the meetings of the Board of Directors and the committees thereof in accordance with the agenda, the training materials intended for the directors, and presentations made to the Board of Directors.

In addition, the directors are given access through the directors' website to the minutes of the meetings of the Board of Directors and the committees thereof, as well as such other information that the Board of Directors approves.

Pursuant to the Regulations of the Board of Directors, there shall be an inclusion on the directors' website of such information as is deemed appropriate for preparation of the meetings of the Board of Directors and the committees thereof, in accordance with the agenda included in the calls to meeting.

In addition, the Regulations of the Board of Directors provide that a director is specifically required to properly prepare the meetings of the Board of Directors and, if applicable, the meetings of the Executive Committee or of the committees of which the director is a member, for which purposes the director must diligently become apprised of the running of the Company and the matters to be discussed at such meetings.

C.1.36 Indicate whether the company has established rules obliging directors to inform the Board of any circumstances, whether or not related to their actions in the company itself, that might harm the company's standing and reputation, tendering their resignation where appropriate. If so, provide details:

Yes X **No** ☐

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Explain the rules
The Regulations of the Board of Directors set out the obligations and duties of the directors, including, as an expression of the duty of loyalty, the duty to submit their resignation to the Board of Directors in the event that supervening circumstances mean they are involved in an instance of disqualification or prohibition, loss of suitability, respectability, capability, expertise, competence, availability or commitment to their duties required to be a director and the other instances provided for in the Governance and Sustainability System. As provided by the Regulations of the Board of Directors, the director must inform the Company of any judicial, administrative or other proceedings instituted against the director which, because of their significance or characteristics, may seriously reflect upon the reputation of the Company. In particular, every director must inform the Company, through the secretary of the Board of Directors, in the event that the director is subject to an investigation, is arrested, or an order for the commencement of an oral criminal trial is issued against the director for the commission of any crime, and of the occurrence of any significant procedural steps in such proceedings. In such instance, the Board of Directors shall review this circumstance as soon as practicable and, following a report of the Appointments Committee, shall adopt the decisions it deems fit taking into account the interests of the Company. In addition, the director must inform the Company of any fact or event that may be relevant to the holding of office as a director. Directors must also submit their resignation to the Board of Directors and formally resign from their position in the events described in section C.1.19 of this Report.

C.1.37 Indicate whether, apart from such special circumstances as may have arisen and been duly minuted, the Board of Directors has been notified or has otherwise become aware of any situation affecting a director, whether or not related to his or her actions in the company itself, that might harm the company's standing and reputation:

Yes ☐ **No** X

C.1.38 Detail any material agreements entered into by the company that come into force, are modified or are terminated in the event of a change in control of the company following a public takeover bid, and their effects.

Not applicable.

C.1.39 Identify individually as regards directors, and in aggregate form in other cases, and provide details of any agreements between the company and its directors, executives or employees containing indemnity or golden parachute clauses in the event of resignation or dismissal without due cause or termination of employment as a result of a takeover bid or any other type of transaction.

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Number of beneficiaries	28
Type of beneficiary	**Description of agreement**
Executive directors and officers	1. EXECUTIVE DIRECTORS Pursuant to the provisions of his contract, the chairman & CEO has the right to receive a severance payment in the event of termination of his relationship with the Company, provided that such termination is not the consequence of a breach attributable thereto or exclusively due to his own decision to withdraw. The amount of the severance payment is three times annual salary. Since 2011, contracts with new executive directors and with senior management include maximum severance pay equal to two times annual salary in the event of termination of their relationship with the Company, provided that termination of the relationship is not the result of a breach attributable thereto or solely due to a voluntary decision thereof. This is the system applicable to the Business CEO, who was appointed by the shareholders at the General Shareholders' Meeting held on 31 March 2017. Furthermore, in consideration for the executive directors' non-compete commitment for a period of between one and two years, they shall be entitled to severance pay equal to the remuneration for such period. 2. OFFICERS The employment contracts of officers of Iberdrola who, given their responsibilities, decisively contribute to the creation of value, contain specific clauses on severance payments. The purpose of such clauses is to obtain an effective and sufficient level of loyalty for the management of the Company and thus avoid a loss of experience and knowledge that might jeopardise the achievement of strategic objectives. The amount of the severance pay is determined based on length of service and the reasons for the officer's withdrawal from office, up to a maximum of five times annual salary. Notwithstanding the foregoing, the Senior Management Remuneration Policy provides since 2011 that the limit on the amount of the severance pay under new contracts with the members of senior management shall be two times their annual salary.

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Indicate whether, beyond the cases established by legislation, these agreements have to be communicated and/or authorised by the governing bodies of the company or its group. If so, specify the procedures, the cases concerned and the nature of the bodies responsible for their approval or communication:

	Board of Directors	General shareholders' meeting
Body authorising the clauses	X	

	YES	NO
Are these clauses notified to the General Shareholders' Meeting?	X	

C.2 Committees of the Board of Directors

C.2.1 Provide details of all committees of the Board of Directors, their members, and the proportion of executive, proprietary, independent and other external directors forming them:

AUDIT AND RISK SUPERVISION COMMITTEE

Name	Position	Category
MR XABIER SAGREDO ORMAZA	Chair	Independent
MR JOSÉ WALFREDO FERNÁNDEZ	Member	Independent
MS REGINA HELENA JORGE NUNES	Member	Independent

% of executive directors	0.00
% of proprietary directors	0.00
% of independent directors	100.00
% of other external directors	0.00

Remarks
Ms Georgina Kessel Martínez ceased to be a member of the Audit and Risk Supervision Committee on 20 October 2020. She had knowledge and experience in accounting and auditing.

Explain the functions assigned to this committee, including where applicable those that are additional to those prescribed by law, and describe the rules and procedures for its organisation and functioning. For each of these functions, briefly describe its most important actions during the year and how it has exercised in practice each of the functions assigned to it by law, in the articles of association or in other corporate resolutions.

The Audit and Risk Supervision Committee is an internal informational and consultative body.

The Audit and Risk Supervision Committee shall be composed of a minimum of three and a maximum of five directors appointed by the Board of

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Directors upon a proposal of the Appointments Committee from among the non-executive directors who are not members of the Executive Committee. A majority of its members shall be independent, and at least one of them shall be appointed taking into account the knowledge and experience thereof in the areas of accounting, audit and risk management.

Without prejudice to the foregoing, the Board of Directors and the Appointments Committee shall endeavour to ensure that all members of the Audit and Risk Supervision Committee, and especially the chair thereof, have the expertise, qualifications and experience appropriate for the duties they are called upon to perform in the area of accounting, auditing and management of risks, both financial and non-financial, that at least one of them has experience in information technology, and that as a whole the members of the Audit and Risk Supervision Committee have relevant technical knowledge in the finance and internal control area, as well as in relation to the energy sector.

The Board of Directors shall appoint a chair of the Committee from among the independent directors forming part thereof, as well as its secretary, who need not be a director.

The members of the Audit and Risk Supervision Committee shall be appointed for a maximum term of four years and may be re-elected on one or more occasions for terms of the same maximum length. The chair shall hold office for a maximum period of four years, after which period the director who has held office as such may not be re-elected until the passage of at least one year from ceasing to act as such.

A valid quorum shall be established with the attendance at the meeting, in person or by proxy, of a majority of its members, and resolutions shall be adopted by an absolute majority of votes of the members present at the meeting in person or by proxy.

The duties of the Committee are provided and are further developed in the Regulations of the Board of Directors, as well as in the Regulations of the Audit and Risk Supervision Committee.

The most relevant activities performed by this Committee during financial year 2020 are described in the Activities Report of the Board of Directors and of the Committees thereof 2020, available at www.iberdrola.com.

Identify the directors who are member of the audit committee and have been appointed taking into account their knowledge and experience in accounting or audit matters, or both, and state the date on which the Chairperson of this committee was appointed.

Name of directors with experience	MR XABIER SAGREDO ORMAZA AND MS REGINA HELENA JORGE NUNES
Date of appointment of the chairperson	19/02/2019

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SUSTAINABLE DEVELOPMENT COMMITTEE

Name	Position	Category
MS SARA DE LA RICA GOIRICELAYA	Chair	Independent
MS SAMANTHA BARBER	Member	Other external
MS NICOLA MARY BREWER	Member	Independent

% of executive directors	0.00
% of proprietary directors	0.00
% of independent directors	66.67
% of other external directors	33.33

Explain the functions assigned to this committee and describe the rules and procedures for its organisation and functioning. For each of these functions, briefly describe its most important actions during the year and how it has exercised in practice each of the functions assigned to it by law, in the articles of association or in other corporate resolutions.

The Sustainable Development Committee is an internal informational and consultative body.

The Committee shall be composed of a minimum of three and a maximum of five directors appointed by the Board of Directors upon a proposal of the Appointments Committee, from among the non-executive directors.

A majority of the members of the Sustainable Development Committee must be classified as independent. The Board of Directors shall appoint a chair of the Committee from among the members forming part thereof, as well as its secretary, who need not be a director.

The members of the Sustainable Development Committee shall be appointed for a maximum term of four years and may be re-elected on one or more occasions for terms of the same maximum length.

A valid quorum shall be established with the attendance at the meeting, in person or by proxy, of a majority of its members, and resolutions shall be adopted by an absolute majority of votes of the members present at the meeting in person or by proxy.

The duties of the Committee are further developed in the Regulations of the Board of Directors, as well as in the Regulations of the Sustainable Development Committee.

The most relevant activities performed by this Committee during financial year 2020 are described in the Activities Report of the Board of Directors and of the Committees thereof 2020, available at www.iberdrola.com.

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APPOINTMENTS COMMITTEE

Name	Position	Category
MS MARÍA HELENA ANTOLÍN RAYBAUD	Chair	Independent
MR ANTHONY L. GARDNER	Member	Independent
MR ÁNGEL JESÚS ACEBES PANIAGUA	Member	Independent

% of executive directors	0.00
% of proprietary directors	0.00
% of independent directors	100.00
% of other external directors	0.00

Explain the functions assigned to this committee, including where applicable those that are additional to those prescribed by law, and describe the rules and procedures for its organisation and functioning. For each of these functions, briefly describe its most important actions during the year and how it has exercised in practice each of the functions assigned to it by law, in the articles of association or in other corporate resolutions.

The Appointments Committee is an internal informational and consultative body.

The Committee shall be composed of a minimum of three and a maximum of five directors appointed by the Board of Directors upon a proposal of the Appointments Committee, from among the non-executive directors.

A majority of the members of the Appointments Committee must be classified as independent. The Board also appoints the chair thereof from among the independent directors forming part thereof, as well as its secretary, who need not be a director.

The Board of Directors shall endeavour to ensure that the members of the Committee have such expertise, qualifications and experience as are required by the duties they are called upon to perform, particularly in the following areas: corporate governance, strategic human resources analysis and evaluation, selection of directors and management personnel, and performance of senior management duties.

The members of the Appointments Committee shall be appointed for a maximum term of four years and may be re-elected on one or more occasions for terms of the same maximum length.

A valid quorum shall be established with the attendance at the meeting, in person or by proxy, of a majority of its members, and resolutions shall be adopted by an absolute majority of votes of the members present at the meeting in person or by proxy.

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The duties of the Committee are further developed in the Regulations of the Board of Directors, as well as in the Regulations of the Appointments Committee.

The most relevant activities performed by this Committee during financial year 2020 are described in the Activities Report of the Board of Directors and of the Committees thereof 2020, available at www.iberdrola.com.

REMUNERATION COMMITTEE

Name	Position	Category
MR JUAN MANUEL GONZÁLEZ SERNA	Chair	Independent
MR MANUEL MOREU MUNAIZ	Member	Independent
MR IÑIGO VÍCTOR DE ORIOL IBARRA	Member	Other external

% of proprietary directors	0.00
% of independent directors	66.67
% of other external directors	33.33

Explain the functions assigned to this committee, including where applicable those that are additional to those prescribed by law, and describe the rules and procedures for its organisation and functioning. For each of these functions, briefly describe its most important actions during the year and how it has exercised in practice each of the functions assigned to it by law, in the articles of association or in other corporate resolutions.

The Remuneration Committee is an internal informational and consultative body.

The Committee shall be composed of a minimum of three and a maximum of five directors appointed by the Board of Directors upon a proposal of the Appointments Committee, from among the non-executive directors.

A majority of the members of the Remuneration Committee must be classified as independent. The Board also appoints the chair thereof from among the independent directors forming part thereof, as well as its secretary, who need not be a director.

The Board of Directors shall endeavour to ensure that the members of the Committee have such expertise, qualifications and experience as are required by the duties they are called upon to perform, and particularly regarding corporate governance, policy design and remuneration plans for directors and senior management.

The members of the Remuneration Committee shall be appointed for a maximum term of four years and may be re-elected on one or more occasions for terms of the same maximum length.

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A valid quorum shall be established with the attendance at the meeting, in person or by proxy, of a majority of its members, and resolutions shall be adopted by an absolute majority of votes of the members present at the meeting in person or by proxy.

The duties of the Committee are further developed in the Regulations of the Board of Directors, as well as in the Regulations of the Remuneration Committee.

The most relevant activities performed by this Committee during financial year 2020 are described in the Activities Report of the Board of Directors and of the Committees thereof 2020, available at www.iberdrola.com.

EXECUTIVE COMMITTEE

Name	Position	Category
MR JOSÉ IGNACIO SÁNCHEZ GALÁN	Chair	Executive
MR JUAN MANUEL GONZÁLEZ SERNA	Member	Independent
MR MANUEL MOREU MUNAIZ	Member	Independent
MS SAMANTHA BARBER	Member	Other external
MR ÁNGEL JESÚS ACEBES PANIAGUA	Member	Independent

% of executive directors	20.00
% of proprietary directors	0.00
% of independent directors	60.00
% of other external directors	20.00

Explain the functions delegated or assigned to this committee, other than those that have already been described in Section C.1.9, and describe the rules and procedures for its organisation and functioning. For each of these functions, briefly describe its most important actions during the year and how it has exercised in practice each of the functions assigned to it by law, in the articles of association or in other corporate resolutions.

The Executive Committee is assigned all the powers of the Board of Directors, except for those powers that may not be delegated pursuant to legal or by-law restrictions. The chairman of the Board of Directors and the chief executive officer, if any, are members in all cases. The secretary of the Board of Directors acts as secretary of the Committee.

The Executive Committee shall meet as many times as deemed necessary by the chair thereof. It shall also meet when so requested by a minimum of two of the directors forming part thereof.

Resolutions of the Committee shall be adopted by absolute majority of its members who are present at the meeting in person or by proxy.

The duties of this Committee consist of making proposals to the Board of Directors regarding strategic decisions, investments and divestitures that

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are significant for the Company or the group, assessing their conformity to the current budget and strategic plans and analysing and monitoring business risks. It also provides assistance to the Board of Directors in the ongoing supervision of compliance with the principles governing the organisation and the coordination of the group and the strategic goals thereof.

The most relevant activities performed by this Committee during financial year 2020 are described in the Activities Report of the Board of Directors and of the Committees thereof 2020, available at www.iberdrola.com.

C.2.2 Complete the following table with information regarding the number of female directors who were members of Board committees at the close of the past four years:

	Number of female directors							
	Year 2020		Year 2019		Year 2018		Year 2017	
	Number	%	Number	%	Number	%	Number	%
Audit and Risk Supervision Committee	1	33.33	2	50.00	2	50.00	2	50.00
Sustainable Development Committee	3	100.00	2	66.67	1	33.33	1	33.33
Appointments Committee	1	33.33	1	33.33	1	33.33	1	33.33
Remuneration Committee	0	0.00	1	33.33	1	33.33	1	33.33
Executive Committee	1	20.00	2	50.00	2	40.00	2	40.00

C.2.3 Indicate, where applicable, the existence of any regulations governing Board committees, where these regulations are to be found, and any amendments made to them during the year. Also indicate whether any annual reports on the activities of each committee have been voluntarily prepared.

The committees of the Board are governed by the Regulations of the Board of Directors. Each of the consultative committees also has its own regulations, available at www.iberdrola.com, where one can also find the Activities Report of the Board of Directors and of the Committees thereof.

Within the process of ongoing review of the Governance and Sustainability System, apart from technical improvements, there have been amendments of the regulations of the various consultative committees in order to regulate the holding of meetings by remote means of communication. The Regulations of the Audit and Risk Supervision Committee were updated to regulate the functional subordination of the Risk Management and Internal Assurance Division to this committee.

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D RELATED PARTY AND INTRAGROUP TRANSACTIONS

D.1 Describe, if applicable, the procedure and competent bodies for the approval of related party and intragroup transactions.

Article 48 of the Regulations of the Board of Directors provides that:

1. Any transaction by the Company or the companies forming part of its group with directors, with shareholders that directly or indirectly own a shareholding interest that is equal to or greater than that legally regarded as significant at any time or that have proposed or caused the appointment of any of the directors of the Company, or with the respective related persons ("**Related-Party Transactions**"), shall be subject to the approval of the Board of Directors, or in urgent cases, of the Executive Committee, following a report from the Appointments Committee.
2. In the event that authorisation has been granted by the Executive Committee due to the urgency of the matter, the Executive Committee shall give notice thereof to the Board of Directors at its next meeting in order for it to be ratified.
3. The authorisation of Related-Party Transactions must be approved by the shareholders at the General Shareholders' Meeting in the instances provided by law, and particularly if it relates to a transaction having a value of more than ten per cent of the corporate assets.
4. As an exception, Related-Party Transactions with any of the listed companies of the group (as is the case of Avangrid, Inc. and Neoenergia S.A.) or with the subsidiaries thereof shall not be subject to the rules on Related-Party Transactions, provided that they have corporate governance rules similar to those of the Company.
5. The execution of a Related-Party Transaction puts the director engaging in said transaction or who is related to the person engaging in the transaction in a conflict of interest, for which reason the provisions of the Regulations of the Board of Directors in this area shall apply, to the extent applicable. This particularly includes the duties of communication and abstention.
6. The Board of Directors, through the Appointments Committee, shall ensure that Related-Party Transactions are carried out under arm's length conditions and with due observance of the principle of equal treatment of shareholders in the same situation. In the case of transactions to be carried out by companies of the group, the scope of authorisation of the Board of Directors, or that of the Executive Committee, if applicable, referred to in the preceding sections, shall be limited to the verification of compliance with such particulars.
7. In the case of customary and recurring Related-Party Transactions in the ordinary course of business, it shall be sufficient for the Board of Directors to give prior generic approval of the kind of transaction and of the conditions for performance thereof, following a report from the Appointments Committee.
8. If a Related-Party Transaction entails the successive performance of different transactions, of which the second and subsequent transactions are mere acts of execution of the first transaction, the provisions of Article 48 of the Regulations of the Board of Directors shall only apply to the first transaction carried out.

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9. The authorisation shall not be required in connection with transactions that simultaneously satisfy the following three conditions: that they are conducted under contracts whose terms and conditions are standardised and apply on an across-the-board basis to a large number of customers; that they are conducted at prices or rates established generally by the party acting as supplier of the goods or services in question, and that the amount thereof does not exceed one per cent of the consolidated annual income of the group.

10. The Company shall report Related-Party Transactions in the Half-Yearly Financial Report and in the Annual Corporate Governance Report, in the cases and to the extent provided by law. Likewise, the Company shall include in the notes accompanying the annual accounts information regarding the transactions by the Company or by the companies of the group with the directors and with those persons who act for the account of the latter when such transactions are conducted other than in the ordinary course of the Company's business or other than under normal arm's length conditions.

    To this end, the directors must give written notice to the secretary of the Board of Directors, on a semi-annual basis, within the first week of January and July of each year, regarding the Related-Party Transactions that they have engaged in. If they are not carried out, the directors shall so report. The secretary of the Board of Directors shall send a notice to the directors on a semi-annual basis requesting the appropriate information that must be sent to the Company.

11. The notice must include the following information: the nature of the transaction; the date on which the transaction originated; the conditions and periods for payment; the name of the person who carried out the transaction and the relationship, if any, with the director; the amount of the transaction; and other aspects, such as pricing policies, guarantees given and received, and any other feature of the transactions that allows for a proper assessment thereof, particularly such information as allows for verification that it has been carried out on arm's length conditions and in compliance with the principle of equal treatment.

12. The secretary of the Board of Directors shall prepare a register of Related-Party Transactions. The information set forth in such register shall be made available to the Compliance Unit when it so requests, and shall also periodically be made available to the Audit and Risk Supervision Committee through the Internal Audit Area.

D.2 Describe any transactions that are significant, either because of the amount involved or the subject matter, entered into between the company or entities within its group and the company's significant shareholders:

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Name or company name of significant shareholder	Name or company name of the company or entity within its group	Nature of the relationship	Type of transaction	Amount (thousands of euros)
QATAR INVESTMENT AUTHORITY	IBERDROLA, S.A.	Corporate	Dividends and other distributed profits	224,025
QATAR INVESTMENT AUTHORITY	IBERDROLA Group	Corporate	Other	14

Remarks
Transactions by shareholders exercising a significant influence on participation in the entity's financial and operating decisions, with significant influence being understood as having a member of the Board of Directors, are deemed to be related-party transactions. Shareholders who are able to exercise the proportional representation system due to their interest in the capital of the Company are also considered to have such influence. As of the date of this report, only Qatar Investment Authority meets this condition, for which reason the amounts reflected in the period refer to transactions with this shareholder. The amount allocated for "Dividends and other distributed profits" corresponds to the Iberdrola Flexible Remuneration scheme and the bonus for attending the General Shareholders' Meeting, and "Other" corresponds to the income from cash investments made with Qatar National Bank by Scottish Power Ltd. At 31 December the outstanding amount was 97,950 thousand euros, maturing in January 2021.

D.3 Describe any transactions that are significant, either because of their amount or the subject matter, entered into between the company or entities within its group and directors or managers of the company:

Name or company name of director(s) or manager(s)	Name or company name of the company or entity within its group	Relationship	Nature of the transaction	Amount (thousands of euros)
No data				N.A.

D.4 Report any material transactions carried out by the company with other entities belonging to the same group, provided that these are not eliminated in the consolidation process and do not form part of the company's ordinary business activities in terms of their purpose and conditions.

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In any case, report any intragroup transaction conducted with entities established in countries or territories considered as tax havens:

Company name of the entity within the group	Brief description of the transaction	Amount (thousands of euros)
No data		N.A.

Remarks
Transactions with subsidiaries and companies in which the Company has an interest that have not been eliminated in the process of consolidation were made in the ordinary course of business of the Company, were carried out under arm's-length conditions, and are of little significance to accurately reflect the assets, financial condition and results of operations of the Company.

D.5 Report any material transactions carried out by the company or entities belonging to its group with other related parties that have not been reported in the previous sections.

Company name of the related party	Brief description of the transaction	Amount (thousands of euros)
No data		N.A.

D.6 List the mechanisms in place to detect, determine and resolve potential conflicts of interest between the company and/or its group and its directors, senior management or significant shareholders.

Pursuant to the Regulations of the Board of Directors, a conflict of interest shall be deemed to exist in those situations provided by law, particularly when the interests of the director, either for their own or another's account, directly or indirectly conflict with the interest of the Company or of companies within the group and their duties to the Company. An interest of a director shall exist when a matter affects the director or a person related thereto or, in the case of a proprietary director, when it also affects the shareholder or shareholders that proposed or caused the appointment thereof or persons directly or indirectly related thereto.

The Regulations of the Board of Directors contain a list of persons deemed to be related for such purposes, distinguishing between an individual and a corporate director.

Conflicts of interest shall be governed by the following rules, without prejudice to the general duty imposed on all directors to take the measures necessary to avoid engaging in these situations:

a) Communication: once a director becomes aware of being in a situation of conflict of interest, the director must give written notice of the conflict to the Board of Directors, in the person of the secretary thereof. The secretary shall periodically submit a copy of the notices received to the Appointments Committee, in the person of the secretary thereof.

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The notice shall contain a description of the situation giving rise to the conflict of interest, with a statement as to whether it is a direct conflict or an indirect conflict through a related person, in which case the latter person must be identified.

The description of the situation must describe, as applicable, the subject matter and the principal terms of the transaction or the planned decision, including the amount thereof or an approximate financial assessment thereof. If the situation giving rise to the conflict of interest is a Related-Party Transaction (as this term is defined in article 48 of the Regulations of the Board of Directors), the notice shall also identify the department or person of the Company or of any of the companies of the group with which the respective contacts were made.

Any question as to whether a director might be involved in a conflict of interest must be forwarded to the secretary of the Board of Directors, and the director must refrain from taking any action until it is resolved.

b) Abstention: if the conflict arises from an operation, transaction, or circumstance that requires any kind of operation, report, decision, or acceptance, the director must refrain from taking any action until the Board of Directors studies the case and informs the director of the appropriate decision.

To this end, the director shall leave the meeting during the deliberation and voting on those matters in which the director is affected by a conflict of interest, and shall not be counted in the number of members attending for purposes of the calculation of a quorum and majorities. At each meeting of the Board of Directors and of the committees thereof, the secretary reminds the directors, before dealing with the agenda, of this abstention rule.

c) Transparency: whenever required by law, the Company shall report any cases of conflict of interest in which the directors have been involved during the financial year in question and of which the Company is aware by reason of notice given thereto by the director affected by such conflict or by any other means.

If the conflict of interest is, or may reasonably be expected to be, of a structural and permanent nature, it shall be deemed that there is a loss of the suitability required to hold office, which constitutes an event requiring the resignation, separation and removal of the director.

Conflicts of interest with officers are subject to the same rules of communication, abstention and transparency.

The Code of Ethics, which dedicates a specific section to conflicts of interest, applies to all professionals within the group, regardless of rank.

Furthermore, transactions between companies forming part of the group with significant shareholders or shareholders that have proposed the appointment of any of the directors and their respective related persons are also dealt with in the Regulations of the Board of Directors as explained in section D.1. They must be carried out on arm's-length conditions and be previously approved by the Board of Directors (or, in urgent cases, by the Executive Committee) or be approved by the

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shareholders at a General Shareholders' Meeting if the value of the transaction exceeds 10% of the corporate assets. All of these transactions will be reported in the Annual Corporate Governance Report and in the Half-Yearly or Annual Financial Report.

D.7 Indicate whether the company is controlled by another entity in the meaning of Article 42 of the Commercial Code, whether listed or not, and whether it has, directly or through any of its subsidiaries, business relationships with said entity or any of its subsidiaries (other than the listed company) or carries out activities related to those of any of them.

Yes ☐ **No X**

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E RISK MANAGEMENT AND CONTROL SYSTEMS

E.1 Explain the scope of the company's Risk Management and Control System, including tax risk.

Pursuant to the three lines model, Iberdrola's General Risk Control and Management Policy and the risk policies (corporate and those specific to the businesses) in development thereof are implemented within a comprehensive risk control and management system, supported by the group's Risk Committee and based upon a proper definition and allocation of duties and responsibilities at the operating level and upon supporting procedures, methodologies and tools, suitable for the various stages and activities within the system, including:

a) The establishment of a structure of risk policies, guidelines, limits and indicators, as well as of the corresponding mechanisms for the approval and implementation thereof.

b) The ongoing identification of significant risks and threats, taking into account their possible impact on key management objectives and the accounts (including contingent liabilities and other off-balance sheet risks).

c) The analysis of such risks, both at each corporate business or function and taking into account their combined effect on the group as a whole.

d) The measurement and control of risks following homogeneous procedures and standards common to the entire group.

e) The analysis of risks associated with new investments, as an essential element in risk/return-based decision-making, including physical and transition risks related to climate change.

f) The maintenance of a system for monitoring and control of compliance with policies, guidelines and limits, by means of appropriate procedures and systems, including the contingency plans needed to mitigate the impact of the materialisation of risks.

g) The ongoing evaluation of the suitability and efficiency of applying the system and the best practices and recommendations in the area of risks for eventual inclusion thereof in the model.

h) The audit of the comprehensive risk control and management system by the Internal Audit Division.

The foregoing is undertaken in accordance with the following main principles of conduct:

a) Integrate the risk/opportunity vision into the group's management, through a definition of the strategy and the risk appetite and the incorporation of this variable into strategic and operating decisions.

b) Segregate functions, at the operating level, between areas that assume risks and areas responsible for the analysis, control and monitoring of such risks, ensuring an appropriate level of independence between them.

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c) Guarantee the proper use of risk-hedging instruments and the maintenance of records thereof as required by applicable law.

d) Inform regulatory agencies and the principal external players, in a transparent fashion, regarding the risks facing the group and the operation of the systems developed to monitor such risks, maintaining suitable channels of communication.

e) Ensure appropriate compliance with the corporate governance rules established by the Company through its Governance and Sustainability System and the update and continuous improvement thereof within the framework of the best international practices as to transparency and good governance, and implement the monitoring and measurement thereof.

f) Act at all times in compliance with the values and standards of conduct reflected in the Code of Ethics, under the principle of "zero tolerance" for the commission of unlawful acts and situations of fraud set forth in the Crime Prevention Policy and in the Anti-Corruption and Anti-Fraud Policy and the principles and good practices reflected in the Corporate Tax Policy.

The General Risk Control and Management Policy and the risk policies apply to all companies that make up the group, over which the Company has effective control, within the limits established by the laws applicable to the regulated activities carried out by the group in the various countries in which it operates.

Excluded from the scope of this policy are listed country subholding companies and the subsidiaries thereof which, pursuant to their own special framework of strengthened autonomy, have their own risk policies approved by their competent bodies. In any event, said risk policies must be in accord with the principles set forth in risk policies of the group.

At those companies over which the Company does not have effective control, the Company shall promote principles, guidelines, and risk limits consistent with those established in the General Risk Control and Management Policy and in its supplemental risk policies and shall maintain appropriate channels of information to ensure a proper understanding of risks.

Iberdrola believes that its comprehensive risk control and management system operates on a comprehensive and continuous basis, strengthening such management by business unit or activity, subsidiaries, geographic areas and corporate-level support areas.

E.2 Identify the bodies within the company responsible for preparing and executing the Risk Management and Control System, including tax risk.

1. BOARD OF DIRECTORS

In the area within its purview, and with the support of the Audit and Risk Supervision Committee, it must use develop all of its capabilities in order for the significant risks to all the activities and businesses of the group to be adequately identified, measured, managed and controlled, and to establish through the General Risk Control and Management Policy the mechanisms and basic principles for appropriate management of the risk/opportunity ratio. By virtue thereof, it defines the risk strategy and profile of the group and approves the risk policies.

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2. EXECUTIVE COMMITTEE

In order to conform the impact of the risks to the established appetite, the Executive Committee, upon the proposal of affected business or corporate divisions and after a report from the group's Risk Committee, annually reviews and approves the specific guidelines regarding the risk limits of the corporate risk policies.

3. AUDIT AND RISK SUPERVISION COMMITTEE.

As a consultative body of the Board of Directors, this Committee is vested with various powers relating to the Comprehensive Risk Control and Management System, as set forth in articles 3, 5, 6 and 10 of the Regulations thereof.

This includes the following (by way of example and based on the importance thereof):

- Conduct a periodic review of the risk policies on at least an annual basis.
- Monitor the effectiveness of their internal control and risk management systems.
- Continuously review the internal control and risk management systems, such that the principal risks are properly identified, managed and reported.
- Obtain and analyse with the external auditor information regarding any significant deficiency in internal control that the statutory auditor detects.
- Ensure that the internal control policies and systems are effectively applied in practice.
- As regards the activities of the Risk Management and Internal Assurance Division, which is functionally controlled by the Committee: i) supervise the activities and ensure the effectiveness thereof, and ii) approve the direction and the annual management plan and its budget.
- Evaluate the various risk tolerance levels established in the risk policies in order to, if appropriate, propose the adjustment thereof.
- Promote a culture in which risk is a factor that is taken into account in all decisions.
- Endeavour to ensure that the group's internal control and risk management system identifies at least: i) the different types of financial and non-financial risks, ii) the establishment and review of the risk levels that the Company deems acceptable, iii) the measures planned in order to mitigate the impact of identified risks in the event they occur, and iv) the information and internal control systems used to monitor and manage the risks.
- Maintain appropriate relationships with the audit and compliance committees of the other companies of the group and promote a risk culture.
- Identify and evaluate emerging risks.

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- Obtain creditable information as to whether the most significant risks are managed and maintained within the tolerance figures that have been established.
- Receive information from the Company's tax director regarding the tax guidelines applied during the financial year, and particularly regarding the level of compliance with the Corporate Tax Policy, as well as regarding the tax consequences of transactions or matters that must be submitted to the Board of Directors for approval when such consequences represent a significant issue.

4. BOARDS OF DIRECTORS AND AUDIT AND COMPLIANCE COMMITTEES OF COUNTRY SUBHOLDING AND HEAD OF BUSINESS COMPANIES

The country subholding companies adopt the group's risk policies and specify the application thereof, approving the guidelines on specific risk limits, based on the nature and particularities of the businesses in each country. The audit and compliance committees of such companies shall report to the Board of Directors on the internal control and risk management systems.

The management decision-making bodies of the head of business companies of each country or region must approve the specific risk limits applicable to each of them and implement the control systems necessary to ensure compliance therewith.

Pursuant to their special framework of strengthened autonomy, the listed companies of the group have their own risk policies, which are aligned with those of the group.

5. GROUP RISK COMMITTEE

The Risk Committee of the Iberdrola group is a technical committee that is chaired by the Risk Management and Internal Assurance Director and that performs executive duties in the customary management of risks and provides advice to the governance bodies of the group.

- It meets at least once a month, with the participation of the group's Risk Management director, the risk directors of the country subholding companies and corporate areas that have such a position, the Internal Audit Area and the Management and Control Division.
- It reviews new reported risks and the reports monitoring the main existing risks, and issues the Quarterly Risk Report of the group, which includes the main risk positions, the report on compliance with policies and risk limits and indicators, and the update of the key risks map.

It is supplemented by the credit risk and market risk committees, which report to the former, and which meet on a monthly basis to discuss and decide on credit and market (financial and commodities) risks.

E.3 Indicate the main risks, including tax risks, and those deriving from corruption (with the scope of these risks as set out in Royal Decree Law 18/2017), to the extent that these are significant, which may affect the achievement of business objectives.

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The group is subject to various risks inherent in the different countries, industries and markets in which it does business and in the activities it carries out, which may prevent it from achieving its objectives and successfully implementing its strategies.

In the "Principal risks and uncertainties" section of the Management Report of the Annual Financial Report for financial year 2020, there is a detailed description of the principal risks associated with the activities of the main businesses of the group, as well as the risks of the corporation.

Pursuant to the definitions established by the General Risk Control and Management Policy, risks at the group level are classified as follows:

- Corporate governance risks.
- Market risks.
- Credit risks.
- Business risks.
- Regulatory and political risks.
- Operational, technological, environmental, social and legal risks.
- Reputational risks.

Given the multidimensional nature of the risks, the group has a system that allows for the risks to be classified according to complementary risk taxonomies for improved monitoring.

The system also considers the classification variable of emerging risks, understood as possible new threats with an uncertain impact and with an undefined but growing probability that could become significant for the group.

The activities of the group during financial year 2021 and later years will be particularly affected by the following main risk factors:

- Changes in the exchange rate between the euro and the currencies of the principal countries in which the group does business.
- The evolution of commodity and electricity prices in these countries.
- The annual change in hydraulic, solar and wind resources with an impact on the production of electricity at the renewable generation plants of the group.
- Increased competition in the unrestricted market in Spain as a result of the entry of significant new players, and the current increased competition in the United Kingdom, with a possible impact on the annual accounts.
- The ability to implement the current major investment plan, in terms of cost and timing.
- Environmental, social and governance issues (commonly known as "ESG"), with potentially significant reputational impacts, including risks arising from climate change, pollution, fire, health and safety, labour and diversity issues, impacts on local communities, corporate governance, fraud and corruption.
- Financial and reputational risk arising from a potential increase in cybersecurity attacks or incidents. There are regular appearances before the

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Audit and Risk Supervision Committee of executive officers competent to report on this issue.

- The course of the COVID-19 pandemic and its vaccine and the economic recovery of the various countries in which the group has a presence.
- The integration of CEB Distribuição (in Brazil) y PNM Resources (in the United States).

Finally, in relation to possible risks with a reputational impact, the following is reported:

- The proceeding that commenced in April 2017 when the Public Prosecutor filed a claim against Iberdrola Generación España, S.A.U., bringing before the courts an adverse government ruling by the National Markets and Competition Commission (*Comisión Nacional de los Mercados y de la Competencia*) ("CNMC"), which was appealed to the contentious-administrative courts, relating to the price of bids for the Duero, Sil and Tajo hydroelectric management units between 30 November 2013 and 23 December 2013.
- The hiring of entities linked to the former police commissioner José Manuel Villarejo Pérez, a matter disclosed in the annex to this Report due to the limit on the number of characters in this section.

In relation to these types of risks, it should be noted that the group's comprehensive risk control and management system specifically identifies all risks with a reputational impact and establishes mechanisms for the monitoring, control and internal and external communication thereof.

Furthermore, Iberdrola has a Compliance System made up of a set of substantive rules, formal procedures and significant actions intended to ensure that conduct is in accordance with ethical principles and applicable law, preventing, avoiding and mitigating the risk of conduct that is improper or contrary to ethics or the law. The bodies and divisions directly entrusted with the implementation and further development thereof also form part of this System.

Elements of the system include the Code of Ethics (which is applicable to all professionals of the group, board members and suppliers) and the Compliance Unit, a collective permanent and internal body linked to the Sustainable Development Committee, which, among other things, spreads a preventive culture based on the principle of "zero tolerance" towards the commission of illegal acts and improper conduct. The System has been designed following the best domestic and international practices in the area of compliance, fraud prevention and the fight against corruption.

For more details regarding the risks to which the group is subject, see:
- Statement of Non-Financial Information-Sustainability Report 2020.
- The Integrated Report.
- Other sections of this Annual Corporate Governance Report.

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E.4 Indicate whether the entity has risk tolerance levels, including for tax risk.

The Company's Board of Directors reviews and approves the risk tolerance level that is acceptable for the group on an annual basis. The General Risk Control and Management Policy, together with the policies that further develop and supplement it, qualitatively and quantitatively establish the annually accepted risk appetite, in a sufficiently detailed manner, both at the group level and at the level of each of its principal businesses and corporate functions, in accordance with the objectives established in the multi-year plan and the corresponding annual budgets.

By way of complement, the Management and Control Division, after considering such limits and guidelines, in order to verify the risk globally assumed in the annual profit and loss account, engages in a comprehensive probability analysis of the global risk remaining for the financial year at the time of approving the annual budget.

In addition, all new multi-annual plans are accompanied by their corresponding analysis of associated risk.

The General Risk Control and Management Policy is further developed and supplemented through the following policies, which are also subject to approval and update by the Company's Board of Directors, and which include the following risk limits and indicators:

Corporate Risk Policies:

- Corporate Credit Risk Policy
- Corporate Market Risk Policy
- Operational Risk in Market Transactions Policy
- Insurance Policy
- Investment Policy
- Financing and Financial Risk Policy
- Treasury Share Policy
- Risk Policy for Equity Interests in Listed Companies
- Information Technology Policy
- Cybersecurity Risk Policy
- Reputational Risk Framework Policy
- Purchasing Policy
- Occupational Safety and Health Risk Policy

Risk policies for the various businesses of the group:

- Risk Policy for the Networks Businesses of the Iberdrola group
- Risk Policy for the Renewable Energy Businesses of the Iberdrola group
- Risk Policy for the Liberalised Businesses of the Iberdrola group

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– Risk Policy for the Real Estate Business

The General Risk Control and Management Policy, as well a summary of the risk policies in further implementation thereof, are available on the corporate website.

The limits and indicators of the risk policies should be consistent with the annual budget and the objectives set forth in the multi-annual investment plans. The numeric values of the limits and indicators set forth in the various policies are probabilistic in nature (like VaR and EBITDA at risk) or deterministic in nature, and are expressed in monetary units, indices or benchmarks based on which volumetric risks and/or values are generated, including:

– limits on the maximum overall credit risk exposure by type of counterparty;

– limitations on market risk proportional to the volume of activity of each business;

– strict overall limit on the discretional trading of energy;

– limitations on operational risk through preventative maintenance programmes and assurance programmes; and

– strict limitations on activities not associated with the main energy business.

The Corporate Tax Policy establishes the limits on tax risk by setting the tax strategy, the principles of conduct and the good tax practices assumed by the Company.

As described above, the Iberdrola group has a risk tolerance level (acceptable risk level) established at the corporate level, which is annually approved by the Board of Directors and its Executive Committee. The group's Risk Committee, the Operating Committee, the Audit and Risk Supervision Committee, the businesses, the corporate functions and the Risk Management and Internal Assurance Division also participate in the process.

E.5 Indicate which risks, including tax risks, have materialised during the year.

The activities of the Iberdrola group during 2020 were affected by various risks that materialised in the countries and markets in which it operates, and particularly by the COVID-19 pandemic.

Thanks to a diversification of activities, markets and geographical regions (which allowed the negative impacts on some businesses to be offset by favourable behaviour in others) and the measures adopted by the group as a result of Covid-19, the overall impact on the group's consolidated accounts has been limited.

The World Health Organisation classified the outbreak of the COVID-19 coronavirus as a pandemic on 11 March 2020. As a result, the main countries in which the IBERDROLA group operates have been gradually taking temporary measures to limit the spread of COVID-19, which include or have included restrictions on the free movement of people, quarantine requirements, isolation or confinement, border closures and the closing of public and private premises (except for essential and health care facilities), which have affected and will affect to a greater or lesser

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extent the economic activity of these countries and particularly the group's operations.

Since the start of COVID-19, the IBERDROLA group's distributors have taken numerous actions to maintain supplies to more than 32 million customers and to ensure the quality of service and the safety of customers as well as facilities and operations. These include:

- Activation of emergency plans, with special measures to protect the supply of critical facilities like hospitals, homes, the food industry, Defence Ministries, prisons, etc.
- Special service plans for hospitals, installing generators and inspecting the circuits serving essential facilities, to ensure the uninterruptibility of service. Special operations positions have been created to solely deal with health services, in collaboration with public bodies.
- In addition, customer service channels have been strengthened and service cuts for non-payment have been suspended, providing customers with payment schemes and resources to reduce energy use.

Furthermore, in order to mitigate the economic impact and facilitate a faster economic recovery, numerous governments and central banks have approved or announced various plans to support economic recovery, including liquidity plans, soft loans, tax relief, support measures for the most vulnerable groups and the most affected industries, as well as various regulatory measures.

As a result of COVID-19, the companies of the IBERDROLA group have faced, and are expected to continue to face, an increase in their traditional credit, market, financial, operational and regulatory risks.

It should be noted that the regulated network businesses in the countries in which the group operates have regulatory frameworks that provide adjustments to the regular tariffs for involuntary deviations in income and expenses, and provide extraordinary adjustments for deviations arising from force majeure, such as those resulting from the effects of COVID-19. Some of the impacts associated with the risks arising from COVID-19 will be covered, in full or in part, based on the specific characteristics of each of the regulatory frameworks and the law applicable in each country.

The main risks relating to COVID-19 that have materialised for the group derive from credit risk as a result of the increase in the cost of non-performing loans in our liberalised retail supply businesses and, to a lesser extent, in our network businesses in Brazil and, on the other hand, market risk as a result of the significant decreases in demand for electricity and gas in the various countries in which the group is present and the resulting decreases in electricity and gas prices.

Although it is not possible to know precisely the impact of COVID-19 on the financial statements, the group estimates that it has led to decrease of 238 million euros in Net profit, with an increase of 124 million euros in provisions, due to insolvencies, attributable to COVID-19.

For more information, see the 2020 Annual Financial Report.

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Risks other than those arising from the COVID-19 pandemic that have materialised include:

- The UK government's cancellation of the announced reduction in corporation tax from 19% to 17%, with an estimated impact on the group's accounts of GBP 135 million due to lower deferred tax credits.
- Wind power resources in Spain 10% below the forecasted average value.

Positive developments include a gross capital gain of EUR 485 million on the sale of the group's 8.07% stake in Siemens Gamesa to Siemens AG in February 2020.

E.6 Explain the response and oversight plans for the company's main risks, including tax risks, as well as the procedures followed by the company in order to ensure that the Board of Directors responds to any new challenges that arise

The comprehensive risk control and management system, together with the control and management policies that implement them, including the group's Risk Committee and the Company's Operating Committee, have allowed for the identification of risks and new threats sufficiently in advance, as well as for establishing appropriate mitigation plans, including those related to the COVID-19 pandemic.

The Company's Operating Committee meets on an approximately weekly basis.

The group's Risk Committee, which reviews the evolution of the various risks, meets on a monthly basis, and on a quarterly basis issues the Quarterly Risk Report of the group, which includes the main risk positions, the report on compliance with policies and limits approved, and the update of the key risks map.

On at least a quarterly basis, the Audit and Risk Supervision Committee of the Board of Directors supervises the evolution of the Company's risks:

– It reviews the group's Quarterly Risk Report submitted by the group's Risk director.
– It coordinates and reviews the Risk Report submitted on a regular basis (at least half-yearly) by the audit and compliance committees of the business subholding companies of the group.
– On at least a half-yearly basis, it prepares a Risk Report for the Board of Directors.

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F INTERNAL RISK MANAGEMENT AND CONTROL SYSTEMS RELATING TO THE PROCESS OF PUBLISHING FINANCIAL INFORMATION (ICFR)

Describe the mechanisms forming your company's Internal Control over Financial Reporting (ICFR) system.

F.1 **The entity's control environment:**

Report on at least the following, describing their principal features:

F.1.1. The bodies and/or departments that are responsible for: (i) the existence and maintenance of an adequate and effective ICFR system; (ii) its implementation; and (iii) its supervision.

Iberdrola's Board of Directors is ultimately responsible for implementing and maintaining a proper and effective internal control over financial information ("ICFR") system. The Boards of Directors of each of the country subholding companies and of the head of business companies also have this responsibility within their various purviews.

The heads of the country subholding companies and of the head of business companies, together with their respective heads of control, as well as the directors of the corporate areas, are in turn responsible for the design and implementation of the ICFR system. This responsibility is explicitly set forth in the certifications that said persons sign on a half-yearly basis in relation to the financial information for their respective areas of responsibility.

Pursuant to Article 31.6.d of the Regulations of the Board of Directors, the Audit and Risk Supervision Committee (hereinafter, "ARSC") is responsible for supervising the effectiveness of the internal control of the Company and of its group, as well as the risk management systems thereof. Article 31.6.f also provides that the duties of the ARSC include that of supervising the process of preparing and presenting mandatory financial information and submitting recommendations or proposals to the Board of Directors to protect the integrity of this information.

The ARSC is supported by the Risk Management and Internal Assurance Area and the Internal Audit Area in the performance of its powers with respect to the internal control and risk management systems. Any audit committees at the country subholding and head of business companies have these powers within their respective purviews.

The Risk Management and Internal Assurance Area became functionally subordinate to the ARSC in 2020 (according to the IIA 2020 "Three Lines Model" of The Institute of Internal Auditors, this area would be a "second line"). This area has the mission of ensuring the proper definition, implementation and maintenance of the ICFR system, assuring Senior Management and the Board of Directors, through the ARSC, that it is effective.

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F.1.2. Indicate whether the following exist, especially in relation to the drawing up of financial information:

- Departments and/or mechanisms in charge of: (i) the design and review of the organisational structure; (ii) clear definition of lines of responsibility and authority with an appropriate distribution of tasks and functions; and (iii) ensuring that adequate procedures exist for their proper dissemination throughout the entity.

> The Board of Directors of Iberdrola defines the organisational structure at the first level. The heads of these top-level organisations, together with the Human Resources, General Services and Corporate Security Division, implement the deployment within their respective purviews.
>
> Each top-level division prepares a proposed organisational structure, including a description of the mission, duties and responsibilities of the various organisations deployed, which must subsequently be validated by the Human Resources, General Services and Corporate Security Division, as well as by the Finance, Control and Resources Area.
>
> The main responsibility for preparing financial information lies with the corporate Administration and Control Division. This division proposes the structure of heads of Control of the country subholding and head of business companies and deals with coordinating and supervising the conduct thereof.

- Code of conduct, the body approving this, degree of dissemination and instruction, principles and values covered (stating whether there is specific mention of record keeping and preparation of financial information), body charged with analysing breaches and proposing corrective actions and sanctions.

> The Iberdrola group has a *Code of Ethics* that was first approved by the Board of Directors in financial year 2002, and that is regularly reviewed and updated.
>
> The Code of Ethics is communicated and disseminated among the professionals of the Iberdrola group in accordance with the plan approved annually for this purpose by the Compliance Unit of Iberdrola (the "**Unit**"), which provides for various initiatives in the area of training (both on-line and in-person) and communication, addressed to the various groups of professionals based on their exposure to Compliance risks.
>
> The Code of Ethics, which includes informational transparency among its general ethical principles and principles on relations with Iberdrola's stakeholders, expressly states the following in article B.6.:
>
> "1. The group shall provide true, proper, useful and consistent information regarding its programmes and actions. The transparency of the information required to be disclosed is a basic principle that must govern the conduct of all directors, professionals and suppliers of the group.

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2. The economic/financial information of the group (especially the annual accounts) shall faithfully reflect its economic and financial position and its net worth, in accordance with generally accepted accounting principles and applicable international financial reporting standards. For such purposes, no directors, professional or supplier shall conceal or distort the information set forth in the accounting records and reports of the group, which shall be complete, accurate and truthful.

3. A lack of honesty in the communication of information, whether within the group (to professionals, subsidiaries, departments, internal bodies, management decision-making bodies, etc.) or externally (to auditors, shareholders and investors, regulatory entities, the media, etc.) is a breach of this Code of Ethics. This includes delivering incorrect information, organising it in an incorrect manner or seeking to confuse those who receive it".

The Unit, which is a collective permanent and internal body linked to the Sustainable Development Committee of Iberdrola, controls the effective operation of the Company's Compliance System, with powers in the area of compliance. The duties of the Unit include ensuring the application of the Code of Ethics and of the other rules of the group in the compliance area, and the spread of a preventive culture based on the principle of "zero tolerance" towards the commission of unlawful acts. It also approves the "General Compliance System Framework of the Iberdrola group", which contains the basic principles of structure and operation of the group's Compliance System as well as the duties and responsibilities of the various bodies involved. The Unit also evaluates and prepares an annual report on the effectiveness of the Compliance System of Iberdrola and of the Iberdrola group. The report is submitted to the Sustainable Development Committee, which issues its opinion and forwards it to the Board of Directors.

The Unit is also in charge of investigating grievances and potential improper activities in order to determine whether a professional of Iberdrola has acted contrary to the provisions of applicable law or the Code of Ethics, and if applicable, to submit its conclusions to the Human Resources, General Services and Corporate Security Division for it to decide on the application of disciplinary measures in accordance with the offences and penalties system set forth in the collective bargaining agreement to which the professional belongs or in applicable labour law. The Compliance divisions of the other companies of the group perform this same function at each of them.

Pursuant to Article F.5.1 of the Code of Ethics, directors, professionals of the companies of the group and the suppliers thereof expressly accept the rules of conduct established therein that are applicable thereto.

Pursuant to Article F.5.2, professionals who hereafter join or become part of the group and suppliers contracting with companies of the group shall also expressly accept the rules of conduct to which they are subject as set forth in sections D (for professionals of the group) and E (for suppliers), respectively, of the Code of Ethics.

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Likewise, directors shall receive a complete copy of the Code of Ethics, for which they shall deliver a signed receipt.

- Whistleblower channel allowing notifications to the audit committee of irregularities of a financial and accounting nature, in addition to potential breaches of the code of conduct and unlawful activities undertaken in the organisation, indicating whether this channel is confidential and whether anonymous notifications can be made, protecting the rights of the whistleblower and the person reported.

Iberdrola has various ethics mailboxes based on the sender: (i) ethics mailboxes for the professionals of the group; (ii) the mailbox available to shareholders and investors; and (iii) the suppliers' mailbox, accessible from the Employee Portal, from the OLS "On Line Shareholders" system or their mobile app, and from the Supplier Portal, respectively. These channels allow for communicating and complaining of any conduct that may involve the commission of an improper act or an act in violation of legal provisions or of the rules of conduct laid down in the Code of Ethics or to ask questions regarding any issue with respect to compliance.

Identification of the complaining party or whistle-blower is not required to send a complaint through these mailboxes (complaints may be anonymous), and if one does so Iberdrola guarantees absolute confidentiality with respect to both the information provided and the personal data of the reporting party. The group naturally states its commitment to not retaliate against any professional making a complaint, unless there is bad faith on the party of the complaining party.

- Training and periodic refresher programmes for personnel involved in the preparation and revision of financial information, as well as in the assessment of the ICFR system, covering at least accounting standards, auditing, internal control and risk management.

Training is key in the Iberdrola's human resources policy and is an essential element for adapting new professionals to Iberdrola and the proper performance of their jobs, as well as to keep the group's employees updated regarding any changes that occur within the group itself as well as the environment within which it does business.

As an example of the commitment to training, Iberdrola has a corporate campus with multiple training centres in various countries, including the International Corporate Campus in San Agustín de Guadalix (Madrid). Training in all areas is provided at these facilities by internal professionals, outside entities, universities, outside experts, etc.

Specifically, the personnel directly or indirectly involved in the preparation and review of financial information and in the evaluation of the ICFR system, based on their different responsibilities, receive regular training on accounting standards, internal control and risk management, which is intended to give them the knowledge needed for the optimal performance of their duties as well as to anticipate, to the extent possible, the proper alignment of the group with future

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rules and best practices. Most of these courses are provided by outside entities: business schools, universities and consultants specialising in economic/financial matters.

In addition, and on a general basis, these professionals regularly take coursework to improve their qualifications in the use of the computer-based tools required to perform their duties, mainly excel and database management.

They also attend various conferences, symposia and seminars in the areas of accounting, tax and internal audit, at both the domestic and international level.

Furthermore, in order to pool best practices and analyse the challenges facing the group in these areas, various meetings between the professionals of these areas from the different countries and country subholding companies are organised on an annual basis. Specifically, in 2020 there were, among other events, the annual II International Internal Audit Planning Days and "XIII Global Control Committee", which analyse the most significant issues affecting the function, like new accounting rules, with special attention on reviewing and evaluating the group's ICFR system.

Most of the activities and actions mentioned above have been carried out virtually, due to the situation caused by COVID-19 since March.

In addition, although not considered specific training activities, the Accounting Practice Division, which reports directly to the director of Administration and Control, who is responsible for defining and updating the accounting policies, publishes a quarterly bulletin that is broadly distributed within the group regarding new accounting developments with respect to International Financial Reporting Standards ("IFRS"), which includes updates on standards (standards that have entered into effect, drafts issued, standards issued, standards approved by the European Union, new standards and expected drafts, as well as existing standards) and accounting questions asked internally, together with the conclusions with respect thereto.

F.2 Assessment of risks in financial reporting

Report on at least the following:

F.2.1. The main characteristics of the risk identification process, including risks of error and fraud, as regards:

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- Whether the process exists and is documented.

The process of identifying risks of error in financial information is one of the most important steps within the methodology used for internal control over financial information at Iberdrola, documenting both the objectives and performance thereof as well as its results.

The methodology, developed and updated by the Risk Management and Internal Assurance Area, starts with an analysis of the consolidated financial information of the Iberdrola group and of the various country subholding companies, in order to select the most significant accounting headings and notes, pursuant to quantitative (materiality) and qualitative (business risk and third-party visibility) standards. The headings and notes selected are grouped into management cycles or large processes in which the selected information is generated. The cycles are analysed and a high-level description of each of them is prepared as a means for identifying the potential risks of error in the financial information in relation to attributes like integrity, presentation, valuation, cut-off, recording and validity. The risks identified are subject to a process of assessment, selecting the most significant ones, applying professional judgement regarding a number of indicators (existence of documented processes and controls, intervention of systems that automate the process, occurrence of incidents in the past, familiarity with and maturity of the process, and need for the use of judgement to make estimates). The risks of fraud are not subject to explicit identification, although they are taken into account to the extent that they can generate material errors in the financial information.

Once the most significant risks have been selected and the main aspects to be controlled are identified, the controls required for the mitigation or management thereof are selected and designed, with these controls being subject to monitoring and documentation within the scope of the ICFR system.

The Risk Management and Internal Assurance Area provides specialised knowledge regarding internal control and carries out duties of support and coordination throughout the process described above, endeavouring to ensure the consistency and homogeneity of the model within the group, as well as the efficiency and effectiveness thereof.

The selected risks are reviewed at least annually within the framework of the assessment of the effectiveness of the internal control system performed by those responsible for it with the support and coordination of the Risk Management and Internal Assurance Area. This review is intended to update the risks to the changing circumstances in which the Company operates, especially given changes in the organisation, computer systems, regulation, products or the status of the markets.

The above controls, together with the risks they mitigate, are systematically reviewed by the Internal Audit Area.

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- Whether the process covers all the objectives of financial reporting, (existence and occurrence; completeness; valuation; presentation; disclosure and comparability; and rights and obligations), whether it is updated and if so how often.

  As mentioned above, the cycles or large processes in which financial information is generated are reviewed at least on an annual basis to identify potential risks of error in relation to attributes like validity (existence and approval), integrity, valuation, presentation, cut-off and recording.

- The existence of a process for identifying the scope of consolidation, taking into account, among other factors, the possible existence of complex corporate structures or special purpose vehicles.

  The scope of consolidation is identified on a monthly basis, and is used to produce an updated map of companies, expressly identifying the changes that have occurred each period.

  The scope of this review is the totality of all companies in which Iberdrola or any of its subsidiaries has an interest, regardless of the significance thereof.

  Furthermore, following the provisions of section 529 of the Companies Act, the Regulations of the Board of Directors provide that the purview of the Board of Directors includes, among other things, approving the creation or acquisition of equity interests in special purpose entities or entities registered in countries or territories that are considered to be tax havens, as well as any other transactions or operations of a similar nature that, due to their complexity, might diminish the transparency of the group. In any event, the making of such decision requires a prior report of the ARSC, as provided in its Regulations.

  Pursuant to specific internal procedures in effect (conforming to the current corporate governance model), the initiative relating to the creation or acquisition of an interest in a special purpose entity or an entity domiciled in a tax haven is within the purview of the management of the group or of the country subholding company or head of business company or subsidiary thereof that intends to create or acquire a company of this nature. In the event that such transactions are carried out by listed country subholding companies of the group or by subsidiaries thereof, the audit and compliance committee or similar body of such listed country subholding company shall be responsible for issuing the relevant report.

- Whether the process takes into account the effects of other types of risk (operational, technological, financial, legal, tax, reputational, environmental, etc.) to the extent that they affect the financial statements.

  The process of identifying risks of error in financial information takes into account the effects of other types of risk (operational, technological, financial, legal, tax, reputational, environmental, etc.) to the extent that they significantly affect the financial statements. These risks are assessed and managed by various corporate units such

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as the Risk Management or Legal Services, among others. However, there is no express identification of such other types for the categorisation of financial information risks.

- The governing body within the company that supervises the process.

The governing body that supervises the process is the ARSC, which is supported by the Risk Management and Internal Assurance Area and the Internal Audit Area in the performance of this duty.

F.3 Control activities

Report on whether the company has at least the following, describing their main characteristics:

F.3.1. Review and authorisation procedures for financial information and a description of the ICFR, to be disclosed to the securities markets, indicating those responsible, as well as documentation describing the flow of activity and controls (including those relating to the risk of fraud) of the various types of transactions which may materially affect the financial statements, including accounting closing procedures and the specific review of significant judgements, estimates, valuations and projections.

On 15 December 2020, Iberdrola's Board of Directors updated the Iberdrola group Financial Information Preparation Policy that applies to all companies of the group, and which further develops the process for preparing the consolidated financial information and clearly defines the powers vested in the ARSC and the audit and compliance committees of the other companies of the group.

"Consolidated financial information" means the information appearing in the consolidated annual accounts, in the interim management statements corresponding to the results of Iberdrola and its consolidated group for the first and third quarter, and in the Half-Yearly Financial Report.

The policy provides that the financial information required for the preparation of the "consolidated financial information" must be prepared in accordance with the accounting standards established in the Accounting Policies Handbook and the models approved by Iberdrola's Administration and Control Division.

The policy provides which management decision-making body of each company shall be responsible for preparing the financial information relating to its respective company that may be required to prepare the "consolidated financial information". By analogy, the management decision-making bodies of the country subholding companies shall be responsible for approving the "financial information for consolidation" within which the information regarding the company itself and that of the subsidiaries forming part of its subgroup are included.

Thus, the management decision-making bodies of the country subholding companies, following a report from their respective audit and compliance committees, and based on the information received from their subsidiaries, shall prepare and approve the financial information for consolidation corresponding to each subgroup, and once such information has been

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verified by their external auditor within the context of its review of the consolidated financial information, they shall send it to Iberdrola's Administration and Control Division prior to the date indicated thereby, in order to prepare the consolidated financial information and submit it for formulation or approval by Iberdrola's Board of Directors, as appropriate, after a report from its ARSC.

Furthermore, the process or structure of certification of the financial information managed and coordinated by the Risk Management and Internal Assurance Area, which is formally carried out on a half-yearly basis, coinciding with the interim and annual close, reflects the form in which the financial information is generated within the group.

In this structure, the heads of the country subholding companies and the heads of the head of business companies, together with their respective heads of control, as well as the heads of the global corporate areas, certify both the reliability of the financial information regarding their areas of responsibility (which is the information they provide for consolidation at the group level) and the effectiveness of the internal control system established to reasonably guarantee such reliability. Finally, the chairman & CEO, as the top responsible executive, and the General Finance, Control and Resources Director (CFO), who is responsible for the preparation of the financial information, certify to the Board of Directors the reliability of the consolidated annual accounts and the Half-Yearly Financial Report.

The ARSC, with the support of the Risk Management and Internal Assurance Area and the Internal Audit Area, supervises the entire process of certification, submitting to the Board of Directors the conclusions obtained from this analysis at the meetings during which the accounts are formally prepared.

As regards the description of the ICFR system to be published in the securities markets, the procedure for the review and approval thereof is the same as the one used for all disclosures of an economic and financial nature in the Annual Corporate Governance Report.

The documentation of the Internal Control over Financial Reporting (ICFR) System includes high-level descriptions of the cycles for generating the selected relevant financial information, as well as detailed descriptions of the prioritised risks of error and of the controls designed for the mitigation or management thereof. The description of the controls includes the evidence obtained for the implementation thereof, which is necessary for their review.

Each of the accounting close processes at the businesses is considered a cycle, and the same occurs with the group of accounting close activities at the corporate level, with the global consolidation process and with the process of preparing the notes to the financial statements. This means that all of these activities are subject to the methodological process described in the section relating to risks.

Furthermore, the specific review of critical accounting judgements, estimates, valuations and relevant projections is subject to specific controls within the model, as these types of issues involve risks of error in the various cycles in which they are made. The evidence of the specific controls is the support for such reviews in many cases.

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Independently of the process of certification followed in the countries, businesses and corporate areas, the ARSC, with the support of the Internal Audit Area, performs a quarterly global review of the financial information, ensuring that the half-yearly financial reports and quarterly management statements are prepared using the same accounting standards as the annual financial reports, and verifies the proper definition of the scope of consolidation and the correct application of generally accepted accounting principles and international financial reporting standards.

F.3.2. Internal IT control policies and procedures (access security, control of changes, system operation, operational continuity and segregation of duties, among others) which support significant processes within the company relating to the preparation and publication of financial information.

The controls considered to mitigate or manage the risks of error in financial reporting include some relating to the most significant software applications, like the controls relating to user access permissions or those relating to the integrity of the transfer of information between applications, control of operations and change management.

In addition, the Iberdrola group has internal control guidelines and procedures regarding IT systems in relation to the acquisition and development of software, the acquisition of systems infrastructure, the installation and testing of software, change management, management of service levels, management of third-party services, security of the systems and access thereto, incident management, transaction management, continuity of operations and the segregation of functions.

These guidelines and procedures (which in some cases are different based on geographic area or type of solution, and are in a process of progressive homogenisation) are applied to all IT systems that support the relevant process of generation of financial information, and to the infrastructure required for the operation thereof.

The Iberdrola group also has an Information Technologies (IT) Policy that contemplates the management of risks associated with the use, ownership, operation, participation, influence and adoption of specific information technology or the processes for the management and control thereof.

Thus, there is a model of general controls integrated within the risk management model that allows for a global evaluation of the risks related to information technology.

Both the risk model and the IT controls are based on and aligned with market best-practices, like COBIT5 and COSO. The evolution thereof over the long term is maintained by including the new needs arising from the changing regulatory compliance framework that applies to the IT systems and services, as well as the recommendations and guidelines of auditors and relevant third parties.

As part of the general IT controls model, there is a regular evaluation of the effectiveness of the information technology controls in the area of financial systems, adopting the appropriate measures if any incident is detected.

On an annual basis, the heads of the IT systems of the Iberdrola group certify the effectiveness of the internal controls established regarding

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financial information. This certification covers all systems declared to be within the scope of the external financial auditing, as well as others deemed to be relevant, by the corresponding business organisations within the group.

For financial year 2020, the total number of systems covered by the IT controls system was 51, on which a model of 26 controls was applied, most of which are evaluated and applied by the Systems Division, and in some cases by other business organisations. The frequency of the evaluation is annual or biannual, depending on the nature of the control, and it is performed using a principle of sampling of all of the relevant evidence in each case. The entire process of evaluating the IT controls is supported by a GRC system and is supervised annually by the Internal Audit Area.

F.3.3. Internal control policies and procedures for overseeing the management of activities subcontracted to third parties, as well as of those aspects of assessment, calculation or valuation entrusted to independent experts, which may materially affect financial statements.

In general terms, the Iberdrola group does not have significant functions subcontracted to third parties with a direct impact on financial information. The evaluations, calculations or assessments entrusted to third parties that could materially affect the financial statements are considered to be activities relevant to the generation of financial information leading to the identification of any priority risks of error, which involves the design of associated internal controls. These controls cover the internal analysis and approval of fundamental assumptions to be used, as well as the review of the evaluations, calculations or assessments made by outside parties, by comparing them to the calculations made internally.

F.4 Information and communication

Report on whether the company has at least the following, describing their main characteristics:

F.4.1. A specifically assigned function for defining and updating accounting policies (accounting policy area or department) and resolving doubts or conflicts arising from their interpretation, maintaining a free flow of information to those responsible for operations in the organisation, as well as an up-to-date accounting policy manual distributed to the business units through which the company operates.

The Accounting Practice Division, which reports to the Administration and Control director, is responsible for defining and updating the accounting policies, as well as for resolving questions or conflicts arising from the interpretation thereof. It maintains fluid communication with the heads of operation of the organisation, and particularly with the heads of the accounting functions.

It publishes a bulletin on a quarterly basis that is broadly distributed within the group regarding new accounting developments deriving from the IFRS, which includes updates on standards (standards that have entered into effect, drafts issued, standards issued, standards approved by the European Union, new standards and expected drafts, as well as existing standards)

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and accounting questions asked internally, together with the conclusions with respect thereto.

The Accounting Practice Division is also responsible for keeping the Accounting Policies Handbook of the group continuously updated and ensuring the appropriate dissemination thereof.

The accounting policies handbook is continuously updated. For this purpose, the Accounting Practice Division analyses whether the new developments or changes in the accounting area have an effect on the group's accounting policies, as well as the date of entry into force of each of the standards. When a new provision, or new interpretations thereof, are identified having an effect on the accounting policies of the group, it is included in the handbook, and also communicated to the parties responsible for preparing the financial information of the group through the quarterly bulletins mentioned above, and the application supporting the handbook is also updated.

The updated version of the handbook is available in an application on the internal network of the group. This application is also accessible by users via remote access and can be connected to e-mail. Any change or upload of a document of the handbook generates an e-mail notice to all users.

F.4.2. Mechanisms for capturing and preparing financial information in standardised formats for application and use by all units of the entity or group, and support its main financial statements and notes, as well as disclosures concerning ICFR.

The mechanism for capturing and preparing the information supporting the main financial statements of the Iberdrola group is mainly based on the use of a unified management consolidation tool (called BPC), which is accessible from all geographic areas, that is currently deployed throughout the group.

A large part of the information supporting the breakdowns and notes is included in the consolidation tool, with the rest being captured by homogeneously formatted spreadsheets, called reporting packets, that are prepared for the half-yearly and yearly close.

F.5 Supervision of the functioning of the system

Report on at least the following, describing their principal features:

F.5.1. The activities of the audit committee in overseeing ICFR as well as whether there is an internal audit function one of the responsibilities of which is to provide support to the committee in its task of supervising the internal control system, including ICFR. Additionally, describe the scope of ICFR assessment made during the year and the procedure through which the person responsible for performing the assessment communicates its results, whether the company has an action plan detailing possible corrective measures, and whether their impact on financial reporting has been considered.

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The ARSC is supported by the Risk Management and Internal Assurance Area and the Internal Audit Area in the performance of its powers with respect to the internal control and risk management systems.

The ARSC's supervision of the ICFR system mainly includes:

i. monitoring compliance with the certification process by the various persons responsible for financial information;
ii. reviewing the design and operation of the internal control system to evaluate the effectiveness thereof, with the support of the Risk Management and Internal Assurance Area and the Internal Audit Area; and
iii. regular meetings with the external auditor, the Administration and Control Division, the Risk Management and Internal Assurance Area, the Internal Audit Area and senior management to review, analyse and comment on the financial information, the boundary of companies that it covers and the accounting criteria applied, as well as any significant weaknesses in internal control that have been identified.

The Risk Management and Internal Assurance Area performs functions that include, among others, monitoring, supporting, coordinating and homogenising the implementation of the IFRS, establishing the methodology, criteria and reporting method, as well as the operational monitoring of controls and the regular assessment of the effectiveness of the IFRS.

The parties responsible for preparing the financial information of each country subholding company, each head of business company and each corporate area must engage in an annual process, coordinated by the Risk Management and Internal Assurance Area, of reviewing the design and operation of the internal control system within their area of responsibility in order to evaluate the effectiveness thereof.

There is thus an analysis of whether, based on the changing circumstances in which the group acts (changes in organisation, systems, processes, products, regulation, etc.), changes in the risks identified and prioritised and/or new risks identified should be included. There is also an analysis of whether the design of the existing controls to mitigate or manage the risks that may have changed is appropriate, as well as whether they have operated satisfactorily in accordance with their design.

The conclusions from this annual review process, with respect to both the deficiencies identified (which are classified as high, medium or low, based precisely on their potential impact on the financial information) and the action plans to fix them, are presented at an annual specific meeting attended by the group's heads of Control and of the various country subholding companies, the heads of the main corporate areas, the Risk Management and Internal Assurance Area and the Internal Audit Area. Conclusions are made at this meeting regarding the effectiveness of the internal control system within each of the different areas of responsibility, and globally for the entire group.

Thereafter, the most significant conclusions regarding the review are submitted to the ARSC within the framework of the regular meetings it holds with the Risk Management and Internal Assurance director.

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Apart from what is described in the preceding paragraphs, the Internal Audit Area, in support of the ARSC, undertakes an independent review of the design and operation of the internal control system, identifying deficiencies and preparing recommendations for improvement. The Internal Audit Area is functionally subordinate to the ARSC, and pursuant to the Basic Internal Audit Regulations has the main duties of assisting this committee in the exercise of its powers and objectively and independently supervising the effectiveness of the group's internal control system, which is made up of a set of risk management and control mechanisms and systems.

Based thereon, the Internal Audit Area engages in ongoing monitoring of the action plans agreed to with the various organisations to correct the deficiencies detected and to implement the suggestions for improvement agreed to with the organisations.

The period that the Internal Audit Area plans for in-depth review of the entire internal control system is five years.

Specifically, 16 cycles were reviewed during financial year 2020. These are cycles corresponding to the companies Iberdrola México, S.A. de C.V., Scottish Power Ltd., Iberdrola España, S.A.U., Neoenergia S.A and Iberdrola Energía Internacional S.A.U., as well as corporate cycles.

In addition, on a half-yearly basis, coinciding with the half-yearly and yearly close, the Internal Audit Area performs a review of the operation of the internal controls that are considered to be most critical, to which there should be added the annual review of all the SOX Key Controls of Avangrid, Inc.

The combination of regular reviews, together with the half-yearly reviews of the most critical controls, allows the Internal Audit Area to perform an evaluation of the internal control system (both design and operation) and issue an opinion regarding the effectiveness of the internal controls established to ensure the reliability of the financial information, which it submits to the ARSC within the framework of their regular meetings.

F.5.2. Whether there is a discussion procedure whereby the statutory auditor (pursuant to the Spanish Technical Audit Standards), the internal auditor and other experts can report to senior management and the audit committee or directors of the company any significant weaknesses in internal control identified during the review of the annual financial statements or any others they have been assigned. Additionally, state whether an action plan is available for correcting or mitigating any weaknesses detected.

In general terms, the procedure for discussion regarding significant internal control weaknesses that have been identified is based on regular meetings with the various agents.

Thus, the ARSC holds meetings, both at the half-year and yearly close, with the external auditor, the Risk Management and Internal Assurance Area, the Internal Audit Area and the officers responsible for preparing the financial information, in order to discuss any relevant aspect of the preparation process and of the resulting financial information.

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Specifically, as established in its Regulations (scope of powers), Iberdrola's ARSC has, among other powers, that of obtaining information regarding any significant deficiency in internal control that the statutory auditor detects while carrying out its audit work. For these purposes, the statutory auditor appears before such Committee on an annual basis to present recommendations in connection with the internal control weaknesses identified during the review of the annual accounts. Any weaknesses noted by the statutory auditor are continuously monitored by the Committee with the support of the Internal Audit Area. Management responsible for preparing the consolidated accounts also holds meetings with the external auditors and with the internal auditors, at both the half-yearly and yearly close, in order to discuss any significant issues relating to the financial information.

F.6 Other relevant information

Iberdrola has an Internal Control over Financial Reporting (ICFR) system or model that is intended to reasonably guarantee the reliability of the financial information. The development of the model, which began in 2006, was not the result of a legal requirement but rather the conviction, by both the Board of Directors and the Company's senior management, that within a context of growth and internationalisation as was already forecast for the group, an explicit and auditable internal control system would contribute to maintaining and improving its control environment and the quality of the financial information, while at the same time increasing the confidence of investors due to its effects on the transparency, reputation and good governance of Iberdrola and of the companies making up the group.

The ICFR system has two main sides: certification, and internal control itself.

Certification is a half-yearly process managed and coordinated by the Risk Management and Internal Assurance Area in which those responsible for financial information in the different areas of the Company certify that: (i) the financial information they deliver to Iberdrola for purposes of consolidation does not contain any material errors or omissions and provides a fair view of the results and the financial condition of the Company within their area of responsibility, and (ii) they are responsible for establishing the ICFR system within their area of responsibility and have found, upon assessment, that the system is effective. The text of these certifications is inspired by the form of certification established in Section 302 of the U.S. Sarbanes-Oxley Act.

The culmination of the half-yearly process is a joint certification that the chairman & CEO and the General Finance, Control and Resources Director (CFO) submit to the Board of Directors for purposes of approval of the Half-Yearly Financial Report or the formulation of the annual accounts.

The process is carried out by means of electronic signature in a software application which manages the areas of responsibility and time periods and which serves as a repository of all the documentation generated, allowing for periodic review by the supervision and control bodies of the group.

The other side of the model, that of internal control itself, is inspired by the leading framework described in the "Internal Control Integrated Framework" report of the "Committee of Sponsoring Organizations of the Treadway Commission (COSO)",

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and is mainly focused on providing a reasonable level of security in achieving the goal of reliability of financial information.

The methodology used by Iberdrola for the development and continuous update of internal control, the development, maintenance and update of which is the responsibility of the Risk Management and Internal Assurance Area, has the following stages or steps: (i) analysis and selection of significant financial information; (ii) the grouping thereof within cycles or large processes in which it is generated; (iii) the identification, evaluation and prioritisation of the risks of error in financial information within the selected cycles; (iv) the design and operation of controls to mitigate or manage the selected risks; and (v) the monitoring and update of the foregoing steps to continuously adapt the model to the circumstances of the business activity.

One of the main characteristics of the design of the model is that it attempts to ensure the quality of the financial information during each month of the year, and is not only limited to the periods corresponding to the annual or half-yearly close.

This characteristic is strengthened with the use of a specific software application internally developed by the group, which allows for the monitoring of the status of the controls at all times.

Another important characteristic of the model is that it extends the culture of internal control to all the organisations, both corporate and business, that significantly contribute to the generation of financial information, by personally assigning responsibility in the implementation and documentation of controls.

All significant documentation regarding Iberdrola's ICFR system, including both the certification process and the internal control itself, is stored in this software application.

The people responsible for implementing the controls input into the software application evidence showing the performance thereof, and evaluate the results obtained, classifying them as satisfactory or unsatisfactory. This allows for monitoring of the internal control situation in real-time, permitting quick action regarding any deficiencies detected.

Additionally, on an annual basis, the various heads of control at the country subholding and head of business companies, as well as the heads of the corporate areas, review the design and operation of the ICFR system, as a systematic process for the update thereof to the changing circumstances of the business activity.

The annual review is coordinated by the Risk Management and Internal Assurance Area, which is also tasked with administering the software application and with coordinating the development of the ICFR system within the various businesses and corporate areas of the group, as well as maintaining the homogeneity of the ICFR system throughout the group. Based on this review, the Risk Management and Internal Assurance Area issues its opinion on the effectiveness of the IFRS, which is communicated during the annual meeting of the Control Committee and to the ARSC.

Furthermore, the Internal Audit Area, which is responsible for the independent supervision of internal control in support of the ARSC, undertakes an independent review of the design and operation of the ICFR system, identifying deficiencies and preparing recommendations for improvement. This review is performed applying a mixed model of selecting cycles based on risk and a minimum rotation of five years.

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In addition, on a half-yearly basis, the Internal Audit Area undertakes an independent review of the effectiveness of the internal controls established to ensure the reliability of the financial information. It also reviews the process of certification of the financial information on a half-yearly basis. The conclusions from these reviews are submitted to the ARSC, which, if applicable, makes them its own and forwards them to the Board of Directors.

Based on materiality standards, the current scope of the ICFR system covers the entire Iberdrola group. More than 1,600 people from the group use the software application, both to document the evidence showing the implementation of more than 3,000 controls —which mitigate or manage more than 1,300 risks of error in the financial information deemed priority— and to monitor, analyse, adjust and evaluate the ICFR system.

In addition, the approximately 135 department heads who participate in the process of certifying the correctness of the information for which they are responsible do so using an electronic signature directly within the software application.

All of the above allows for the final result of the certification process, which is supported by the situation of internal control itself, to be reviewed by Iberdrola's Board of Directors as one of the major guarantees of reliability in connection with the formulation of the annual and interim financial information of the group.

F.7 External auditor's report

Report:

F.7.1. Whether the ICFR information sent to the markets has been subjected to review by the external auditor, in which case the entity should include the corresponding report as an attachment. If not, reasons why should be given.

The information on the ICFR system sent to the markets has not been subject to review by the external auditor consistent with the fact that the other information contained in the Annual Corporate Governance Report is only subject to review by the external auditor in relation to the accounting information contained in said Report. Furthermore, it is believed that externally reviewing the information on the ICFR system sent to the markets would in a certain way be redundant, taking into account the review of internal control that the external auditor must perform in accordance with technical auditing standards within the context of the statutory audit of accounts.

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G DEGREE OF COMPLIANCE WITH CORPORATE GOVERNANCE RECOMMENDATIONS

Specify the company's degree of compliance with recommendations of the Good Governance Code for listed companies.

In the event that a recommendation is not followed or only partially followed, a detailed explanation of the reasons must be included so that shareholders, investors and the market in general have enough information to assess the company's conduct. General explanations are not acceptable.

1. **That the articles of association of listed companies should not limit the maximum number of votes that may be cast by one shareholder or contain other restrictions that hinder the takeover of control of the company through the acquisition of its shares on the market.**

Complies ☐ Explain X

Article 29.2 of the By-Laws provides that "No shareholder may cast a number of votes greater than those corresponding to shares representing ten (10%) per cent of share capital, even if the number of shares held exceeds such percentage of the share capital. This limitation does not affect votes corresponding to shares with respect to which a shareholder is holding a proxy as a result of the provisions of article 23 above, provided, however, that with respect to the number of votes corresponding to the shares of each shareholder represented by proxy, the limitation set forth above shall apply".

Section 3 of such article adds: "The limitation set forth in the preceding section shall also apply to the maximum number of votes that may be collectively or individually cast by two or more shareholders that are entities or companies belonging to the same group. Such limitation shall also apply to the number of votes that may be cast collectively or individually by an individual and the shareholder entity, entities, or companies controlled by such individual. A group shall be deemed to exist under the circumstances provided by law, and also when a person controls one or more entities or companies".

Iberdrola believes that the limitation on the maximum number of votes that may be cast by a single shareholder, or by several shareholders belonging to the same group or, if applicable, acting in concert, is a measure to protect shareholders at companies with dispersed share ownership, whose investment is thus guarded from any transaction that is contrary to the corporate interest. In this regard, most shareholders, especially including but not limited to small retail investors, who represent approximately one-fourth of Iberdrola's capital, have little room to manoeuvre and respond to a potential shareholder owning a non-controlling interest and not reaching the threshold requiring a takeover bid but seeking influence over the Company and whose own interest is not totally in line with the corporate interest.

It should also be noted that such voting limitation has been in effect since 16 June 1990, the date on which the General Shareholders' Meeting was held at which it was resolved, by unanimous vote of the attendees, to bring the By-Laws of the Company (then doing business as Iberduero, S.A.) into line with the consolidated text of the Companies Act approved by Royal Legislative Decree 1564/1989 of 22 December. This shows the level of corporate consensus that has existed on such voting limitation from the very beginning, which has been confirmed by the fact that such limitation has remained unchanged through various by-law amendments passed by the shareholders at General Shareholders' Meetings. In turn, it reflects the will of the

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shareholders to increase their bargaining power in the event of hostile offers or transactions.

In any event, Article 50 of the current By-Laws establishes the instances of removal of such voting limitation in the event that the Company is the target of a takeover bid that receives the required shareholder approval, in which case the provisions of Section 527 of the Companies Act prevail. Pursuant to the foregoing, it cannot be deemed that the limitation on the maximum number of votes that may be cast by a shareholder constitutes an obstacle to a takeover bid.

2. **That when the listed company is controlled by another entity in the meaning of Article 42 of the Commercial Code, whether listed or not, and has, directly or through its subsidiaries, business relations with said entity or any of its subsidiaries (other than the listed company) or carries out activities related to those of any of them it should make accurate public disclosures on:**

   a) **The respective areas of activity and possible business relationships between the listed company or its subsidiaries and the parent company or its subsidiaries.**

   b) **The mechanisms in place to resolve any conflicts of interest that may arise.**

Complies X Complies partially ☐ Explain ☐ Not applicable ☐

3. **That, during the ordinary General Shareholders' Meeting, as a complement to the distribution of the written annual corporate governance report, the chairman of the Board of Directors should inform shareholders orally, in sufficient detail, of the most significant aspects of the company's corporate governance, and in particular:**

   a) **Changes that have occurred since the last General Shareholders' Meeting.**

   b) **Specific reasons why the company has not followed one or more of the recommendations of the Code of Corporate Governance and the alternative rules applied, if any.**

Complies ☐ Complies partially ☐ Explain X

This information is continuously available to shareholders through the corporate website. In view of the special circumstances, the 2020 General Shareholders' Meeting was held exclusively online. It was therefore deemed appropriate to shorten the meeting, dispensing with any non-mandatory items already available on the website.

4. **That the company should define and promote a policy on communication and contact with shareholders and institutional investors, within the framework of their involvement in the company, and with proxy advisors that complies in all aspects with rules against market abuse and gives equal treatment to similarly situated shareholders. And that the company should publish this policy on its website, including information on how it has been put into practice and identifying the contact persons or those responsible for implementing it.**

   And that, without prejudice to the legal obligations regarding dissemination of inside information and other types of regulated information, the company should also have a general policy regarding the communication of economic-financial, non-financial and

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corporate information through such channels as it may consider appropriate (communication media, social networks or other channels) that helps to maximise the dissemination and quality of information available to the market, investors and other stakeholders.

Complies X Complies partially ☐ Explain ☐

5. **That the Board of Directors should not submit to the General Shareholders' Meeting any proposal for delegation of powers allowing the issue of shares or convertible securities with the exclusion of preemptive rights in an amount exceeding 20% of the capital at the time of delegation.**

   And that whenever the Board of Directors approves any issue of shares or convertible securities with the exclusion of preemptive rights, the company should immediately publish the reports referred to by company law on its website.

Complies X Complies partially ☐ Explain ☐

6. **That listed companies that prepare the reports listed below, whether under a legal obligation or voluntarily, should publish them on their website with sufficient time before the General Shareholders' Meeting, even if their publication is not mandatory:**

   a) **Report on the auditor's independence.**

   b) **Reports on the workings of the audit and nomination and remuneration committees.**

   c) **Report by the audit committee on related party transactions.**

Complies X Complies partially ☐ Explain ☐

7. **That the company should transmit in real time, through its website, the proceedings of the General Shareholders' Meetings.**

   And that the company should have mechanisms in place allowing the delegation and casting of votes by means of data transmission and even, in the case of large-caps and to the extent that it is proportionate, attendance and active participation in the General Meeting to be conducted by such remote means.

Complies X Complies partially ☐ Explain ☐

8. **That the audit committee should ensure that the financial statements submitted to the General Shareholders' Meeting are prepared in accordance with accounting regulations. And that in cases in which the auditor has included a qualification or reservation in its audit report, the chairman of the audit committee should clearly explain to the general meeting the opinion of the audit committee on its content and scope, making a summary of this opinion available to shareholders at the time when the meeting is called, alongside the other Board proposals and reports.**

Complies X Complies partially ☐ Explain ☐

9. **That the company should permanently publish on its website the requirements and procedures for certification of share ownership, the right of attendance at the General Shareholders' Meetings, and the exercise of the right to vote or to issue a proxy.**

   And that such requirements and procedures promote attendance and the exercise of shareholder rights in a non-discriminatory fashion.

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Complies X Complies partially ☐ Explain ☐

10. **That when a duly authenticated shareholder has exercised his or her right to complete the agenda or to make new proposals for resolutions in advance of the General Shareholders' Meeting, the company:**

    a) **Should immediately distribute such complementary points and new proposals for resolutions.**

    b) **Should publish the attendance, proxy and remote voting card specimen with the necessary changes such that the new agenda items and alternative proposals can be voted on in the same terms as those proposed by the Board of Directors.**

    c) **Should submit all these points or alternative proposals to a vote and apply the same voting rules to them as to those formulated by the Board of Directors including, in particular, assumptions or default positions regarding votes for or against.**

    d) **That after the General Shareholders' Meeting, a breakdown of the voting on said additions or alternative proposals be communicated.**

Complies X Complies partially ☐ Explain ☐ Not applicable ☐

11. **That if the company intends to pay premiums for attending the General Shareholders' Meeting, it should establish in advance a general policy on such premiums and this policy should be stable.**

Complies X Complies partially ☐ Explain ☐ Not applicable ☐

12. **That the Board of Directors should perform its functions with a unity of purpose and independence of criterion, treating all similarly situated shareholders equally and being guided by the best interests of the company, which is understood to mean the pursuit of a profitable and sustainable business in the long term, promoting its continuity and maximising the economic value of the business.**

    And that in pursuit of the company's interest, in addition to complying with applicable law and rules and conducting itself on the basis of good faith, ethics and a respect for commonly accepted best practices, it should seek to reconcile its own company interests, when appropriate, with the interests of its employees, suppliers, clients and other stakeholders that may be affected, as well as the impact of its corporate activities on the communities in which it operates and on the environment.

Complies X Complies partially ☐ Explain ☐

13. **That the Board of Directors should be of an appropriate size to perform its duties effectively and in a collegial manner, which makes it advisable for it to have between five and fifteen members.**

Meets X Explain ☐

14. **That the Board of Directors should approve a policy aimed at favouring an appropriate composition of the Board and that:**

    a) **Is concrete and verifiable;**

    b) **Ensures that proposals for appointment or re-election are based upon a prior analysis of the skills required by the Board of Directors; and**

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c) Favours diversity of knowledge, experience, age and gender. For these purposes, it is considered that the measures that encourage the company to have a significant number of female senior executives favour gender diversity.

That the result of the prior analysis of the skills required by the Board of Directors be contained in the supporting report from the nomination committee published upon calling the General Shareholders' Meeting to which the ratification, appointment or re-election of each director is submitted.

The nomination committee will annually verify compliance with this policy and explain its findings in the annual corporate governance report.

Complies X Complies partially ☐ Explain ☐

15. That proprietary and independent directors should constitute a substantial majority of the Board of Directors and that the number of executive directors be kept to a minimum, taking into account the complexity of the corporate group and the percentage of equity participation of executive directors.

And that the number of female directors should represent at least 40% of the members of the Board of Directors before the end of 2022 and thereafter, and no less 30% prior to that date.

Complies X Complies partially ☐ Explain ☐

16. That the number of proprietary directors as a percentage of the total number of non-executive directors not be greater than the proportion of the company's share capital represented by those directors and the rest of the capital.

This criterion may be relaxed:

a) In large-cap companies where very few shareholdings are legally considered significant.

b) In the case of companies where a plurality of shareholders is represented on the Board of Directors without ties among them.

Complies X Explain ☐

17. That the number of independent directors should represent at least half of the total number of directors.

That, however, when the company does not have a high level of market capitalisation or in the event that it is a large-cap company with one shareholder or a group of shareholders acting in concert who together control more than 30% of the company's share capital, the number of independent directors should represent at least one third of the total number of directors.

Meets X Explain ☐

18. That companies should publish the following information on its directors on their website, and keep it up to date:

a) Professional profile and biography.

b) Any other Boards to which the directors belong, regardless of whether or not the companies are listed, as well as any other remunerated activities engaged in, regardless of type.

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c) **Category of directorship, indicating, in the case of individuals who represent significant shareholders, the shareholder that they represent or to which they are connected.**

d) **Date of their first appointment as a director of the company's Board of Directors, and any subsequent re-elections.**

e) **Company shares and share options that they own.**

Complies X Complies partially ☐ Explain ☐

19. **That the annual corporate governance report, after verification by the nomination committee, should explain the reasons for the appointment of any proprietary directors at the proposal of shareholders whose holding is less than 3%. It should also explain, if applicable, why formal requests from shareholders for presence on the Board were not honoured, when their shareholding was equal to or exceeded that of other shareholders whose proposal for proprietary directors was honoured.**

Complies ☐ Complies partially ☐ Explain ☐ Not applicable X

20. **That proprietary directors representing significant shareholders should resign from the Board when the shareholder they represent disposes of its entire shareholding. They should also resign, in a proportional fashion, in the event that said shareholder reduces its percentage interest to a level that requires a decrease in the number of proprietary directors.**

Complies ☐ Complies partially ☐ Explain ☐ Not applicable X

21. **That the Board of Directors should not propose the dismissal of any independent director before the completion of the director's term provided for in the articles of association unless the Board of Directors finds just cause and a prior report has been prepared by the nomination committee. Specifically, just cause is considered to exist if the director takes on new duties or commits to new obligations that would interfere with his or her ability to dedicate the time necessary for attention to the duties inherent to his or her post as a director, fails to complete the tasks inherent to his or her post, or is affected by any of the circumstances which would cause the loss of independent status in accordance with applicable law.**

    The dismissal of independent directors may also be proposed as a result of a public takeover bid, merger or other similar corporate transaction entailing a change in the shareholder structure of the company, provided that such changes in the structure of the Board are the result of application of the proportionate representation criterion provided in Recommendation 16.

Meets X Explain ☐

22. **That companies should establish rules requiring that directors inform the Board of Directors and, where appropriate, resign from their posts, when circumstances arise which affect them, whether or not related to their actions in the company itself, and which may harm the company's standing and reputation, and in particular requiring them to inform the Board of any criminal proceedings in which they appear as suspects or defendants, as well as of how the legal proceedings subsequently unfold.**

    And that, if the Board is informed or becomes aware in any other manner of any of the circumstances mentioned above, it must investigate the case as quickly as possible and, depending on the specific circumstances, decide, based on a report from the

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nomination and remuneration committee, whether or not any measure must be adopted, such as the opening of an internal investigation, asking the director to resign or proposing that he or she be dismissed. And that these events must be reported in the annual corporate governance report, unless there are any special reasons not to do so, which must also be noted in the minutes. This without prejudice to the information that the company must disseminate, if appropriate, at the time when the corresponding measures are implemented.

Complies X Complies partially ☐ Explain ☐

23. That all directors clearly express their opposition when they consider any proposal submitted to the Board of Directors to be against the company's interests. This particularly applies to independent directors and directors who are unaffected by a potential conflict of interest if the decision could be detrimental to any shareholders not represented on the Board of Directors.

Furthermore, when the Board of Directors makes significant or repeated decisions about which the director has serious reservations, the director should draw the appropriate conclusions and, in the event the director decides to resign, explain the reasons for this decision in the letter referred to in the next recommendation.

This recommendation also applies to the secretary of the Board of Directors, even if he or she is not a director.

Complies ☐ Complies partially ☐ Explain ☐ Not applicable X

24. That whenever, due to resignation or resolution of the General Shareholders' Meeting, a director leaves before the completion of his or her term of office, the director should explain the reasons for this decision, or in the case of non-executive directors, their opinion of the reasons for cessation, in a letter addressed to all members of the Board of Directors.

And that, without prejudice to all this being reported in the annual corporate governance report, insofar as it is relevant to investors, the company must publish the cessation as quickly as possible, adequately referring to the reasons or circumstances adduced by the director.

Complies X Complies partially ☐ Explain ☐ Not applicable ☐

25. That the nomination committee should make sure that non-executive directors have sufficient time available in order to properly perform their duties.

And that the Board regulations establish the maximum number of company Boards on which directors may sit.

Complies X Complies partially ☐ Explain ☐

26. That the Board of Directors meet frequently enough to be able to effectively perform its duties, and at least eight times per year, following a schedule of dates and agendas established at the beginning of the year and allowing each director individually to propose other items that do not originally appear on the agenda.

Complies X Complies partially ☐ Explain ☐

27. That director absences occur only when absolutely necessary and be quantified in the annual corporate governance report. And when absences do occur, that the director appoint a proxy with instructions.

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Complies X Complies partially ☐ Explain ☐

28. That when directors or the secretary express concern regarding a proposal or, in the case of directors, regarding the direction in which the company is headed and said concerns are not resolved by the Board of Directors, such concerns should be included in the minutes at the request of the director expressing them.

Complies ☐ Complies partially ☐ Explain ☐ Not applicable X

29. That the company should establishes adequate means for directors to obtain appropriate advice in order to properly fulfil their duties including, should circumstances warrant, external advice at the company's expense.

Complies X Complies partially ☐ Explain ☐

30. That, without regard to the knowledge necessary for directors to complete their duties, companies make refresher courses available to them when circumstances make this advisable.

Complies X Explain ☐ Not applicable ☐

31. That the agenda for meetings should clearly indicate those matters on which the Board of Directors is to make a decision or adopt a resolution so that the directors may study or gather all relevant information ahead of time.

When, in exceptional circumstances, the chairman wishes to bring urgent matters for decision or resolution before the Board of Directors which do not appear on the agenda, prior express agreement of a majority of the directors shall be necessary, and said consent shall be duly recorded in the minutes.

Complies X Complies partially ☐ Explain ☐

32. That directors be periodically informed of changes in shareholding and of the opinions of significant shareholders, investors and rating agencies of the company and its group.

Complies X Complies partially ☐ Explain ☐

33. That the chairman, as the person responsible for the efficient workings of the Board of Directors, in addition to carrying out the duties assigned by law and the articles of association, should prepare and submit to the Board of Directors a schedule of dates and matters to be considered; organise and coordinate the periodic evaluation of the Board as well as, if applicable, the chief executive of the company, should be responsible for leading the Board and the effectiveness of its work; ensuring that sufficient time is devoted to considering strategic issues, and approve and supervise refresher courses for each director when circumstances make this advisable.

Complies X Complies partially ☐ Explain ☐

34. That when there is a coordinating director, the articles of association or Board regulations should confer upon him or her the following powers in addition to those conferred by law: to chair the Board of Directors in the absence of the chairman and deputy chairmen, should there be any; to reflect the concerns of non-executive directors; to liaise with investors and shareholders in order to understand their points of view and respond to their concerns, in particular as those concerns relate to corporate governance of the company; and to coordinate a succession plan for the chairman.

Complies X Complies partially ☐ Explain ☐ Not applicable ☐

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35. That the secretary of the Board of Directors should pay special attention to ensure that the activities and decisions of the Board of Directors take into account such recommendations regarding good governance contained in this Good Governance Code as may be applicable to the company.

Meets X Explain ☐

36. That the Board of Directors meet in plenary session once a year and adopt, where appropriate, an action plan to correct any deficiencies detected in the following:

a) The quality and efficiency of the Board of Directors' work.

b) The workings and composition of its committees.

c) Diversity in the composition and skills of the Board of Directors.

d) Performance of the chairman of the Board of Directors and of the chief executive officer of the company.

e) Performance and input of each director, paying special attention to those in charge of the various Board committees.

In order to perform its evaluation of the various committees, the Board of Directors will take a report from the committees themselves as a starting point and for the evaluation of the Board, a report from the nomination committee.

Every three years, the Board of Directors will rely for its evaluation upon the assistance of an external advisor, whose independence shall be verified by the nomination committee.

Business relationships between the external adviser or any member of the adviser's group and the company or any company within its group must be specified in the annual corporate governance report.

The process and the areas evaluated must be described in the annual corporate governance report.

Complies X Complies partially ☐ Explain ☐

37. That if there is an executive committee, it must contain at least two non-executive directors, at least one of whom must be independent, and its secretary must be the secretary of the Board.

Complies X Complies partially ☐ Explain ☐ Not applicable ☐

38. That the Board of Directors must always be aware of the matters discussed and decisions taken by the executive committee and that all members of the Board of Directors receive a copy of the minutes of meetings of the executive committee.

Complies X Complies partially ☐ Explain ☐ Not applicable ☐

39. That the members of the audit committee, in particular its chairman, be appointed in consideration of their knowledge and experience in accountancy, audit and risk management issues, both financial and non-financial.

Complies X Complies partially ☐ Explain ☐

40. That under the supervision of the audit committee, there should be a unit in charge of the internal audit function, which ensures that information and internal control

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systems operate correctly, and which reports to the non-executive chairman of the Board or of the audit committee.

Complies X Complies partially ☐ Explain ☐

41. That the person in charge of the unit performing the internal audit function should present an annual work plan to the audit committee, for approval by that committee or by the Board, reporting directly on its execution, including any incidents or limitations of scope, the results and monitoring of its recommendations, and present an activity report at the end of each year.

Complies X Complies partially ☐ Explain ☐ Not applicable ☐

42. That in addition to the provisions of applicable law, the audit committee should be responsible for the following:

1. With regard to information systems and internal control:

a) Supervising and evaluating the process of preparation and the completeness of the financial and non-financial information, as well as the control and management systems for financial and non-financial risk relating to the company and, if applicable, the group - including operational, technological, legal, social, environmental, political and reputational risk, or risk related to corruption - reviewing compliance with regulatory requirements, the appropriate delimitation of the scope of consolidation and the correct application of accounting criteria.

b) Ensuring the independence of the unit charged with the internal audit function; proposing the selection, appointment and dismissal of the head of internal audit; proposing the budget for this service; approving or proposing its orientation and annual work plans for approval by the Board, making sure that its activity is focused primarily on material risks (including reputational risk); receiving periodic information on its activities; and verifying that senior management takes into account the conclusions and recommendations of its reports.

c) Establishing and supervising a mechanism that allows employees and other persons related to the company, such as directors, shareholders, suppliers, contractors or subcontractors, to report any potentially serious irregularities, especially those of a financial or accounting nature, that they observe in the company or its group. This mechanism must guarantee confidentiality and in any case provide for cases in which the communications can be made anonymously, respecting the rights of the whistleblower and the person reported.

d) Generally ensuring that internal control policies and systems are effectively applied in practice.

2. With regard to the external auditor:

a) In the event that the external auditor resigns, examining the circumstances leading to such resignation.

b) Ensuring that the remuneration paid to the external auditor for its work does not compromise the quality of the work or the auditor's independence.

c) Making sure that the company informs the CNMV of the change of auditor, along with a statement on any differences that arose with the outgoing auditor and, if applicable, the contents thereof.

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d) **Ensuring that the external auditor holds an annual meeting with the Board of Directors in plenary session in order to make a report regarding the tasks performed and the development of the company's accounting situation and risks.**

e) **Ensuring that the company and the external auditor comply with applicable rules regarding the provision of services other than auditing, limits on the concentration of the auditor's business, and, in general, all other rules regarding auditors' independence.**

Complies X Complies partially ☐ Explain ☐

43. **That the audit committee be able to require the presence of any employee or manager of the company, even stipulating that he or she appear without the presence of any other member of management.**

Complies X Complies partially ☐ Explain ☐

44. **That the audit committee be kept abreast of any corporate and structural changes planned by the company in order to perform an analysis and draw up a prior report to the Board of Directors on the economic conditions and accounting implications and, in particular, any exchange ratio involved.**

Complies X Complies partially ☐ Explain ☐ Not applicable ☐

45. **That the risk management and control policy identify or determine, as a minimum:**

a) **The various types of financial and non-financial risks (including operational, technological, legal, social, environmental, political and reputational risks and risks relating to corruption) which the company faces, including among the financial or economic risks contingent liabilities and other off-balance sheet risks.**

b) **A risk control and management model based on different levels, which will include a specialised risk committee when sector regulations so require or the company considers it to be appropriate.**

c) **The level of risk that the company considers to be acceptable.**

d) **Measures in place to mitigate the impact of the risks identified in the event that they should materialise.**

e) **Internal control and information systems to be used in order to control and manage the aforementioned risks, including contingent liabilities or off-balance sheet risks.**

Complies X Complies partially ☐ Explain ☐

46. **That under the direct supervision of the audit committee or, if applicable, of a specialised committee of the Board of Directors, an internal risk control and management function should exist, performed by an internal unit or department of the company which is expressly charged with the following responsibilities:**

a) **Ensuring the proper functioning of the risk management and control systems and, in particular, that they adequately identify, manage and quantify all material risks affecting the company.**

b) **Actively participating in drawing up the risk strategy and in important decisions regarding risk management.**

c) **Ensuring that the risk management and control systems adequately mitigate risks as defined by the policy laid down by the Board of Directors.**

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Complies X Complies partially ☐ Explain ☐

47. That in designating the members of the nomination and remuneration committee – or of the nomination committee and the remuneration committee if they are separate – care be taken to ensure that they have the knowledge, aptitudes and experience appropriate to the functions that they are called upon to perform and that the majority of said members are independent directors.

Complies X Complies partially ☐ Explain ☐

48. That large-cap companies have separate nomination and remuneration committees.

Complies X Explain ☐ Not applicable ☐

49. That the nomination committee consult with the chairman of the Board of Directors and the chief executive of the company, especially in relation to matters concerning executive directors.

And that any director be able to ask the nomination committee to consider potential candidates that he or she considers suitable to fill a vacancy on the Board of Directors.

Complies X Complies partially ☐ Explain ☐

50. That the remuneration committee exercise its functions independently and that, in addition to the functions assigned to it by law, it should be responsible for the following:

a) Proposing the basic conditions of employment for senior management to the Board of Directors.

b) Verifying compliance with the company's remuneration policy.

c) Periodically reviewing the remuneration policy applied to directors and senior managers, including share-based remuneration systems and their application, as well as ensuring that their individual remuneration is proportional to that received by the company's other directors and senior managers.

d) Making sure that potential conflicts of interest do not undermine the independence of external advice given to the committee.

e) Verifying the information on remuneration of directors and senior managers contained in the various corporate documents, including the annual report on director remuneration.

Complies X Complies partially ☐ Explain ☐

51. That the remuneration committee should consult with the chairman and the chief executive of the company, especially on matters relating to executive directors and senior management.

Complies X Complies partially ☐ Explain ☐

52. That the rules regarding the composition and workings of the supervision and control committees should appear in the regulations of the Board of Directors and that they should be consistent with those applying to legally mandatory committees in accordance with the foregoing recommendations, including:

a) That they be composed exclusively of non-executive directors, with a majority of independent directors.

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b) That their chairpersons be independent directors.

c) That the Board of Directors select members of these committees taking into account their knowledge, skills and experience and the duties of each committee; discuss their proposals and reports; and require them to render account of their activities and of the work performed in the first plenary session of the Board of Directors held after each committee meeting.

d) That the committees be allowed to avail themselves of outside advice when they consider it necessary to perform their duties.

e) That their meetings be recorded and their minutes be made available to all directors.

Complies X Complies partially ☐ Explain ☐

53. That verification of compliance with the company's policies and rules on environmental, social and corporate governance matters, and with the internal codes of conduct be assigned to one or divided among more than one committee of the Board of Directors, which may be the audit committee, the nomination committee, a specialised committee on sustainability or corporate social responsibility or such other specialised committee as the Board of Directors, in the exercise of its powers of self-organisation, may have decided to create. And that such committee be composed exclusively of non-executive directors, with a majority of these being independent directors, and that the minimum functions indicated in the next recommendation be specifically assigned to it.

Complies X **Complies partially** ☐ **Explain** ☐

54. The minimum functions referred to in the foregoing recommendation are the following:

a) Monitoring of compliance with the company's internal codes of conduct and corporate governance rules, also ensuring that the corporate culture is aligned with its purpose and values.

b) Monitoring the application of the general policy on communication of economic and financial information, non-financial and corporate information and communication with shareholders and investors, proxy advisors and other stakeholders. The manner in which the entity communicates and handles relations with small and medium-sized shareholders must also be monitored.

c) The periodic evaluation and review of the company's corporate governance system, and environmental and social policy, with a view to ensuring that they fulfil their purposes of promoting the interests of society and take account, as appropriate, of the legitimate interests of other stakeholders.

d) Supervision of the company's environmental and social practices to ensure that they are in alignment with the established strategy and policy.

e) Supervision and evaluation of the way in which relations with the various stakeholders are handled.

Complies X Complies partially ☐ Explain ☐

55. That environmental and social sustainability policies identify and include at least the following:

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a) **The principles, commitments, objectives and strategy relating to shareholders, employees, clients, suppliers, social issues, the environment, diversity, tax responsibility, respect for human rights, and the prevention of corruption and other unlawful conduct.**

b) **Means or systems for monitoring compliance with these policies, their associated risks, and management.**

c) **Mechanisms for supervising non-financial risk, including that relating to ethical aspects and aspects of business conduct.**

d) **Channels of communication, participation and dialogue with stakeholders.**

e) **Responsible communication practices that impede the manipulation of data and protect integrity and honour.**

Complies X Complies partially ☐ Explain ☐

56. **That director remuneration be sufficient in order to attract and retain directors who meet the desired professional profile and to adequately compensate them for the dedication, qualifications and responsibility demanded of their posts, while not being so excessive as to compromise the independent judgement of non-executive directors.**

Complies X Explain ☐

57. **That only executive directors should receive variable remuneration linked to corporate results and personal performance, as well as remuneration in the form of shares, options or rights to shares or instruments referenced to the share price and long-term savings plans such as pension plans, retirement schemes or other provident schemes.**

Consideration may be given to delivering shares to non-executive directors as remuneration providing this is conditional upon their holding them until they cease to be directors. The foregoing shall not apply to shares that the director may need to sell in order to meet the costs related to their acquisition.

Complies X Complies partially ☐ Explain ☐

58. **That as regards variable remuneration, remuneration policies should incorporate the necessary limits and technical safeguards to ensure that such remuneration is in line with the professional performance of its beneficiaries and not based solely on general developments in the markets or in the sector in which the company operates, or other similar circumstances.**

And, in particular, that variable remuneration components:

a) **Are linked to pre-determined and measurable performance criteria and that such criteria take into account the risk incurred to achieve a given result.**

b) **Promote the sustainability of the company and include non-financial criteria that are geared towards creating long term value, such as compliance with the company's rules and internal operating procedures and with its risk management and control policies.**

c) **Are based on balancing the attainment of short-, medium- and long-term objectives, so as to allow remuneration of continuous performance over a period long enough to be able to assess its contribution to the sustainable creation of value, such that the elements used to measure performance are not associated only with one-off, occasional or extraordinary events.**

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Complies X Complies partially ☐ Explain ☐ Not applicable ☐

59. That the payment of variable remuneration components be subject to sufficient verification that previously established performance or other conditions have effectively been met. Entities must include in their annual report on director remuneration the criteria for the time required and methods used for this verification depending on the nature and characteristics of each variable component.

That, additionally, companies consider the inclusion of a reduction ('malus') clause for the deferral of the payment of a portion of variable remuneration components that would imply their total or partial loss if an event were to occur prior to the payment date that would make this advisable.

Complies X Complies partially ☐ Explain ☐ Not applicable ☐

60. That remuneration related to company results should take into account any reservations that might appear in the external auditor's report and that would diminish said results.

Complies X Complies partially ☐ Explain ☐ Not applicable ☐

61. That a material portion of executive directors' variable remuneration be linked to the delivery of shares or financial instruments referenced to the share price.

Complies X Complies partially ☐ Explain ☐ Not applicable ☐

62. That once shares or options or financial instruments have been allocated under remuneration schemes, executive directors be prohibited from transferring ownership or exercising options or rights until a term of at least three years has elapsed.

An exception is made in cases where the director has, at the time of the transfer or exercise of options or rights, a net economic exposure to changes in the share price for a market value equivalent to at least twice the amount of his or her fixed annual remuneration through the ownership of shares, options or other financial instruments.

The forgoing shall not apply to shares that the director may need to sell in order to meet the costs related to their acquisition or, following a favourable assessment by the nomination and remuneration committee, to deal with such extraordinary situations as may arise and so require.

Complies X Complies partially ☐ Explain ☐ Not applicable ☐

63. That contractual arrangements should include a clause allowing the company to demand reimbursement of the variable remuneration components in the event that payment was not in accordance with the performance conditions or when payment was made based on data subsequently shown to have been inaccurate.

Complies X Complies partially ☐ Explain ☐ Not applicable ☐

64. That payments for contract termination should not exceed an amount equivalent to two years of total annual remuneration and should not be paid until the company has been able to verify that the director has fulfilled all previously established criteria or conditions for payment.

For the purposes of this recommendation, payments for contractual termination will be considered to include any payments the accrual of which or the obligation to pay which arises as a consequence of or on the occasion of the termination of the

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contractual relationship between the director and the company, including amounts not previously vested of long-term savings schemes and amounts paid by virtue of post-contractual non-competition agreements.

Complies ☐ Complies partially X Explain ☐ Not applicable ☐

Contracts with executive directors and senior officers signed as from 2011 provide severance pay for contractual termination equal to a maximum of two times annual salary in the event of termination of their relationship with the Company, provided that termination of the relationship is not the result of a breach attributable thereto or solely due to a voluntary decision thereof. This is the case of the Business CEO.

The Company included guarantee clauses of up to five years in contracts with its key officers in the year 2000. Subsequently, in 2001, when the current chairman & CEO joined Iberdrola, he received the treatment in effect for such officers, in order to achieve an effective and sufficient level of loyalty. As chairman & CEO, he is currently entitled to three times his annual salary for this item, plus another two times annual salary for his non-compete commitment.

The Board of Directors has analysed this situation, the treatment of which is necessarily collective in nature. Any reduction in the salary multiples would carry high costs for the Company, for which reason the Board of Directors believes that it is most appropriate not to change the status quo. Any proposed reduction in the salary multiples would have a higher cost for the Company, as the amount of the contingency will gradually decrease due to the passage of time, resulting in payments far smaller than any possible reduction in the agreed severance payment, taking into account the average age of the affected group and the low likelihood of the guarantees being enforced. In this regard, it should be pointed out that the number of officers with a right to severance pay greater than two years continues to decrease without the execution of any guarantee clause. There were only 17 left at the close of financial year 2020.

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H FURTHER INFORMATION OF INTEREST

1. If there is any significant aspect regarding corporate governance in the company or other companies in the group that has not been included in other sections of this report, but which it is necessary to include in order to provide a more comprehensive and reasoned picture of the structure and governance practices in the company or its group, describe them briefly below.

2. This section may also be used to provide any other information, explanation or clarification relating to previous sections of the report, so long as it is relevant and not repetitive.

   Specifically, indicate whether the company is subject to any corporate governance legislation other than that of Spain and, if so, include any information required under this legislation that differs from the data required in this report.

3. The company may also indicate whether it has voluntarily subscribed to other ethical or best practice codes, whether international, sector-based, or other. In such case, name the code in question and the date on which the company subscribed to it. Specific mention must be made as to whether the company adheres to the Code of Good Tax Practices of 20 July 2010.

   On 20 July 2010 the Company adhered to the Code of Good Tax Practices approved by the full Forum of Large Businesses (*Foro de Grandes Empresas*) established on 10 June 2009 at the behest of the National Tax Administration Agency (*Agencia Estatal de la Administración Tributaria*).

   Pursuant to the provisions of Sections 1 and 2 of the Code of Good Tax Practices and Sections 3 and 4 of the Corporate Tax Policy, the Company reports that it has complied with the text of said Code as from the time of approval thereof.

   In particular, it is reported that during financial year 2020, the Company's tax director appeared before Iberdrola's Audit and Risk Supervision Committee on 24 February and 22 February to report on, among other issues, the level of compliance with the Corporate Tax Policy, which includes the good tax practices contained in said Code, all of which has been reported to the Board of Directors.

   The annex contains a description of the attendance of each and every one of the directors at the meetings of the Board of Directors and its committees during financial year 2020. Proxies granted with specific voting instructions are considered to be attendances.

This Annual Corporate Governance Report was approved by the Board of Directors of the company at the meeting held on 23/02/2021.

Indicate whether any director voted against or abstained from approving this Report.

Yes ☐ No X

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Annex to ACGR 2020:

SECTION C.1.26

Below is the data on attendance of each and every one of the directors at the meetings of the Board of Directors and its committees during financial year 2020. Proxies granted with specific voting instructions are considered to be attendances.

Directors	Board	Committees				
		EC	ARSC	AC	RC	SDC
MR JOSÉ IGNACIO SÁNCHEZ GALÁN	9/9	16/16				
MR JUAN MANUEL GONZÁLEZ SERNA	9/9	12/12			11/11	
MR IÑIGO VÍCTOR DE ORIOL IBARRA	9/9			7/7	6/6	6/6
MS SAMANTHA BARBER	9/9	16/16				11/11
MS MARÍA HELENA ANTOLÍN RAYBAUD	9/9			8/8		
MR JOSÉ WALFREDO FERNÁNDEZ	9/9		11/11			
MR MANUEL MOREU MUNAIZ	9/9	16/16			11/11	
MR XABIER SAGREDO ORMAZA	9/9		11/11			
MR FRANCISCO MARTÍNEZ CÓRCOLES	9/9					
MR ANTHONY L. GARDNER	9/9			8/8		
MS SARA DE LA RICA GOIRICELAYA	9/9					11/11
MS NICOLA MARY BREWER	6/6					5/5
MS REGINA HELENA JORGE NUNES	6/6		7/7			
MR ÁNGEL JESÚS ACEBES PANIAGUA	1/1	3/3		1/1		
MS INÉS MACHO STADLER	3/3	4/4			5/5	
MS GEORGINA KESSEL MARTÍNEZ	8/8		9/9			
MS DENISE MARY HOLT	3/3		4/4			

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Notes:
The denominator indicates the number of meetings held during the period of the year in which the director served as such or as a member of the respective committee.
EC: Executive Committee.
ARSC: Audit and Risk Supervision Committee.
AC: Appointments Committee.
RC: Remuneration Committee.
SDC: Sustainable Development Committee.

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SECTION E.3.

ACTIONS OF IBERDROLA, S.A. AND IBERDROLA RENOVABLES ENERGÍA, S.A.U. RELATING TO THE HIRING OF CLUB EXCLUSIVO DE NEGOCIOS Y TRANSACCIONES, S.L. (CENYT)

As reported by the Company, since the day following the appearance of the first news reports in certain media regarding the hiring of "Club Exclusivo de Negocios y Transacciones, S.L." ("**CENYT**") during the month of June 2018, Iberdrola, S.A. (Iberdrola) has conducted various investigations accordance with the provisions of its Governance and Sustainability System and its Compliance System.

Both systems define and describe the powers assigned to the various companies of the group and their corresponding governance bodies, and particularly the Audit and Risk Supervision Committee, the Sustainable Development Committee, the Executive Committee and the Board of Directors of Iberdrola, and the Board of Directors of Iberdrola Renovables, S.A.U. (Iberdrola Renovables), in relation to the facts referred to in said news reports.

The content of the meetings of Iberdrola's governance bodies reflects the impetus given to all of the investigations performed, the supervision of the performance thereof without any limitation in scope, and the guarantee that all internal areas responsible for performing them had the required human and material resources at all times and acted free of any type of internal or external interference.

The internal investigations performed at both companies covered all available documentary evidence, in whatever media they may have been stored. However, it should be noted that in certain cases, whether due to the nature of the services provided, the time since they were provided (which well exceeded the six-year period legally provided for maintaining business documentation) or the lack of cooperation of certain former employees, complete documentation was not available.

In this regard, it should be noted that Iberdrola's Compliance Unit has been advised by "Pricewaterhousecoopers Asesores de Negocio, S.L." ("PwC"), which performed an independent investigation, with neither supervision nor control of internal bodies or outside lawyers, and which made a commitment to make its findings available to the judicial authorities, whatever those findings may be. PwC dedicated more than 5,000 hours of work to this investigation, processing 5.14 TB of information (and reviewing more than 300,000 files and more than 3,000 invoices.

After the aforementioned investigations and based on the results of PwC's collaboration on the terms and with the intensity described above, no payments to companies directly or indirectly linked to Mr Villarejo have been identified other than those corresponding to the 17 invoices issued by CENYT to the group: 14 to Iberdrola, between 2004 and 2009, in the total amount of 1,017,824.14 euros, and 3 to Iberdrola Renovables, issued between 2012 and 2017 (in the total amount of 114,200.00 euros).

In addition, all of the payments made to CENYT correspond to invoices received for which the information has been entered into the Iberdrola group's internal records, as the Management System (SAP) does not allow for the making of payments that do not correspond to the entry of the respective invoice. Specifically, the payments to CENYT were made in accordance with the internal procedures at all times in effect within the group, which require that the service be requested and the corresponding invoice be approved by a person duly authorised to do so by reason of the subject matter, and approved by a controller other than the requesting party.

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In any case, no evidence has been identified that the services referred to in the invoices reviewed were not provided, nor has there been an identification of evidence of any illegal conduct or conduct contrary to the rules that make up the Governance and Sustainability System in relation to these engagements.

The Company has also been actively cooperating with Central Investigation Court number 6, which is handling the judicial investigation of these facts, although neither the Company itself nor any other company of its group is under investigation or otherwise a party to the proceedings. However, three former executives who have left Iberdrola and two executives who continue to provide their services to Iberdrola are under investigation in the aforementioned judicial proceedings.

In this regard, it should be noted Iberdrola's Compliance Unit has subsequently been increasing the initial scope of the aforementioned investigations following the lifting of the secrecy of the aforementioned legal proceedings, which was approved on appeal by the Criminal Division of the National High Court (*Audiencia Nacional*) on 20 July, as more information has become available on the facts investigated in said proceedings due to publication in various media.

This information has allowed for expansion of the already extensive search parameters applied since the start of the investigations into the Company's records, systems and equipment, as well as the number of people affected by the investigation.

In particular, the Compliance Unit has reviewed the scope of the commercial relationship (including the corresponding hiring, accounting and payment processes) of Iberdrola and the other companies of the Group with all of the companies that have provided them with security and intelligence services during the years related to the facts investigated by Central Preliminary Examining Court No. 6, including Kroll Associates Iberia, S.L., K2 Intelligence Iberia, S.L. (the hiring of both companies having appeared in the media) and a number of other entities related to the latter and, based on the information available thereto, no evidence has been identified of any illegal conduct or conduct contrary to the rules that make up the Governance and Sustainability System in connection with such engagements.

Therefore, as of the date hereof, based on available internal information as well as the external events of which the Company has become aware, the facts referred to above cannot be considered legally relevant for the Company, such that the impact thereof, if any, would be limited to the reputational area.

Along these lines, Iberdrola's Sustainable Development Committee and Board of Directors have been monitoring changes in corporate reputation and no impairment in the general reputation of the group or negative impact in relation to its professionals, customers, shareholders or suppliers has been detected. The aforementioned news reports have also not had a negative effect on the group's financial performance.

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PROPOSED DISTRIBUTION OF PROFIT

PROPOSED DISTRIBUTION OF PROFIT

2020

Euros	2020
Basis for distribution:	
Prior years' profit and loss	11,018,466,080.53
Profit for financial year 2020	2,291,562,828.64
Total	**13,310,028,909.17**
Distribution:	
To legal reserve	–
To dividends	Amount to be determined resulting from adding: (a) the Interim Dividend and (b) the result of multiplying the Final Dividend by the total number of shares that the holders have decided to receive as cash remuneration under the framework of the first-time implementation of the *Iberdrola Flexible Remuneration* optional dividend system for 2021.
To retained earnings	Amount to be determined resulting from deducting the amounts earmarked for dividends from the total basis for distribution.
Total	**13,310,028,909.17**

Subject to shareholder approval at the General Shareholders' Meeting of the resolutions relating to the *Iberdrola Flexible Remuneration* optional dividend system for 2021, the amount of the *Final Dividend* is estimated to be the gross amount of EUR 0.252 per share. The final amount of the *Final Dividend* will be disclosed as soon as the Board of Directors (or the body to which it delegates this power) makes its decision in accordance with the terms of the dividend distribution and capital increase resolution that the Board of Directors will propose to the shareholders at the General Shareholders' Meeting in relation to the *Iberdrola Flexible Remuneration* optional dividend system for 2021. Additionally, once the first implementation of the *Iberdrola Flexible Remuneration* optional dividend system for 2021 is completed, the Board of Directors (with express authority to sub-delegate) will specify the aforementioned distribution proposal and determine the final amount of the dividend and the amount to be allocated to retained earnings

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Annual Financial Report

Statement of responsibility

2020

IBERDROLA

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ANNUAL FINANCIAL REPORT STATEMENT OF RESPONSIBILITY 2020

The members of the Board of Directors of IBERDROLA, S.A. state that, to the best of their knowledge, the individual annual accounts of IBERDROLA, S.A. (balance sheet, profit and loss statement, statement of change in shareholders' equity, statement of cash flows and notes), as well as the consolidated annual accounts of IBERDROLA, S.A. and its subsidiaries (consolidated statement of financial position, consolidated income statement, consolidated statement of comprehensive income, consolidated statement of changes in equity, consolidated statement of cash flows and consolidated notes) for the fiscal year ended on December 31, 2020, issued by the Board of Directors at its meeting held on February 23, 2021, and prepared in accordance with the applicable accounting standards, present a fair view of the assets, financial condition and income of IBERDROLA, S.A. as well as of its subsidiaries included within its scope of consolidation, taken as a whole, and that the management reports supplementing the individual and consolidated annual accounts and the *Statement of non-financial information. Sustainability report* contain a fair assessment of the corporate performance and of the position of IBERDROLA, S.A. and of its subsidiaries included within its scope of consolidation, taken as a whole, as well as a description of the principal risks and uncertainties facing them.

Bilbao, February 23, 2021

Mr José Ignacio Sánchez Galán
Chair & Chief Executive Officer

Mr Juan Manuel González Serna
Vice-chair and Lead independent director

Mr Íñigo Víctor de Oriol Ibarra
Director

Ms Samantha Barber
Director

Ms María Helena Antolín Raybaud
Director

Mr José Walfredo Fernández
Director

Mr Manuel Moreu Munaiz
Director

Mr Xabier Sagredo Ormaza
Director

Mr Francisco Martínez Córcoles
Business CEO

Mr Anthony Luzzato Gardner
Director

Ms Sara de la Rica Goiricelaya
Director

Ms Nicola Mary Brewer
Director

Ms Regina Helena Jorge Nunes
Director

Mr Ángel Jesús Acebes Paniagua
Director

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Certificate drafted by the secretary of the Board of Directors to put on record that the directors Ms Nicola Mary Brewer, Ms Samantha Barber, Ms Regina Helena Jorge Nunes, Mr Anthony Luzzato Gardner and Mr José Walfredo Fernández, do not sign by reason of them attending to the meeting using remote communication systems, with the director Mr Juan Manuel González Serna signing in lieu of the directors Ms Nicola Mary Brewer and Ms Samantha Barber, the director Ms María Helena Antolín Raybaud signing in lieu of the directors Ms Regina Helena Jorge Nunes and Mr Anthony Luzzato Gardner and the director Mr Xabier Sagredo Ormaza signing in lieu of the director Mr José Walfredo Fernández, all following the express instructions issued for such purposes by the referred directors, who attended the meeting using remote communication systems.

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ATTACHMENT TO SECTION 5

Attachment 5.14-1: [redacted]

REDACTED

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ATTACHMENT TO SECTION 5

Attachment 5.15-1: Avangrid Renewables Affiliate Companies 2021

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AVANGRID, INC. AND SUBSIDIARIES 2021

Entity Name	Owner	Ownership
Avangrid, Inc.		
Aeolus II Upwind LLC	Avangrid Renewables, LLC	50%
Aeolus Wind Power II LLC	Aeolus II Upwind LLC	25%
Aeolus Wind Power II LLC	PPM Wind Energy LLC	75%
Aeolus Wind Power III LLC	PPM Wind Energy LLC	100%
Aeolus Wind Power IV LLC	PPM Wind Energy LLC	100%
Aeolus Wind Power VII LLC	Avangrid Renewables, LLC	100%
Atlantic Renewable Energy Corporation	Avangrid Renewables, LLC	100%
Atlantic Renewable Projects II LLC	Avangrid Renewables, LLC	100%
Atlantic Renewable Projects LLC	Avangrid Renewables, LLC	100%
Atlantic Wind LLC	Avangrid Renewables, LLC	100%
Aurora Solar LLC	Avangrid Renewables, LLC	100%
Avangrid Arizona Renewables, LLC	Avangrid Renewables, LLC	100%
Avangrid Enterprises, Inc.	Avangrid Networks, Inc.	100%
Avangrid Logistic Services, LLC	Avangrid Renewables, LLC	100%
Avangrid Management Company, LLC	Avangrid, Inc.	100%
Avangrid Networks New York TransCo, LLC	Avangred Networks, Inc.	100%
Avangrid Networks, Inc.	Avangrid, Inc.	100%
Avangrid Renewables Holdings, Inc.	Avangrid, Inc.	100%
Avangrid Renewables Holdings, Inc.	Avangrid, Inc.	100%
Avangrid Renewables, LLC	Avangrid Renewables Holdings, Inc.	100%
Avangrid Service Company	Avangrid Networks, Inc.	100%
Avangrid Solutions, Inc.	Avangrid Management Company, LLC	100%
Avangrid Texas Renewables, LLC	Avangrid Renewables, LLC	100%
Avangrid Vineyard Wind Holdings, LLC	Avangrid Renewables, LLC	100%
Avangrid Vineyard Wind, LLC	Avangrid Vineyard Wind Holdings, LLC	100%
Bakeoven Solar, LLC	Avangrid Renewables, LLC	100%
Barton Windpower LLC	Avangrid Renewables, LLC	100%
Berkshire Energy Resources	UIL Holdings Corporation	100%
Big Horn II Wind Project LLC	Avangrid Renewables, LLC	100%
Big Horn Wind Project LLC	Avangrid Renewables, LLC	100%
Blue Creek Wind Farm LLC	Avangrid Renewables, LLC	100%
Brilliant Light Power, Inc.	Scottishpower Group Holdings Company	0.5%
Buffalo Ridge I LLC	Avangrid Renewables, LLC	100%
Buffalo Ridge II LLC	Avangrid Renewables, LLC	100%
Camino Solar, LLC	Avangrid Renewables, LLC	100%
Casselman Windpower LLC	Avangrid Renewables, LLC	100%
Cayuga Energy, Inc.	Avangrid Management Company, LLC	100%

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Central Maine Power Company	CMP Group, Inc.	100%
Chester SVC Partnership	NORVARCO	50%
Clean Energy Matters, LLC	Avangrid Management Company, LLC	100%
CMP Group, Inc.	Avangrid Networks, Inc.	100%
CNE Enegy Services Group, LLC	Avangrid Management Company, LLC	100%
CNE Peaking, LLC	United Resources, Inc.	100%
Colorado Green Holdings, LLC	Colorado Wind Ventures, LLC	100%
Colorado Wind Ventures, LLC	PPM Colorado Wind Ventures, Inc.	100%
Connecticut Energy Corporation	UIL Holdings Corporation	100%
Connecticut Natural Gas Corporation	CTG Resources, Inc.	100%
Connecticut Yankee Atomic Power Company	Central Maine Power Company	6.00%
Connecticut Yankee Atomic Power Company	The United Illuminating Company	9.50%
Coyote Ridge Wind, LLC	Avangrid Renewables, LLC	20%
CTG Resources, Inc.	UIL Holdings Corporation	100%
Daybreak Solar, LLC	Avangrid Renewables, LLC	100%
Deer River Wind, LLC	Atlantic Wind LLC	100%
Deerfield Wind, LLC	Avangrid Renewables, LLC	100%
Desert Wind Farm, LLC	Avangrid Renewables, LLC	100%
Dillon Wind LLC	Avangrid Renewables, LLC	100%
El Cabo Partners LLC	Avangrid Renewables, LLC	100%
El Cabo Wind Holdings, LLC	El Cabo Wind LLC	100%
El Cabo Wind LLC	El Cabo Partners LLC	100%
Elk River Windfarm, LLC	Aeolus Wind Power II LLC	100%
Elk River Windfarm, LLC	Aeolus Wind Power II LLC	100%
Elm Creek Wind II LLC	Avangrid Renewables, LLC	100%
Elm Creek Wind, LLC	Avangrid Renewables, LLC	100%
Farmers City Wind, LLC	Avangrid Renewables, LLC	100%
Flat Rock Windpower II LLC	Atlantic Renewable Projects II LLC	50%
Flat Rock Windpower LLC	Atlantic Renewable Projects LLC	50%
Flying Cloud Power Partners, LLC	Avangrid Renewables, LLC	100%
Flying Cow Wind, LLC	Avangrid Renewables, LLC	100%
Fountain Wind LLC	Avangrid Renewables, LLC	100%
GEC Holding, LLC	The United Illuminating Company	50%
GenCon Devon, LLC	GenCon Energy, LLC	50%
GenCon Energy, LLC	GEC Holding, LLC	50%
GenCon Middletown, LLC	GenCon Energy, LLC	50%
Golden Hills Wind Farm LLC	Avangrid Renewables, LLC	100%
Goodland Wind, LLC	Avangrid Renewables, LLC	100%
Great Bear Linka, LLC	Great Bear Solar, LLC	100%
Great Bear Solar, LLC	Avangrid Renewables, LLC	100%
Groton Wind, LLC	Avangrid Renewables, LLC	100%
Hardscrabble Wind Power LLC	Avangrid Renewables, LLC	100%
Hay Canyon Wind LLC	Avangrid Renewables, LLC	100%
Heartland Wind LLC	Avangrid Renewables, LLC	100%

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Helix Wind Power Facility, LLC	Avangrid Renewables, LLC	100%
Imperial Wind, LLC	Avangrid Renewables, LLC	100%
Juniper Canyon Wind Power II LLC	Avangrid Renewables, LLC	100%
Juniper Canyon Wind Power LLC	Avangrid Renewables, LLC	100%
Karankawa Wind, LLC	Aeolus Wind Power VII LLC	100%
Kitty Hawk Wind, LLC	Avangrid Renewables, LLC	100%
Klamath Energy LLC	Avangrid Renewables, LLC	100%
Klamath Generation LLC	Avangrid Renewables, LLC	100%
Klondike Wind Power II LLC	Avangrid Renewables, LLC	100%
Klondike Wind Power III LLC	Avangrid Renewables, LLC	100%
Klondike Wind Power LLC	Avangrid Renewables, LLC	100%
La Joya Bond, LLC	La Joya Wind, LLC	100%
La Joya Wind, LLC	Avangrid Renewables, LLC	100%
Lakeview Cogeneration LLC	Avangrid Renewables, LLC	100%
Leaning Juniper Wind Power II, LLC	Avangrid Renewables, LLC	100%
Leipsic Wind LLC	Avangrid Renewables, LLC	100%
Lempster Wind, LLC	Avangrid Renewables, LLC	100%
Locust Ridge II, LLC	Avangrid Renewables, LLC	100%
Locust Ridge Wind Farm, LLC	Avangrid Renewables, LLC	100%
Loma Vista, LLC	Avangrid Renewables, LLC	100%
Loowit Battery Storage, LLC	Avangrid Renewables, LLC	100%
Lund Hill Solar, LLC	Avangrid Renewables, LLC	100%
Maine Electric Power Company, Inc.	Central Maine Power Company	78.28%
Maine Natural Gas Corporation	Avangrid Networks, Inc.	100%
Maine Yankee Atomic Power Company	Central Maine Power Company	38%
MaineCom Services	CMP Group, Inc.	100%
Manzana Power Services, Inc.	Avangrid Renewables, LLC	100%
Manzana Wind LLC	Avangrid Renewables, LLC	100%
Maupin Solar, LLC	Avangrid Renewables, LLC	100%
Midland Wind, LLC	Avangrid Renewables, LLC	100%
Minndakota Wind, LLC	Avangrid Renewables, LLC	100%
Mohawk Solar LLC	Avangrid Renewables, LLC	100%
Montague Solar, LLC	Avangrid Renewables, LLC	100%
Montague Wind Power Facility, LLC	Aeolus Wind Power VII LLC	100%
Moraine Wind II LLC	Avangrid Renewables, LLC	100%
Moraine Wind LLC	Avangrid Renewables, LLC	100%
Mount Pleasant Wind, LLC	Avangrid Renewables, LLC	100%
Mountain View Power Partners III, LLC	Aeolus Wind Power VII LLC	100%
NECEC Transmission, LLC	Avangrid Networks, Inc.	100%
New England Wind, LLC	Avangrid Renewables, LLC	100%
New Harvest Wind Project LLC	Avangrid Renewables, LLC	100%
New York State Electric & Gas Corporation	RGS Energy Group, Inc.	100%
New York TransCo, LLC	Avangrid Networks New York TransCo, LLC	19.97%

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NM Green Holdings, Inc.	Avangrid, Inc.	100%
Northern Iowa Windpower II LLC	Avangrid Renewables, LLC	100%
NORVARCO	Central Maine Power Company	100%
Nth Power Technologies Fund I, LP	CNE Energy Services Group, LLC	7.90%
Oregon Trail Solar, LLC	Avangrid Renewables, LLC	100%
Otter Creek Wind Farm LLC	Aeolus Wind Power VII LLC	100%
Pacific Harbor Capital, Inc.	Scottishpower Financial Services, Inc.	100%
Pacific Solar Investments, Inc.	Avangrid Renewables, LLC	100%
Pacific Wind Development LLC	Avangrid Renewables, LLC	100%
Patriot Wind Farm, LLC	Patriot Wind TE Holdco LLC	100%
Patriot Wind Holdings LLC	Avangrid Renewables, LLC	100%
Patriot Wind TE Holdco LLC	Patriot Wind Holdings LLC	100%
Pebble Springs Wind LLC	Avangrid Renewables, LLC	100%
Penascal II Wind Project LLC	Avangrid Renewables, LLC	100%
Phoenix Wind Power LLC	Avangrid Renewables, LLC	100%
Poseidon Solar, LLC	Avangrid Renewables, LLC	50%
Poseidon Wind, LLC	Avangrid Renewables, LLC	50%
Powell Creek Solar, LLC	Avangrid Renewables, LLC	100%
PPM Colorado Wind Ventures, Inc.	Avangrid Renewables, LLC	100%
PPM Roaring Brook, LLC	Avangrid Renewables, LLC	100%
PPM Technical Services, Inc.	Avangrid Renewables, LLC	100%
PPM Wind Energy LLC	Avangrid Renewables, LLC	100%
Providence Heights Wind, LLC	Avangrid Renewables, LLC	100%
RGS Energy Group, Inc.	Avangrid Networks, Inc.	100%
Rochester Gas and Electric Corporation	RGS Energy Group, Inc.	100%
Rugby Wind LLC	Avangrid Renewables, LLC	100%
San Luis Solar LLC	Avangrid Renewables, LLC	100%
Scottishpower Financial Services, Inc.	Scottishpower Group Holdings Company	100%
Scottishpower Group Holdings Company	Avangrid Renewables Holdings, Inc.	100%
Scottishpower International Group Holdings Company	Scottishpower Group Holdings Company	100%
Shiloh I Wind Project LLC	Aeolus Wind Power II LLC	100%
Shiloh I Wind Project LLC	Aeolus Wind Power II LLC	100%
Solar Star Oregon II, LLC	Avangrid Renewables, LLC	100%
South Chestnut LLC	Avangrid Renewables, LLC	100%
South Glen Falls Energy, LLC	Cayuga Energy, Inc.	85%
Star Point Wind Project LLC	Avangrid Renewables, LLC	100%
Streator Deer Run Wind Farm LLC	Avangrid Renewables, LLC	100%
Streator-Cayuga Ridge Wind Power LLC	Avangrid Renewables, LLC	100%
Sunset Solar, LLC	Avangrid Renewables, LLC	100%
Tatanka Ridge Wind, LLC	Avangrid Renewables, LLC	15%
TEN Transmission Company	Avangrid Management Company, LLC	100%
The Berkshire Gas Company	Berkshire Energy Resources	100%

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The Southern Connecticut Gas Company	Connecticut Energy Corporation	100%
The Union Water-Power Company	CMP Group, Inc.	100%
The United Illuminating Company	UIL Holdings Corporation	100%
Total Peaking Services, LLC	United Resources, Inc.	100%
Trimont Wind I LLC	Avangrid Renewables, LLC	100%
Tule Wind LLC	Avangrid Renewables, LLC	100%
Twin Buttes Wind II LLC	Avangrid Renewables, LLC	100%
Twin Buttes Wind LLC	Avangrid Renewables, LLC	100%
UIL Distributed Resources, LLC	United Resources, Inc.	100%
UIL Group, LLC	Avangrid Networks, Inc.	100%
UIL Holdings Corporation	UIL Group, LLC	100%
United Resources, Inc.	UIL Holdings Corporation	100%
Vineyard Wind LLC	Avangrid Renewables, LLC	50%
West Valley Leasing Company, LLC	Avangrid Renewables, LLC	100%
Wild Grains Solar, LLC	Avangrid Renewables, LLC	100%
Winnebago Windpower II LLC	Avangrid Renewables, LLC	100%
Winnebago Windpower, LLC	Avangrid Renewables, LLC	100%
Wy'East Solar, LLC	Avangrid Renewables, LLC	100%
Yankee Atomic Electric Company	Central Maine Power Company	9.50%

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ATTACHMENT TO SECTION 5

Attachment 5.15-2: Iberdrola Affiliate Companies 2021

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IBERDROLA, S.A. GROUP COMPANIES, JOINTLY CONTROLLED COMPANIES AND ASSOCIATED COMPANIES OF THE IBERDROLA, S.A. GROUP (NOT INCLUDING AVANGRID, INC. AND ITS SUBSIDIARIES) Q1 2021

Company	Direct Parent
Informacion y Coordinacion de Obras, A.I.E. (INKOLAN)	I-DE REDES ELÉCTRICAS INTELIGENTES, S.A.U.
Oficina de Coordinacion de Obras de Valencia A.I.E. (OCOVAL)	I-DE REDES ELÉCTRICAS INTELIGENTES, S.A.U.
Iberdrola Clientes, S.A.U.	Iberdrola Clientes Espana, S.A.U.
Iberdrola Generacion Temica, S.A.U.	Iberdrola Clientes Espana, S.A.U.
MIBGas, SA	Iberdrola Clientes Espana, S.A.U.
OMIP SGPS, S.A.	Iberdrola Clientes Espana, S.A.U.
Operator Mercado Iberico Polo Espanol, S.A. (OMEL)	Iberdrola Clientes Espana, S.A.U.
Aerodis Herbitzheim, S.A.S.	Alto Power, GmbH
Aerodis Les Chaumes, S.A.R.L.	Alto Power, GmbH
Aerodis Pays De Boussac, S.A.R.L.	Alto Power, GmbH
Eolien La Croix Didier, S.A.R.L.	Alto Power, GmbH
Eolien La Piece Du Roi, S.A.R.L.	Alto Power, GmbH
Sepe De Plemy, S.A.S.	Alto Power, GmbH
Alto Power Gmbh France, S.A.R.L.	Alto Power, S.A.S.
Alto Power, GmbH	Alto Power, S.A.S.
D'orvilliers, S.A.R.L.	Alto Power, S.A.S.
Ener Du Champs Des Sourerettes, S.A.R.L.	Alto Power, S.A.S.
Eolien Le Flond D'etre, S.A.R.L.	Alto Power, S.A.S.
Eolien Le Florembeau, S.A.R.L	Alto Power, S.A.S.
Eolien Les Neufs Champs, S.A.S.	Alto Power, S.A.S.
Heurtebise, S.A.R.L.	Alto Power, S.A.S.
ANSELMO LEON-DISTRIBUCION SL (90719)	Anselmo Leon, S.A.U.
ELECTRO DISTRIBUIDORA CASTELLANO LEONESA SA (63377)	Anselmo Leon, S.A.U.
Norte Energia, S.A.	Belo Monte Participacoes, S.A.
BWF Finance PTY, Ltd	Bodangora Wind Farm PTY, Ltd
Bodangora Wind Farm PTY, Ltd	BWF Holdings PTY, Ltd
PPC Renewables Rokas, S.A.	C Rokas Industrial Commercial Company, S.A.
ROKAS AEOLIKI CYPRUS LIMITED (73340)	C Rokas Industrial Commercial Company, S.A.
ROKAS AEOLIKI THRAKI III S.A. (91265)	C Rokas Industrial Commercial Company, S.A.
ROKAS CONSTRUCTIONS S.A. (73342)	C Rokas Industrial Commercial Company, S.A.
Rokas Hidroelectric, S.A.	C Rokas Industrial Commercial Company, S.A.
Thaleia Energeiaki Monoprosopi ikei, SA	C Rokas Industrial Commercial Company, S.A.
Santana 1 Energia Renovavel, S.A.	Calango 6 Energia Renovavel S.A.
Santana 2 Energia Renovavel, S.A.	Calango 6 Energia Renovavel S.A.
Capital Wind Far (BB) Trust	Capital Wind Farm Holdings PTY, Ltd.

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CS CWF, Trust	Capital Wind Farm Holdings PTY, Ltd.
Infigen Energy T Services PTY, LTD	Capital Wind Farm Holdings PTY, Ltd.
ANSELMO LEON-HIDRAULICA S.L. (63355)	Ciener, S.A.U.
MINICENTRALES DEL TAJO SA (73318)	Ciener, S.A.U.
E-Ventures Capital Internet, S.A.	Corporacion IBV Participanciones Empresariales, S.A.U.
Tecnologia Aplicada en Procedimientos Empresariales, S.L. (TAPES)	Corporacion IBV Participanciones Empresariales, S.A.U.
Renewable Power Ventures PTY, Ltd.	CS CWF, Trust
ELECTRICA CONQUENSE DISTRIBUCION S.A. (63373)	Electrica Conquense, S.A.
Enerbrasil-Energias Renovaveis do Brasil	Elektro Renovaveis do Brasil, S.A.
Forca Eolica do Brasil 1, S.A.	Elektro Renovaveis do Brasil, S.A.
Forca Eolica do Brasil 2, S.A.	Elektro Renovaveis do Brasil, S.A.
Neoenergia Renovaveis S.A.	Elektro Renovaveis do Brasil, S.A.
Belinchon Renovables, S.L.	Energias Renovables De Circe, S.L.
Servicios Industriales y Administrativos Noreste	Enertek, S.A. de C.V. (63394)
Aixeidar, S.A.	Eolicas de Euskadi, S.A.U.
Ekain Fotovoltaica, AIE	Eolicas de Euskadi, S.A.U.
INVERSIONES FINANCIERAS PERSEO S.L. (63461)	Eolicas de Euskadi, S.A.U.
Gestion Unificada De Proyectos	E-Ventures Capital Internet, SA
Arizona 1 energia Renovavel, S.A.	FE Participacoes, S.A.
Caetite 3 Energia Renovavel, S.A.	FE Participacoes, S.A.
Calango 2 Energia Renovavel, S.A.	FE Participacoes, S.A.
Calango 3 Energia Renovavel S.A.	FE Participacoes, S.A.
Mel 2 Energia Renovavel, S.A.	FE Participacoes, S.A.
Fincalia Agropecuaria XXI, S.L.U.	FINCALIA AGROPECUARIA, S.A
Caetite 1 Energia Renovavel, S.A.	Forca Eolica do Brasil 1, S.A.
Caetite 2 Energia Renovavel, S.A.	Forca Eolica do Brasil 1, S.A.
Calango 1 Energia Renovavel, S.A.	Forca Eolica do Brasil 1, S.A.
Calango 4 Energia Renovavel S.A.	Forca Eolica do Brasil 1, S.A.
Calango 5 Energia Renovavel S.A.	Forca Eolica do Brasil 1, S.A.
FE Participacoes, S.A.	Forca Eolica do Brasil 2, S.A.
Energetica Corumba III, S.A.	Geracio CIII, S.A.
HIPSA	Gestion Unificada De Proyectos, S.A.
Aerodis Bussiere, S.A.S.	Heurtebise, S.A.R.L.
Rocher De Mementu, S.A.S.	Heurtebise, S.A.R.L.
Sepe Aeerodis Chambonchard, S.A.S.	Heurtebise, S.A.R.L.
Sepe De Beauchamps, S.A.S.	Heurtebise, S.A.R.L.
Sepe De Bougueneuf, S.A.S.	Heurtebise, S.A.R.L.
Sepe De Plouguenast Langast, S.A.S	Heurtebise, S.A.R.L.
Sepe De Sevigny, S.A.S.	Heurtebise, S.A.R.L.

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Sepe De waleppe, S.A.S.	Heurtebise, S.A.R.L.
Sepe Les Coutures, S.A.S.	Heurtebise, S.A.R.L.
Iberdrola Mexico, S.A. de C.V. (63442)	Hidrola I, S.L.
Iberdrola Australia Smithfield Holdings PTY, Ltd	Iberdrola Australia (NSW) Power Holdings PTY, Ltd
Iberdrola Australia SAGT PTY, Ltd	Iberdrola Australia (SA) Power Holdings PTY, Ltd
Infigen Energy US Partnership	Iberdrola Australia (US) PTY, LTD
BWF Holdings PTY, Ltd	Iberdrola Australia Development Holdings PTY, Ltd
Capital East Solar PTY, Ltd	Iberdrola Australia Development Holdings PTY, Ltd
Iberdrola Australia Development PTY, Ltd	Iberdrola Australia Development Holdings PTY, Ltd
Infigen Suntech Australia PTY, Ltd	Iberdrola Australia Development Holdings PTY, Ltd
Renewable Energy Construction PTY, Ltd	Iberdrola Australia Development Holdings PTY, Ltd
WWCS Holdings PTY, LTd	Iberdrola Australia Development Holdings PTY, Ltd
Infigen Energy (Malta), Ltd	Iberdrola Australia Energy Europe 4 PTY, Ltd
Iberdrola Australia Development Holdings PTY, LTD	Iberdrola Australia Holdings PTY, Ltd
Iberdrola Australia US Holdings PTY, Ltd	Iberdrola Australia Holdings PTY, Ltd
CREP Land Holdings PTY, LTD	Iberdrola Australia Services Holdings PTY, Ltd
Iberdrola Australia Custodian Services PTY, LTD	Iberdrola Australia Services Holdings PTY, Ltd
Iberdrola Australia Markets PTY, LTD	Iberdrola Australia Services Holdings PTY, Ltd
Iberdrola Australia RE, Ltd	Iberdrola Australia Services Holdings PTY, Ltd
Iberdrola Australia Services PTY, Ltd	Iberdrola Australia Services Holdings PTY, Ltd
Smithfield Land Holdings PTY, Ltd	Iberdrola Australia Smithfield Holdings PTY, Ltd
Smithfield Power Generation PTY, Ltd	Iberdrola Australia Smithfield Holdings PTY, Ltd
Iberdrola Australia Wallgrove PTY, Ltd	Iberdrola Australia Wallgrove Holdings PTY, Ltd
Capital Wind Farm Holdings PTY, Ltd	Iberdrola Australia, Ltd.
Iberdrola Australia (US) 2 PTY, Ltd	Iberdrola Australia, Ltd.
Iberdrola Australia (NSW) Power Holdings PTY, Ltd	Iberdrola Australia, Ltd.
Iberdrola Australia (SA) Power Holdings PTY, LTD	Iberdrola Australia, Ltd.
Iberdrola Australia (US) Pty, Ltd	Iberdrola Australia, Ltd.
Iberdrola Australia Energy Europe 2 PTY, Ltd	Iberdrola Australia, Ltd.
Iberdrola Australia Energy Europe 4 PTY, Ltd	Iberdrola Australia, Ltd.
Iberdrola Australia Finance PTY, Ltd	Iberdrola Australia, Ltd.
Iberdrola Australia Holdings PTY, LTD	Iberdrola Australia, Ltd.
Iberdrola Australia Investments PTY, Ltd.	Iberdrola Australia, Ltd.
Iberdrola Australia Services Holdings PTY, Ltd	Iberdrola Australia, Ltd.
Iberdrola Australia Wallgrove Holdings PTY, LTD	Iberdrola Australia, Ltd.
Infigen Energy Europe 3 Pty, Ltd	Iberdrola Australia, Ltd.
Infigen Energy, Trust	Iberdrola Australia, Ltd.

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Lake Bonney 2 Holdings PTY, Ltd	Iberdrola Australia, Ltd.
Lake Bonney Holdings PTY, LTD	Iberdrola Australia, Ltd.
Lake Bonney Wind Power PTY, Ltd	Iberdrola Australia, Ltd.
NPP Projects I, LLC	Iberdrola Australia, Ltd.
NPP Projects V, LLC	Iberdrola Australia, Ltd.
NPPLB2, LLC	Iberdrola Australia, Ltd.
PAREP Holdings PTY, Ltd.	Iberdrola Australia, Ltd.
Walkaway (BB) PTY, LTD	Iberdrola Australia, Ltd.
Walkaway (CS) PTY, LTD	Iberdrola Australia, Ltd.
WWP Holdings PTY, LTD	Iberdrola Australia, Ltd.
Iberdrola Clientes Portugal, Unipessoal LDA	Iberdrola Clientes Internacional, S.A.U.
Iberdrola Clienti Italia, S.R.L.	Iberdrola Clientes Internacional, S.A.U.
Iberdrola Energie Deustchland GMBH	Iberdrola Clientes Internacional, S.A.U.
Iberdrola Energie France, S.A.S.	Iberdrola Clientes Internacional, S.A.U.
Iberdrola Ireland Limited	Iberdrola Clientes Internacional, S.A.U.
Iberdrola Solutions, LLC	Iberdrola Clientes Internacional, S.A.U.
Curenergia COMERCIALIZACION DE ULTIMO RECURSO SOCIEDAD ANONIM (63407)	Iberdrola Clientes, S.A.U.
IBERDROLA SERVICIOS ENERGETICOS S.A.U.	Iberdrola Clientes, S.A.U.
PRODUCTOS Y SERVICIOS DE CONFORT SA. (63472)	Iberdrola Clientes, S.A.U.
Cogeneracion Gequisa, S.A.	Iberdrola Cogeneracion, S.L.U.
Enercrisa, S.A.	Iberdrola Cogeneracion, S.L.U.
Energia Portatil Cogeneracion, S.A.	Iberdrola Cogeneracion, S.L.U.
ENERGYWORKS ARANDA S.L. (63384)	Iberdrola Cogeneracion, S.L.U.
ENERGYWORKS CARBALLO S.L. (63385)	Iberdrola Cogeneracion, S.L.U.
ENERGYWORKS CARTAGENA SL (63386)	Iberdrola Cogeneracion, S.L.U.
ENERGYWORKS FONZ SL. (63388)	Iberdrola Cogeneracion, S.L.U.
ENERGYWORKS MILAGROS S.L. (63389)	Iberdrola Cogeneracion, S.L.U.
ENERGYWORKS MONZON SL. (63390)	Iberdrola Cogeneracion, S.L.U.
ENERGYWORKS SAN MILLAN S.L. (63391)	Iberdrola Cogeneracion, S.L.U.
ENERGYWORKS VILLARROBLEDO SOCIEDAD LIMITADA. (63392)	Iberdrola Cogeneracion, S.L.U.
ENERGYWORKS VIT-VALL, S.L. (63393)	Iberdrola Cogeneracion, S.L.U.
Fudepor, S.L.	Iberdrola Cogeneracion, S.L.U.
Intermalta energia, S.A. (lesa)	Iberdrola Cogeneracion, S.L.U.
Peninsular Cogeneracion, S.A.	Iberdrola Cogeneracion, S.L.U.
Iberdrola Renovables Internacional, S.L.	Iberdrola Energia Internacional, S. L.
Iberdrola Clientes Internacional, S.L.	Iberdrola Energia Internacional, S.L.
NEOENERGIA	Iberdrola Energia, S.A.U.
Iberdrola Generacion Espana, S.A.U.	Iberdrola Espana, S.A.U
Iberdrola Redes Espana, S.A.U.	Iberdrola Espana, S.A.U
IBERDROLA RENOVABLES ENERGIA SAU (91316)	Iberdrola Espana, S.A.U

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Iberdrola Clientes, S.A. de C.V.	Iberdrola Generacion Mexico, S.A. de C.V.
Iberdrola Cogeneracion Ramos, S.A. de C.V.	Iberdrola Generacion Mexico, S.A. de C.V.
Iberdrola Energia Altamira de Servicios, S.A. de C.V. (63411)	Iberdrola Generacion Mexico, S.A. de C.V.
Iberdrola Energia Altamira, S.A. de C.V. (63412)	Iberdrola Generacion Mexico, S.A. de C.V.
Iberdrola Energia Baja California, S.A. de C.V.	Iberdrola Generacion Mexico, S.A. de C.V.
Iberdrola Energia del Golfo, S.A. de C.V. (63414)	Iberdrola Generacion Mexico, S.A. de C.V.
Iberdrola Energia Escobedo, S.A. de C.V.	Iberdrola Generacion Mexico, S.A. de C.V.
Iberdrola Energia la Laguna, S.A. de C.V. (63417)	Iberdrola Generacion Mexico, S.A. de C.V.
Iberdrola Energia Monterrey, S.A. de C.V. (63418)	Iberdrola Generacion Mexico, S.A. de C.V.
Iberdrola Energia Noroeste, S.A. de C.V.	Iberdrola Generacion Mexico, S.A. de C.V.
Iberdrola Energia Tamazunchale, S.A. de C.V.	Iberdrola Generacion Mexico, S.A. de C.V.
Iberdrola Energia Topolobampo, S.A. de C.V.	Iberdrola Generacion Mexico, S.A. de C.V.
Iberdrola Soporte a Proyectos liberalizado, S.A. de C.V.	Iberdrola Generacion Mexico, S.A. de C.V.
Cinergy, S.R.L. de C.V. (63361)	Iberdrola Generacion Mexico, S.A. de C.V.
Enertek, S.A. de C.V. (63394)	Iberdrola Generacion Mexico, S.A. de C.V.
Iberdrola Cogeneracion Altamira, S.A. de C.V.	Iberdrola Generacion Mexico, S.A. de C.V.
Iberdrola Cogeneracion Bajio, S.A. de C.V.	Iberdrola Generacion Mexico, S.A. de C.V.
Iberdrola Generacion S.A. de C.V.	Iberdrola Generacion Mexico, S.A. de C.V.
Servicios Administrativos Tamazunchale, S.A. de C.V. (63494)	Iberdrola Generacion Mexico, S.A. de C.V.
Servicios de Operacionn la Laguna, S.A. de C.V. (63496)	Iberdrola Generacion Mexico, S.A. de C.V.
Asociacion Nuclear Asco-Vandellos, A.I.E.	Iberdrola Generacion Nuclear, S.A.U
CENTRALES NUCLEARES ALMARAZ TRILLO AIE. (63360)	Iberdrola Generacion Nuclear, S.A.U
Nuclenor, S.A.	Iberdrola Generacion Nuclear, S.A.U
Tecnatom, S.A.	Iberdrola Generacion Nuclear, S.A.U
Elcogas, S.A.	Iberdrola Generacion Temica, S.L.U.
Iberdrola Cogeneracion S.L.U.	Iberdrola Generacion Temica, S.L.U.
Iberdrola Generacion Nuclear, S.A.U	Iberdrola Generacion Temica, S.L.U.
IBERDROLA OPERACION Y MANTENIMIENTO S.A. (63443)	Iberdrola Generacion Temica, S.L.U.
Iberduero, S.L.U.	Iberdrola Generacion Temica, S.L.U.
TARRAGONA POWER S.L. (63508)	Iberdrola Generacion Temica, S.L.U.
Iberdrola Construcao e Servicos, Itda.	IBERDROLA INGENIERIA Y CONSTRUCCION SA
Iberdrola Energy Projects Canada Corporation	IBERDROLA INGENIERIA Y CONSTRUCCION SA
Iberdrola Energy Projects, Inc.	IBERDROLA INGENIERIA Y CONSTRUCCION SA

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IBERDROLA ENGINEERING & CONSTRUCTION NETWORKS LTD (63423)	IBERDROLA INGENIERIA Y CONSTRUCCION SA
Iberdrola Engineering & Construction Ro, SRL	IBERDROLA INGENIERIA Y CONSTRUCCION SA
Iberdrola Engineering and Construction South Africa, LLC	IBERDROLA INGENIERIA Y CONSTRUCCION SA
Iberdrola Engineering and Construction UK Ltd.	IBERDROLA INGENIERIA Y CONSTRUCCION SA
Iberdrola Inenieria y Construccion Costa Rica, S.A.	IBERDROLA INGENIERIA Y CONSTRUCCION SA
IBERDROLA INGENIERIA EXPLOTACION SAU (63432)	IBERDROLA INGENIERIA Y CONSTRUCCION SA
Iberdrola Ingenieria y Construccion Mexico, S.A. de C.V. (63434)	IBERDROLA INGENIERIA Y CONSTRUCCION SA
ARRENDAMIENTO DE VIVIENDAS PROTEGIDAS SIGLO XXI S.L. (73232)	Iberdrola Inmobiliaria, S.A.
Camarate Golf, S.A.	Iberdrola Inmobiliaria, S.A.
Desarrollos Inmobiliarios Laguna del Mar, S.A. de C.V. (63368)	Iberdrola Inmobiliaria, S.A.
IBERDROLA INMOBILIARIA INVESTMENT REAL ESTATE S.A. (73288)	Iberdrola Inmobiliaria, S.A.
Iberdrola Inmobiliaria Patrimonio, S.A.U	Iberdrola Inmobiliaria, S.A.
Promociones La Malinche, S.A. de C.V.	Iberdrola Inmobiliaria, S.A.
Reino de Don Quijote, S.A.	Iberdrola Inmobiliaria, S.A.
SAREB, S.A.	Iberdrola Inmobiliaria, S.A.
TORRE IBERDROLA AIE (63511)	Iberdrola Inversiones 2010, SAU
Iberdrola Generacion Mexico, S.A. de C. V.	Iberdrola Mexico, S.A. de C.V. (63442)
Iberdrola Renovables Mexico, S.A.	Iberdrola Mexico, S.A. de C.V. (63442)
Iberdrola Servicios Corporatives S.A. de CV	Iberdrola Mexico, S.A. de C.V. (63442)
ADE Capital Sodical Sociedad Capital Riesgo de Regimen Comun	Iberdrola Participaciones, S.A.
Brasil Interpart	Iberdrola Participaciones, S.A.
Ciudad real Aeropuertos, S.L.	Iberdrola Participaciones, S.A.
Corporacion Empresarial Extremadura, S.A.	Iberdrola Participaciones, S.A.
Corporacion IBV Particpaciones Empresariales, S.A.U.	Iberdrola Participaciones, S.A.
Energy, Innovation Research S.A.U.	Iberdrola Participaciones, S.A.
Extremadura Avante I, F.C.R de Regimen Comun	Iberdrola Participaciones, S.A.
Iberdrola Corporacion, S.A.	Iberdrola Participaciones, S.A.
IBERDROLA INGENIERIA Y CONSTRUCCION SA (63435)	Iberdrola Participaciones, S.A.
IBERDROLA INMOBILIARIA SA (63439)	Iberdrola Participaciones, S.A.
KIC Innoenergy Iberica, S.L.	Iberdrola Participaciones, S.A.

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Ricari, Desarrollo de Inversiones Riojanas, S.A.	Iberdrola Participaciones, S.A.
Seed capital Bizkaia Bi, F.C.R.	Iberdrola Participaciones, S.A.
Seed capital Bizkaia, F.C.R.	Iberdrola Participaciones, S.A.
Seed Capital Bizkaia, S.A.	Iberdrola Participaciones, S.A.
Teleport Bilbao	Iberdrola Participaciones, S.A.
World Trade Center Bilbao	Iberdrola Participaciones, S.A.
ANSELMO LEON SAU (63354)	Iberdrola Redes Espana, S.A.U.
DISTRIBUIDORA DE ENERGIA ELECTRICA ENRIQUE GARCIA SERRANO S. L. (63370)	Iberdrola Redes Espana, S.A.U.
Distribuidora Electrica Navasfrias, S.L.	Iberdrola Redes Espana, S.A.U.
ELECTRICA CONQUENSE, S.A. (63374)	Iberdrola Redes Espana, S.A.U.
Empresa Electrica del Cabriel, S.L.	Iberdrola Redes Espana, S.A.U.
HEREDEROS DE MARIA ALONSO CALZADA VENTA DE BANOS S.L. (63401)	Iberdrola Redes Espana, S.A.U.
Iberdrola Infraestructuras y Servicios de Redes, S.A.	Iberdrola Redes Espana, S.A.U.
I-DE REDES ELÉCTRICAS INTELIGENTES, S.A.U.	Iberdrola Redes Espana, S.A.U.
San Cipriano de Rueda Distribudon, LS.L.	Iberdrola Redes Espana, S.A.U.
Sociedad Distribuidora de Electricidad de Elorrio, S.A.	Iberdrola Redes Espana, S.A.U.
Iberdrola Australia, Ltd.	Iberdrola Renewables Australia PTY, Ltd
Clarus Offshore Wind Farm Ltd	Iberdrola Renewables Ireland Limited
DP Irish Offshore Wind	Iberdrola Renewables Ireland Limited
Iris Eslga Marine Energy Park Ltd	Iberdrola Renewables Ireland Limited
Shelmalere Offshore Wind Farm Ltd	Iberdrola Renewables Ireland Limited
Aomori-Seinhoku-Oki Offshore Wind Godo Kaisha	Iberdrola Renewables Japan, K.K.
Kioi, SPV	Iberdrola Renewables Japan, K.K.
Saga, S.P.V.	Iberdrola Renewables Japan, K.K.
Satsuma Project, SPV	Iberdrola Renewables Japan, K.K.
Eonergi Energia Eolica, S.A.	Iberdrola Renewables Portugal S.A.
PARQUE EOLICO DA SERRA DO ALVO, S.A. (91061)	Iberdrola Renewables Portugal S.A.
Sunshining, S.A.	Iberdrola Renewables Portugal S.A.
Eolica Dobrogea One, S.A.	Iberdrola Renewables Romania, S.R.L.
EME Hueneja Cuatro, S.L.	IBERDROLA RENOVABLES ANDALUCIA SA (90748)
Energias Renovables Cespedera, S.L.	IBERDROLA RENOVABLES ANDALUCIA SA (90748)
GEANSA	IBERDROLA RENOVABLES ANDALUCIA SA (90748)
Sistemas Energeticos Conexion Hueneja, S.L.	IBERDROLA RENOVABLES ANDALUCIA SA (90748)
SISTEMAS ENERGETICOS LA HIGUERA SA (90725)	IBERDROLA RENOVABLES ANDALUCIA SA (90748)
Iberjalon	IBERDROLA RENOVABLES ARAGON SA (63446)

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S.E. Loma Del Viento, S.A.	IBERDROLA RENOVABLES ARAGON SA (63446)
Sistemas Energeticos La Muela, S.A.	IBERDROLA RENOVABLES ARAGON SA (63446)
SISTEMAS ENERGETICOS MAS GARULLO S.A. (63499)	IBERDROLA RENOVABLES ARAGON SA (63446)
SISTEMAS ENERGETICOS TORRALBA S.A. (63500)	IBERDROLA RENOVABLES ARAGON SA (63446)
Energias Ecologias de Tenerife, S.A.	IBERDROLA RENOVABLES CANARIAS SA (73291)
Energias Verdes de Tenerife, S.L.	IBERDROLA RENOVABLES CANARIAS SA (73291)
Desarrollios Fetovoltaicos Fuentes, S.L.	IBERDROLA RENOVABLES CASTILLA LA MANCHA SA (63447)
Electra Sierra de los Castilios, S.L.	IBERDROLA RENOVABLES CASTILLA LA MANCHA SA (63447)
Electricas de la Alcarria, S.L.	IBERDROLA RENOVABLES CASTILLA LA MANCHA SA (63447)
Energías Eólicas de Cuenca, S.A.U.	IBERDROLA RENOVABLES CASTILLA LA MANCHA SA (63447)
Energias Fotovoltaicas De Puertollano, S.L.	IBERDROLA RENOVABLES CASTILLA LA MANCHA SA (63447)
Eolica de Campollano, S.A.	IBERDROLA RENOVABLES CASTILLA LA MANCHA SA (63447)
Iberdrola Renovables De belona, S.L.	IBERDROLA RENOVABLES CASTILLA LA MANCHA SA (63447)
Iberdrola Renovables De Circe, S.L.	IBERDROLA RENOVABLES CASTILLA LA MANCHA SA (63447)
Iberdrola Renovables De Febe, S.L.	IBERDROLA RENOVABLES CASTILLA LA MANCHA SA (63447)
Iberdrola Renovables De Hermes, S.L.	IBERDROLA RENOVABLES CASTILLA LA MANCHA SA (63447)
Iberdrola Renovables De Tione, S.L.	IBERDROLA RENOVABLES CASTILLA LA MANCHA SA (63447)
BIONOR EOLICA S.A. (73239)	IBERDROLA RENOVABLES CASTILLA Y LEON SA (73293)
ENERGIA DE CASTILLA Y LEON S.A. (73267)	IBERDROLA RENOVABLES CASTILLA Y LEON SA (73293)
Infrestructur as de Medinacell, S.L.	IBERDROLA RENOVABLES CASTILLA Y LEON SA (73293)
PARQUE EOLICO CRUZ DE CARRUTERO S.L. (73328)	IBERDROLA RENOVABLES CASTILLA Y LEON SA (73293)
Peache Energias Renovables, S.A.	IBERDROLA RENOVABLES CASTILLA Y LEON SA (73293)
Producciones Energetica de Castilla Leon, S.A.	IBERDROLA RENOVABLES CASTILLA Y LEON SA (73293)
Baltic Eagle GmbH	Iberdrola Renovables Deutshland Gmbh
Iberdrola Renovables Offshore Deutschland	Iberdrola Renovables Deutshland Gmbh
Windaker GmbH	Iberdrola Renovables Deutshland Gmbh
BIOVENT ENERGIA SA (73240)	Iberdrola Renovables Energia, S.A.U.

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Ciener, S.A.U.	Iberdrola Renovables Energia, S.A.U.
Electra de Malvana, S.A.	Iberdrola Renovables Energia, S.A.U.
Electra Sierra de San Pedro, S.A.	Iberdrola Renovables Energia, S.A.U.
ENERGIAS RENOVABLES REGION DE MURCIA S.A. (73268)	Iberdrola Renovables Energia, S.A.U.
Eolica 2000, S.L.	Iberdrola Renovables Energia, S.A.U.
EOLICAS DE EUSKADI SAU (63395)	Iberdrola Renovables Energia, S.A.U.
FINCALIA AGROPECUARIA, S.A	Iberdrola Renovables Energia, S.A.U.
Iberdrola Generacion, S.A.U.	Iberdrola Renovables Energia, S.A.U.
IBERDROLA RENOVABLES ANDALUCIA SA (90748)	Iberdrola Renovables Energia, S.A.U.
IBERDROLA RENOVABLES ARAGON SA (63446)	Iberdrola Renovables Energia, S.A.U.
IBERDROLA RENOVABLES CANARIAS SA (73291)	Iberdrola Renovables Energia, S.A.U.
IBERDROLA RENOVABLES CASTILLA LA MANCHA SA (63447)	Iberdrola Renovables Energia, S.A.U.
IBERDROLA RENOVABLES CASTILLA Y LEON SA (73293)	Iberdrola Renovables Energia, S.A.U.
IBERDROLA RENOVABLES GALICIA SA (63450)	Iberdrola Renovables Energia, S.A.U.
IBERDROLA RENOVABLES LA RIOJA 2 SA (73296)	Iberdrola Renovables Energia, S.A.U.
IBERDROLA RENOVABLES LA RIOJA SA (73296)	Iberdrola Renovables Energia, S.A.U.
Iberenova Promocionas, S.A.U.	Iberdrola Renovables Energia, S.A.U.
ICARO Renovables, S.A.	Iberdrola Renovables Energia, S.A.U.
Aalto Power, S.A.S.	Iberdrola Renovables France, S.A.S.
Alies Marines, S.A.S.	Iberdrola Renovables France, S.A.S.
SISTEMAS ENERGETICOS CHANDREXA S.A. (63497)	IBERDROLA RENOVABLES GALICIA SA (63450)
Sotaveno Galicia, S.A.	IBERDROLA RENOVABLES GALICIA SA (63450)
C Rokas Industrial Commercial Company, S.A.	Iberdrola Renovables Internacional, S. L.
Iberdrola Renewables Australia PTY, LTD	Iberdrola Renovables Internacional, S. L.
Iberdrola Renewables Bulgaria, E.o.o.d.	Iberdrola Renovables Internacional, S. L.
Iberdrola Renewables Ireland Limited	Iberdrola Renovables Internacional, S. L.
Iberdrola Renewables Portugal S.A.	Iberdrola Renovables Internacional, S. L.
Iberdrola Renewables Romania, S.R.L.	Iberdrola Renovables Internacional, S. L.
Iberdrola Renewables South Africa (PTY) Ltd.	Iberdrola Renovables Internacional, S. L.
IBERDROLA RENOVABLES ITALIA SPA (73295)	Iberdrola Renovables Internacional, S. L.
Iberdrola Renovables Magyaroszag, Kft.	Iberdrola Renovables Internacional, S. L.
Acacia Renewables, K.K.	Iberdrola Renovables Internacional, S.A.U.
Iberdrola Renovables Deutschland GmbH (63448)	Iberdrola Renovables Internacional, S.A.U.

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Iberdrola Renovables France SAS	Iberdrola Renovables Internacional, S.A.U.
Sea Wind Genaker, Sp Z.O.O.	Iberdrola Renovables Internacional, S.A.U.
Sea Wind Kliwer, SP Z.O.O.	Iberdrola Renovables Internacional, S.A.U.
Sea Wind Spinaker, SP Z.O.O.	Iberdrola Renovables Internacional, S.A.U.
Green Frogs Montalto, S.R.L.	Iberdrola Renovables Italia, S.P.A
Societa Energie Rinnovabili 2, SpA	Iberdrola Renovables Italia, S.P.A
Desarrollo de Energias Renovables de La Rioja, S.A.	IBERDROLA RENOVABLES LA RIOJA SA (73296)
MOLINOS DE LA RIOJA S.A. (73320)	IBERDROLA RENOVABLES LA RIOJA SA (73296)
Molinos del Cidacos, S.A.	IBERDROLA RENOVABLES LA RIOJA SA (73296)
Bii Nee Stipa Energia S.A. de C.V.	Iberdrola Renovables Mexico, S.A. de C.V.
Corporativo Iberdrola Renovables Mexico, S.A. de C.V.	Iberdrola Renovables Mexico, S.A. de C.V.
Energias Renovables Venta III, S.A. de C.V.	Iberdrola Renovables Mexico, S.A. de C.V.
Eolica Dos Arbolitos S.A.P.I. de C.V.	Iberdrola Renovables Mexico, S.A. de C.V.
Iberdrola Renovables Centro, S.A. de C.V.	Iberdrola Renovables Mexico, S.A. de C.V.
Iberdrola Renovables del Bajio, S.A. de C.V.	Iberdrola Renovables Mexico, S.A. de C.V.
Iberdrola Renovables Noroeste, S.A. de C.V.	Iberdrola Renovables Mexico, S.A. de C.V.
Iberdrola Soporte a Proyectos, Renovables, S.A. de C.V.	Iberdrola Renovables Mexico, S.A. de C.V.
Parque de Generación Renovable, S.A. de C.V	Iberdrola Renovables Mexico, S.A. de C.V.
Parque Energias Renovables de Mexico, S.A. de C.V.	Iberdrola Renovables Mexico, S.A. de C.V.
Parque Industrial de Energia Renovables Quecholac Felipe Angeles (PIER II) S.A. de C.V.	Iberdrola Renovables Mexico, S.A. de C.V.
Parques Ecologicos de Mexico, S.A. de C.V. (73329)	Iberdrola Renovables Mexico, S.A. de C.V.
Servicios de Operacion Eoloelectrica de Mexico, S.A. de C.V. (63495)	Iberdrola Renovables Mexico, S.A. de C.V.
Avangrid, Inc. (63456)	Iberdrola, S.A.
Hidrola I, S.L.	Iberdrola, S.A.
Iberdrola Energia Internacional, S.L.	Iberdrola, S.A.
Iberdrola Energia, S.A.U.	Iberdrola, S.A.
Iberdrola Espana, S.A.U.	Iberdrola, S.A.
IBERDROLA FINANCE IRELAND LIMITED (63425)	Iberdrola, S.A.
IBERDROLA FINANCIACION SAU (63426)	Iberdrola, S.A.
Iberdrola Finanzas, S.A.U.	Iberdrola, S.A.
Iberdrola International SV	Iberdrola, S.A.
IBERDROLA INVERSIONES 2010 SOCIEDAD ANONIMA. (63441)	Iberdrola, S.A.
Iberdrola participaciones, S.A.U.	Iberdrola, S.A.
IBERDROLA RE S.A. (63445)	Iberdrola, S.A.

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Otras Inversiones	Iberdrola, S.A.
SCOTTISHPOWER OVERSEAS HOLDINGS LTD (63493)	Iberdrola, S.A.
SPW Investments Limited	Iberdrola, S.A.
Biocantaber, S.L.	Iberenova Promocionas, S.A.U.
Cantaber Generacion Eoilca, S.A.	Iberenova Promocionas, S.A.U.
Dehesa Solar Sur, S.L.	Iberenova Promocionas, S.A.U.
Energia Renovables Espliego, S.L.	Iberenova Promocionas, S.A.U.
Energias Renovables Cornicabra, S.L.	Iberenova Promocionas, S.A.U.
Energias Renovables Poleo, S.L.	Iberenova Promocionas, S.A.U.
Iberdrola Energías Marinas de Cantabria, S.A.	Iberenova Promocionas, S.A.U.
Parque Eolico Capiechamartin, C.L.	Iberenova Promocionas, S.A.U.
Parque Eolico Cordel Y Vidural, S.L.	Iberenova Promocionas, S.A.U.
Parque Eólico Encinillas, S.L.	Iberenova Promocionas, S.A.U.
Parque Eólico Panondres, S.L.	Iberenova Promocionas, S.A.U.
Parque Eólico Verdiquerio, S.L.	Iberenova Promocionas, S.A.U.
Parque Solar Caceres, S.L.	Iberenova Promocionas, S.A.U.
Producciones Energeticas Asturianas, S.L.	Iberenova Promocionas, S.A.U.
Proyecto Nunez de Balboa, S.L.	Iberenova Promocionas, S.A.U.
Proyecto Solar Francisco Pizarro, S.L.	Iberenova Promocionas, S.A.U.
PVI Ataulfo, S.L.	Iberenova Promocionas, S.A.U.
Renovables de Buniell, S.L.	Iberenova Promocionas, S.A.U.
Renovables de la Ribera, LC	Iberenova Promocionas, S.A.U.
S.E. Jaralon S.A.	Iberenova Promocionas, S.A.U.
S.E. Serra de Lourenza, S.A.	Iberenova Promocionas, S.A.U.
Sistemas Energeticos Moncayo, S.A.	Iberenova Promocionas, S.A.U.
Sistemas Eolicos de Muno, S.L.	Iberenova Promocionas, S.A.U.
Sistemes Energetics Savalla Comtat, S.A.	Iberenova Promocionas, S.A.U.
SISTEMAS ENERGETICOS ALTAMIRA S.A. (73352)	Ibernova Promociones, S..A.U.
SISTEMAS ENERGETICOS DE LA LINERA SA (73353)	Ibernova Promociones, S..A.U.
SISTEMAS ENERGETICOS LA GOMERA SA (90726)	Ibernova Promociones, S..A.U.
SISTEMAS ENERGETICOS NACIMIENTO SA (90742)	Ibernova Promociones, S..A.U.
SISTEMAS ENERGETICOS TACICA DE PLATA SOCIEDAD ANONIMA. (73356)	Ibernova Promociones, S..A.U.
Infigen Energy Holdings, Sart	Infigen Energy (Malta), Ltd
Infigen Energy NT Solar Holdings PTY, Ltd	Infigen Energy Development Holdings PTY, Ltd
Bluff Solar Farm PTY, Ltd	Infigen Energy Development PTY, Ltd
Bogan River Solar Farm PTY, Ltd	Infigen Energy Development PTY, Ltd
Bowen Solar Farm PTY, Ltd	Infigen Energy Development PTY, Ltd

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Capital Wind Farm 2 PTY, Ltd	Infigen Energy Development PTY, Ltd
Flyers Creek Wind Farm PTY, Ltd	Infigen Energy Development PTY, Ltd
Forsayth Wind Farm PTY, Ltd	Infigen Energy Development PTY, Ltd
RPV Developments PTY, Ltd	Infigen Energy Development PTY, Ltd
Woakwine Wind Farm, PTY, Ltd	Infigen Energy Development PTY, Ltd
Infigen Energy Finance (Lux), Sart	Infigen Energy Holdings, Sart
Batchelor Solar PTY, Ltd	Infigen Energy NT Solar PTY, LTD
Manton Solar PTY, Ltd	Infigen Energy NT Solar PTY, LTD
Infigen Energy US Holdings, LLC	Infigen Energy US Corporations
Iberdrola Australia US Development Corporation	Infigen Energy US Holdings PTY, LTD
Infigen Energy US Corporation	Infigen Energy US Partnership
Infigen Energy Europe 5 PTY, Ltd	Infigen Energy, Ltd
CS Walkaway, Trust	Infigen Energy, Trust
Walkaway (BB) Trust	Infigen Energy, Trust
ATTEN2 advanced Monitoring Technologies, S.L.	INVERSIONES FINANCIERAS PERSEO S.L. (63461)
Balantia Consultores, S.L.	INVERSIONES FINANCIERAS PERSEO S.L. (63461)
Eres Energia Renovable, SAPI de CV	INVERSIONES FINANCIERAS PERSEO S.L. (63461)
Iberdrola QSTP, LLC	INVERSIONES FINANCIERAS PERSEO S.L. (63461)
Iberlyser, S.A.	INVERSIONES FINANCIERAS PERSEO S.L. (63461)
Innowatts, LLC	INVERSIONES FINANCIERAS PERSEO S.L. (63461)
Morgan Solar, Inc.	INVERSIONES FINANCIERAS PERSEO S.L. (63461)
Neotec, F.C.R.	INVERSIONES FINANCIERAS PERSEO S.L. (63461)
Stem, Inc.	INVERSIONES FINANCIERAS PERSEO S.L. (63461)
SunFinder, Inc.	INVERSIONES FINANCIERAS PERSEO S.L. (63461)
Wall Box Chargers, S.L.	INVERSIONES FINANCIERAS PERSEO S.L. (63461)
Canoas Energia Renovavel, S.A.	Lagoa 1 Energia Renovavel, S.A.
Lagoa 2 Energia Renovavel, S.A.	Lagoa 1 Energia Renovavel, S.A.
Lake Bonney BESS PTY, Ltd	Lake Bonney Wind Power PTY, LTD
Portiguar Sul Transmissao de Energia, S.A.	NC Energia
Alfuente Transm Energia Electrica	NEOENERGIA
Baguari I Genarcao de Inergia Electra, S.A.	NEOENERGIA
Bahia PCH II, S.A.	NEOENERGIA
Bahia PCH III, S.A.	NEOENERGIA
Belo Monte Participacoes, S.A.	NEOENERGIA
CELPE	NEOENERGIA
COELBA	NEOENERGIA
COSERN	NEOENERGIA
EKTT 10 Servicos De Transmissao de Energia Electrica SPE S/A	NEOENERGIA
EKTT 6 Servicos De Transmissao de Energia Electrica SPE S/A	NEOENERGIA

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EKTT 7 Servicos De Transmissao de Energia Electrica SPE S/A	NEOENERGIA
EKTT 8 Servicos De Transmissao de Energia Electrica SPE S/A	NEOENERGIA
EKTT 9 Servicos De Transmissao de Energia Electrica SPE S/A	NEOENERGIA
Elektro Comercializ de Energia Ltd.	NEOENERGIA
Elektro Operacao e Manutencao Ltda	NEOENERGIA
Elektro Redes, S.A.	NEOENERGIA
Elektro Renovaveis do Brasil, S.A.	NEOENERGIA
Energetica Aguas da Pedra, S.A.	NEOENERGIA
Geracao Ceu Azul, S.A.	NEOENERGIA
Geracao CIII, S.A.	NEOENERGIA
Itapebi Genacion de Energia, S.A.	NEOENERGIA
NC Energia	NEOENERGIA
Neoenergia Atibaia Transmissao de Energia Electrica SPE S/A	NEOENERGIA
Neoenergia Biguacu Transmissao de Energia Electrica SPE S/A	NEOENERGIA
Neoenergia Dourados Transmissao de Energia Electrica SPE S/A	NEOENERGIA
Neoenergia Guanabara Transmissao de Energia Electrica SPE S/A	NEOENERGIA
Neoenergia Investimentos, S.A.	NEOENERGIA
Neoenergia Itabapoana Transmissao de Energia Electrica SPE S/A	NEOENERGIA
Neoenergia Jalapao Transmissao de Energia Electrica SP S/A	NEOENERGIA
Neoenergia Lagoa dos Patos Transmissao de Energia Electrica SPE S/A	NEOENERGIA
Neoenergia Operacao e Manutencao, S.A.	NEOENERGIA
Neoenergia Santa Luzia Transmissao de Energia Electrica SPE S/A	NEOENERGIA
Neoenergia Servicios, Ltda.	NEOENERGIA
Neoenergia Sobral Transmissao de Energia Electrica SPE S/A	NEOENERGIA
Neoenergia Vale do Italji Transmissao de Energia Electrica SPE S/A	NEOENERGIA
S.E. Narandiba, S.A.	NEOENERGIA
Tele Pires Participacoes, S.A.	NEOENERGIA
Termopernambuco	NEOENERGIA
Bonito 1 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Bonito 10 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Bonito 11 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Bonito 2 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.

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Bonito 3 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Bonito 4 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Bonito 5 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Bonito 6 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Bonito 7 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Bonito 8 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Bonito 9 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Calango 6 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Calango solar 1 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Calango Solar 2 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Canoas 2 Energia Renovavel S/A	Neoenergia Renovavies, S.A.
Canoas 3 Energia Renovavel S/A	Neoenergia Renovavies, S.A.
Canoas 4 Energia Renovavel S/A	Neoenergia Renovavies, S.A.
Chafariz 1 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Chafariz 2 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Chafariz 3 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Chafariz 4 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Chafariz 5 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Chafariz 6 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Chafariz 7 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Lagoa 1 Energia Renovavel, S.A.	Neoenergia Renovavies, S.A.
Lagoa 3 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Lagoa 4 Energia Renovavel S/A	Neoenergia Renovavies, S.A.
Luzia 1 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Luzia 2 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Luzia 3 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Otis 1 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Otis 10 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Otis 2 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Otis 21 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Otis 22 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Otis 23 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Otis 24 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Otis 25 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Otis 26 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Otis 27 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Otis 28 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Otis 3 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Otis 4 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Otis 5 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Otis 6 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Otis 7 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Otis 8 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.

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Otis 9 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Riachao 1 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Riachao 10 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Riachao 11 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Riachao 12 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Riachao 13 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Riachao 14 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Riachao 15 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Riachao 2 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Riachao 3 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Riachao 4 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Riachao 5 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Riachao 6 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Riachao 7 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Riachao 8 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Riachao 9 Energia Renovavel S.A.	Neoenergia Renovavies, S.A.
Ventos de Arapuá 1 Energia Renovável	Neoenergia Renovavies, S.A.
Ventos de Arapuá 2 Energia Renovável	Neoenergia Renovavies, S.A.
Ventos de Arapuá 3 Energia Renovável	Neoenergia Renovavies, S.A.
IBERDROLA, S.A. (63457)	None
Lake Bonney Wind Power 2 PTYY, Ltd.	NPP LB2, LLC
NPP Walkaway PTY, LTD	NPP Projects V, LLC
NPP Walkaway, Trust	NPP Projects V, LLC
RPV Investment, Trust	NPP Projects V, LLC
PAREP 1 PTY, Ltd	PAREP Holdings PTY, LTD.
Ecobarical, S.A.	Producciones Energetica de Castilla Leon, S.A.
Gestión de Evacuación de La Serna, S.L.	S.E. Loma DelViento, S.A.
SP Distribution Plc	Scottish Power Energy Networks Holdings Limited
SP MANWEB PLC (63504)	Scottish Power Energy Networks Holdings Limited
SP POWER SYSTEMS LTD (63505)	Scottish Power Energy Networks Holdings Limited
SP Transmission PLC	Scottish Power Energy Networks Holdings Limited
SCOTTISH POWER UK PLC (63480)	Scottish Power Limited
SCOTTISHPOWER (DCL) LTD (63482)	SCOTTISH POWER Retail HOLDINGS LTD (104579)
SCOTTISHPOWER (SCPL) LTD (63484)	SCOTTISH POWER Retail HOLDINGS LTD (104579)
SCOTTISHPOWER ENERGY MANAGEMENT (AGENCY) LTD (63486)	SCOTTISH POWER Retail HOLDINGS LTD (104579)
SCOTTISHPOWER ENERGY MANAGEMENT LTD (63487)	SCOTTISH POWER Retail HOLDINGS LTD (104579)
SCOTTISHPOWER ENERGY RETAIL LTD (63488)	SCOTTISH POWER Retail HOLDINGS LTD (104579)
SCOTTISHPOWER GENERATION LTD (63489)	SCOTTISH POWER Retail HOLDINGS LTD (104579)
SP Dataserve Ltd	SCOTTISH POWER Retail HOLDINGS LTD (104579)
SP GAS TRANSPORTATION COCKENZIE LTD (73363)	SCOTTISH POWER Retail HOLDINGS LTD (104579)

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SP GAS TRANSPORTATION HATFIELD LTD (73364)	SCOTTISH POWER Retail HOLDINGS LTD (104579)
SP Smart Meter Assets Ltd	SCOTTISH POWER Retail HOLDINGS LTD (104579)
Selectusonline Ltd	Scottish Power UK Plc
SCOTTISH POWER ENERGY NETWORKS HOLDINGS LTD (90981)	SCOTTISH POWER UK PLC (63480)
SCOTTISH POWER Retail HOLDINGS LTD (104579)	SCOTTISH POWER UK PLC (63480)
SCOTTISHPOWER RENEWABLE ENERGY LTD (73348)	SCOTTISH POWER UK PLC (63480)
SCOTTISHPOWER INVESTMENTS LTD (63490)	Scottish Power UK Plc.
Alt Han Company, Ltd	ScottishPower Energy Retail Ltd.
NFPA Holdings Ltd.	ScottishPower Energy Retail Ltd.
Smart Energy Code Company LTD	ScottishPower Energy Retail Ltd.
SPAA, Ltd	ScottishPower Energy Retail Ltd.
St. Clements Services Ltd.	ScottishPower Energy Retail Ltd.
Pacific Harbor Capital, Inc. (81953)	Scottishpower Financial Services, Inc.
Iberdrola Canada Energy Services Ltd (63405)	ScottishPower Overseas Holdings Ltc.
Scottish Power Renewables (UK) Limited	Scottish-Power Renewable Energy Ltd (SPREL)
ScottishPower Renewables (UK Assets) Ltd	Scottish-Power Renewable Energy Ltd (SPREL)
Aviation Investment Fund Company Ltd	SCOTTISHPOWER RENEWABLES (UK) LTD (73349)
Celtpower Limited	SCOTTISHPOWER RENEWABLES (UK) LTD (73349)
COLDHAM WINDFARM LTD (73252)	SCOTTISHPOWER RENEWABLES (UK) LTD (73349)
Cumberhead West Wind Farm Ltd	SCOTTISHPOWER RENEWABLES (UK) LTD (73349)
Douglas West Extension Ltd	SCOTTISHPOWER RENEWABLES (UK) LTD (73349)
East Angila Offshore Wind Limited	SCOTTISHPOWER RENEWABLES (UK) LTD (73349)
East Anglia One Limited	SCOTTISHPOWER RENEWABLES (UK) LTD (73349)
East Anglia One North Ltd	SCOTTISHPOWER RENEWABLES (UK) LTD (73349)
East Anglia Three Limited	SCOTTISHPOWER RENEWABLES (UK) LTD (73349)
East Anglia Two Ltd	SCOTTISHPOWER RENEWABLES (UK) LTD (73349)
Hagshaw Hill Repowering Ltd	SCOTTISHPOWER RENEWABLES (UK) LTD (73349)
SCOTTISHPOWER RENEWABLES (WODS) LTD (90978)	SCOTTISHPOWER RENEWABLES (UK) LTD (73349)
Tidal Power Scotland Limited	SCOTTISHPOWER RENEWABLES (UK) LTD (73349)
Morecambe Wind Limited	SCOTTISHPOWER RENEWABLES (WODS) LTD (90978)
DCUSA Ltd	SP Distribution Plc
Electralink Ltd	SP Distribution Plc
Gemserv Ltd	SP Distribution Plc
MRA Service Company Ltd.	SP Distribution Plc
MANWEB SERVICES LTD (73315)	SP Manweb Plc
Retail Energy Code Company. Ltd	SP Manweb Plc

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SP NETWORK CONNECTIONS LTD (90991)	SP POWER SYSTEMS LTD (63505)
NGET/SPT Upgrades, Ltd	SP Transmission PLC
SCOTTISH POWER LTD (63475)	SPW Investments Limited
Lanmovil, Amara Celular De Bahia Ltda.	Tecnologia Aplicada en Procedimientos Emprearíales, S.L.
Payma Celulares Sociedade Limitades	Tecnologia Aplicada en Procedimientos Emprearíales, S.L.
Payma Mobiles Maoc SARL	Tecnologia Aplicada en Procedimientos Emprearíales, S.L.
Teabia Comunicaciones SLU	Tecnologia Aplicada en Procedimientos Emprearíales, S.L.
Vinzeo Portugal S.A.	Tecnologia Aplicada en Procedimientos Emprearíales, S.L.
Companhia Hidroel, Teles Pires, S.A.	Teles Pires Participacoes, S.A.
Capital Solar Farm PTY, Ltd	WWCS Finance PTY, Ltd
Woodlawn Wind PTY, Ltd	WWCS Finance PTY, Ltd
WWCS Finance PTY, Ltd	WWCS Holdings PTY, Ltd
Walkaway Wind Power PTY, Ltd	WWP Holdings PTY, Ltd

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VINEYARD WIND

ATTACHMENT TO SECTION 5

Attachment 5.15-3: [redacted]

REDACTED

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VINEYARD WIND

ATTACHMENT TO SECTION 5

Attachment 5.15-4: [redacted]

REDACTED

PUBLIC

VINEYARD WIND

ATTACHMENT TO SECTION 5

Attachment 5.15-5: [redacted]

REDACTED

PUBLIC

VINEYARD WIND

ATTACHMENT TO SECTION 6

Attachment 6.1-1: Preferred Site Plan

REDACTED

PUBLIC

VINEYARD WIND

ATTACHMENT TO SECTION 6

Attachment 6.1-2: [redacted]

REDACTED

PUBLIC

VINEYARD WIND

ATTACHMENT TO SECTION 6

Attachment 6.1-3: [redacted]

REDACTED

PUBLIC

VINEYARD WIND

ATTACHMENT TO SECTION 6

Attachment 6.1-4: [redacted]

REDACTED

PUBLIC

VINEYARD WIND

ATTACHMENT TO SECTION 6

Attachment 6.2-1: OCS-A 0501 Lease Agreement

REDACTED

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VINEYARD WIND

ATTACHMENT TO SECTION 6

Attachment 6.2-2: OCS-A 0501 Letter of Good Standing

REDACTED

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ATTACHMENT TO SECTION 6

Attachment 6.2-3: OCS-A 0534 Lease Segregation Letter (BOEM)

REDACTED

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VINEYARD WIND

ATTACHMENT TO SECTION 6

Attachment 6.2-4: [redacted]

REDACTED

PUBLIC

VINEYARD WIND

ATTACHMENT TO SECTION 6

Attachment 6.2-5: [redacted]

REDACTED

PUBLIC

VINEYARD WIND

ATTACHMENT TO SECTION 6

Attachment 6.4-1: [redacted]

REDACTED

PUBLIC

VINEYARD WIND

ATTACHMENT TO SECTION 6

Attachment 6.6-1: [redacted]

REDACTED

PUBLIC

VINEYARD WIND

ATTACHMENT TO SECTION 6

Attachment 6.6-2: [redacted]

REDACTED

PUBLIC

VINEYARD WIND

ATTACHMENT TO SECTION 6

Attachment 6.6-3: [redacted]

REDACTED

PUBLIC

VINEYARD WIND

ATTACHMENT TO SECTION 6

Attachment 6.6-4: [redacted]

REDACTED

PUBLIC

VINEYARD WIND

ATTACHMENT TO SECTION 6

Attachment 6.6-5: [redacted]

REDACTED

PUBLIC

VINEYARD WIND

ATTACHMENT TO SECTION 6

Attachment 6.6-6: [redacted]

REDACTED

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VINEYARD WIND

ATTACHMENT TO SECTION 6

Attachment 6.6-7: [redacted]

REDACTED

PUBLIC

VINEYARD WIND

ATTACHMENT TO SECTION 6

Attachment 6.A-1: [redacted]

REDACTED

PUBLIC

VINEYARD WIND

ATTACHMENT TO SECTION 6

Attachment 6.A-2: [redacted]

REDACTED

PUBLIC

VINEYARD WIND

ATTACHMENT TO SECTION 6

Attachment 6.A-3: [redacted]

REDACTED

PUBLIC

VINEYARD WIND

ATTACHMENT TO SECTION 6

Attachment 6.A-4: [redacted]

REDACTED

PUBLIC

VINEYARD WIND

ATTACHMENT TO SECTION 6

Attachment 6.A-5: [redacted]

REDACTED

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VINEYARD WIND

ATTACHMENT TO SECTION 7

Attachment 7.3-1: Federally Recognized Tribal Community Engagement

REDACTED

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VINEYARD WIND

ATTACHMENT TO SECTION 7

Attachment 7.4-1: Fisheries Mitigation Plan

REDACTED

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VINEYARD WIND

ATTACHMENT TO SECTION 7

Attachment 7.4-2: Fisheries Communication Plan

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Fisheries Communication Plan

Rev. 9

Vineyard Wind LLC

Document Title:	**Fisheries Communication Plan**
Company	Vineyard Wind LLC
Date:	03/30/2020
Document Type:	Plan
Revision:	9
Previous versions:	Rev. 1 – September 2016 Rev. 2 – October 2017 Rev. 3 – November 2017 Rev. 4 – December 2017 Rev. 5 – March 2018 Rev. 6 – June 2018 Rev. 7 – January 2019 Rev. 8 – August 2019
Authors:	Crista Bank and Erik Peckar

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Vineyard Wind Fisheries Communication Plan

Revised March 2020

I. Introduction

Vineyard Wind's Fisheries Communication Plan (FCP) is a living document first drafted in 2011 in order to develop strategies to improve communication with fishermen potentially affected by the development of offshore wind projects. The document continues to evolve with continuous feedback and guidance from fishermen, fishing organizations, and regulatory agencies. The increased participation from the fishing industry will help the offshore wind sector to reduce user conflict, improve project design, and build a better understanding between the two industries.

If you would like to receive updated versions of this FCP as they become available or have any suggestions on how to improve this plan, please send an email to fisheries@vineyardwind.com. Visit vineyardwind.com/fisheries to sign-up for updates, mariner notices, and information requests as well as to access charts, FAQ sheets, and more project information.

II. Vineyard Wind's Lease Areas

a. Overview

Vineyard Wind holds two lease areas for wind energy development on the Outer Continental Shelf (OCS): Lease Area OCS-A 0501 and Lease Area OCS-A 0522. As shown in Figure 2.1, both lease areas are located in the Massachusetts Wind Energy Area (MA WEA). The MA WEA was designated by the Bureau of Ocean Energy Management (BOEM), with significant stakeholder input, including the BOEM MA Renewable Energy Taskforce (made up of local and state elected officials in Massachusetts and Rhode Island), the MA Fishery Working Group (FWG)[1], and the MA Habitat Working Group (HWG)[2] with the intention towards minimizing and avoiding impacts to the marine environment. For example, after considering stakeholder comments, BOEM modified the MA WEA to exclude an area of high fisheries value so as to reduce potential conflict with commercial and recreational fishing activities. Siting choices were considered to minimize and avoid potential impacts to environmental and fisheries resources from offshore wind development on the OCS.

b. Lease Area OCS-A 0501

Lease Area OCS-A 0501 is located approximately 12.4 nautical miles (NM) from the southeast corner of Martha's Vineyard and a similar distance from the southwest side of Nantucket. The Lease Area comprises more than 260 square miles (sq. mi) and is approximately 8.7 nautical miles (NM) wide and 26 NM long. Water depths range from about 121 – 197 feet (ft), gradually increasing as distance from land increases. Lease Area OCS-A 0501 has high wind speeds, excellent seafloor conditions, moderate water depths, and

[1] The FWG is made up of fishermen, fisheries scientists, and other interested parties. Early meetings addressed usage of the potential wind areas by various gear types as well as fisheries science. The FWG, convened by the State of Massachusetts, continues to meet and engage in offshore wind issues.

[2] The HWG is made up of NGOs, scientists, agencies and other interested parties. Early meetings addressed issues such as marine mammal and avian use of the potential wind areas. The HWG, convened by the State of Massachusetts, continues to meet and engage in offshore wind issues.

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reasonable proximity to multiple grid connection locations in an area of high electrical load and a need for new generation capacity.

c. Lease Area OCS-A 0522

Lease Area OCS-A 0522 is located approximately 24 – 44 NM south of Nantucket. It comprises more than 330 sq. mi and is approximately 18 NM wide and 12 NM long. Water depths range from about 100 – 198 ft. As with Lease Area OCS-A 0501, Lease Area OCS-A 0522 has high wind speeds, excellent seafloor conditions, moderate water depths, and reasonable proximity to multiple grid connection locations in an area of high electrical load and a need for new generation capacity.

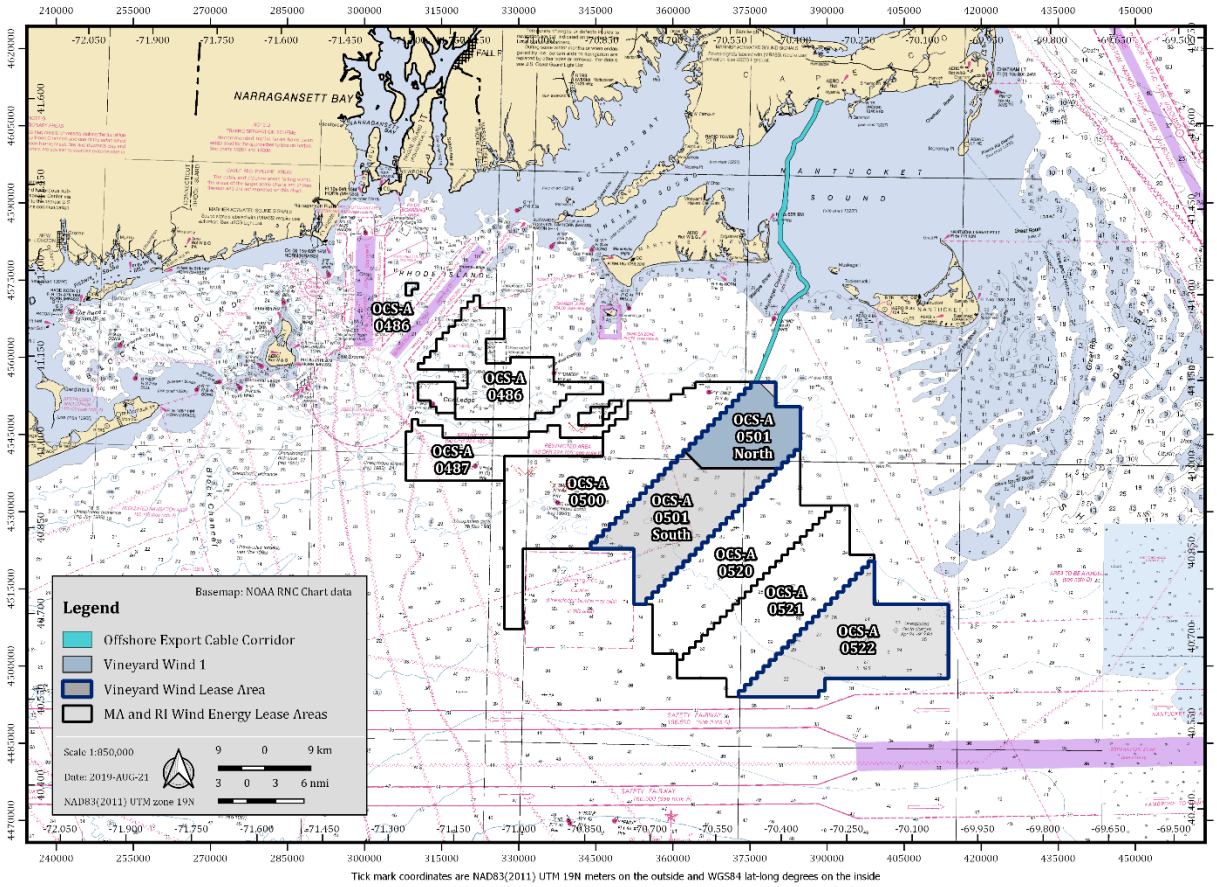

Figure 2.1. Chart of Lease Areas and planned cable corridor route for Vineyard Wind 1.

III. Vineyard Wind's Offshore Wind Projects

a. Overview

Vineyard Wind is developing the nation's first utility-scale offshore wind energy project—Vineyard Wind 1—off the coast of Massachusetts within the northern portion of Lease Area OCS-A 0501. As further described below, Vineyard Wind is also planning projects in the southern portion of Lease Area OCS-A 0501 and in Lease Area OCS-A 0522.

b. Vineyard Wind 1

Vineyard Wind's first offshore wind project is Vineyard Wind 1, which is an 800 MW facility that will be located in the northern portion of Lease Area OCS-A 0501. The project site is approximately 118 sq. mi in size with water depths ranging from 121 – 162 feet. In May 2018, Vineyard Wind 1 was awarded long-term contracts with Massachusetts electric distribution companies and is on track to be the first utility-scale offshore wind project in the US. Once operational, the project will generate clean, renewable, cost-competitive energy for over 400,000 homes and businesses across the Commonwealth, while reducing carbon emissions by over 1.6 million tons per year.

c. Park City Wind

Vineyard Wind's second offshore wind project, named Park City Wind, is an 804 MW facility that will be located in the central portion of Lease Area OCS-A 0501. In December 2019, the Connecticut Department of Energy and Environmental Protection awarded long-term contracts with Connecticut electric distribution companies. Once operational, Park City Wind will deliver approximately 3.7 million megawatt hours of electricity per year, enough to power approximately 400,000 Connecticut households, through a grid interconnection in West Barnstable, Massachusetts.

d. Future Vineyard Wind projects

Vineyard Wind is developing additional projects in the remaining portion of the Lease Area OCS-A 0501 and in Lease Area OCS-A 0522 and is seeking to secure long-term contracts for these projects through state-led energy procurements. For these projects, the proposed wind turbine layout will be set in an east to west, north to south 1x1 NM grid layout, based on fishermen input. As these and all other Vineyard Wind projects moves forward, the company will continue to work to strengthen its communication between potentially affected fishermen and fishery organizations during design, development, construction, operation, and final decommissioning project phases.

IV. Fisheries Communication Plan Objectives and Strategy

a. Objectives

The purpose of the FCP is to define outreach and engagement to potentially affected fishing interests during design, development, construction, operation, and final decommissioning of offshore wind projects, with seven main objectives:

1. Enhance the safety of all who work on the ocean in the wind farms, cable corridors, and landfall sites.
2. Seek stakeholder concerns and strive for open, transparent communication so as to avoid conflicts before they develop, and quickly and fairly resolve conflicts that do develop.
3. Quantify and avoid, minimize and when warranted mitigate adverse impacts on fisheries, and inform appropriate measures for mitigation.
4. Understand, as fully as possible, historic, current, and potential fisheries in the affected areas.
5. Identify gaps in information relating to fish and fisheries to inform research and monitoring strategies.
6. Demonstrate decisions, that may impact the fishing industry, are based on the best available and most credible information, recognizing that information gathering is an on-going iterative process.
7. Facilitate a professional co-existence of these two offshore industries, in which both industries can prosper on a long-term basis.

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b. Strategy

The foundation for achieving these objectives will be built on Vineyard Wind's existing relationships with the fishing communities, cultivated since 2010, and to continuously work towards trusted and mutually respectful lines of communications with the diverse fishing communities of the region. Regular, frequent, and open consultation is primary to ensuring all parties are well informed and can work towards the shared objective of maintaining thriving fisheries alongside offshore wind development in the region.

This FCP is based on best practice guidance and has improved with input from the fishing industry through feedback and consultation. Best practice guidance from other resources includes but is not limited to:

- Guidelines for Information Requirements for a Renewable Energy Construction and Operations Plan, Attachment A – Version 3.0, BOEM April 2016
- Fishing Liaison with Offshore Wind and Wet Renewables Group (FLOWW) Best Practice Guidance for Offshore Renewables Developments: Recommendations for Fisheries Liaison, January 2014
- Development of Mitigation Measures to Address Potential Use Conflicts between Commercial Wind Energy Lessees/Grantees and Commercial Fishermen on the Atlantic Outer Continental Shelf, BOEM 2014 – 654
- Fishing and Submarine Cables Working Together – International Cable Protection Committee, February 2009, Second Edition
- Options for Cooperation between Commercial Fishing and Offshore Wind Energy Industries: A review of relevant tools and best practices, SeaPlan November 2015
- Commercial Fisheries Mitigation Strategy – Developing Wind Energy in the Outer Moray Firth, Moray offshore renewables ltd 2003
- Oregon's Fishermen's Cable Committee

V. Fisheries Outreach Team

a. Overview

Fisheries communication is conducted through several roles including Fisheries Representatives (FR) and Fisheries Liaisons (FL). Vineyard Wind has hired two FLs and a number of FRs who have been actively engaged with the fishing industry regarding the Vineyard Wind project since 2010. Details describing the different roles and responsibilities of the FL and FR are included in Appendix 1 and 2, respectively. Below is a graphic explaining the communication channel relationship between the FLs and the FRs. Contact details for the FLs and FRs can be found in the Section V.b. and Section V.c.

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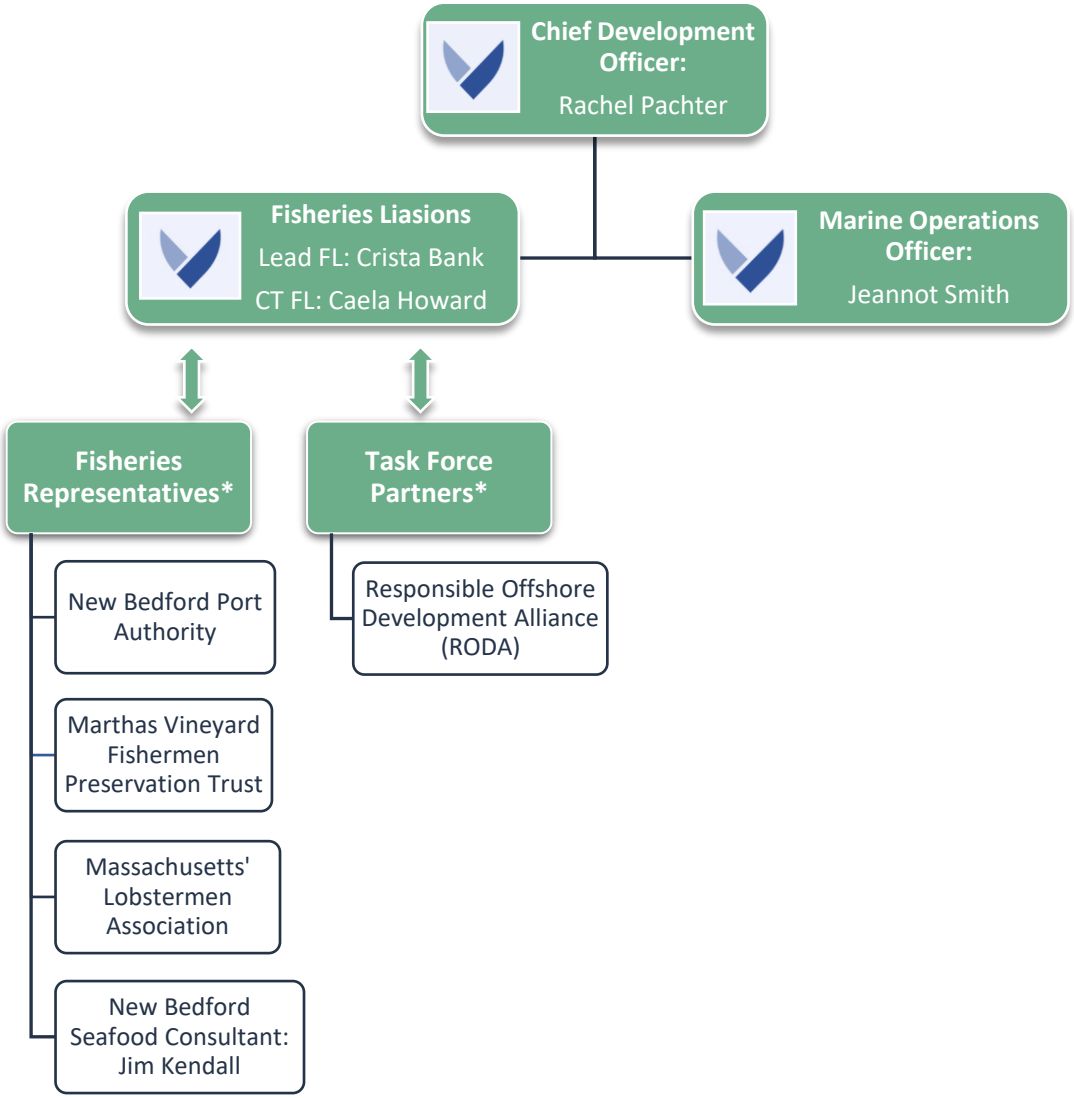
Vineyard Wind Fisheries Outreach Organization Matrix

- **The Vineyard Wind Fisheries Liaisons (FL) are employed by Vineyard Wind and reports directly to the Vineyard Wind Chief Development Officer. The FLs are responsible for overall implementation of the communications plan, in particular communicating project plans and activities that might impact the fishing industry pre, during, and post construction activities of the offshore wind farm and reporting interactions or concerns from the industry to the Chief Development Officer.**

- **The Fishery Representatives (FR) do not work on behalf of Vineyard Wind, but rather represent their respective fishing communities to Vineyard Wind. The FRs collect and report information about fishing industry activities and concerns to the FL as well as collect and relay accurate/relevant project information to the fishing community from the FLs.**

- **The Marine Operations Officer (MOO) is responsible for safe marine operations by Vineyard Wind, and ensuring that Vineyard Wind is a good neighbor generally while on the water. As such, there is frequent interaction, information exchange, and coordination between the MOO and the FLs.**



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The FR represents a particular fishery industry, organization, gear type, port, region, state, or sector(s), and is responsible for communicating concerns, issues, and other input to the project from development and pre-construction into Operation and Maintenance through to the decommissioning of the project. Typically, the FR is an active fisherman, or group representing active fishermen, within the region, fishery, state, or sector they represent. While FRs are compensated for their time and expenses by the project, their duty is to the fishing region, industry, organization, gear-type, or sector they represent. FRs are solicited through a fair and equitable process by the FLs who ensures these individuals or organizations adequately and fairly represent their respective industry, gear type, port, or region and have the support of the fisheries stakeholders they represent.

The FLs facilitates the work of the FRs by serving as a knowledgeable point of contact to which the FRs can efficiently and effectively communicate. The FLs also communicate across fishery communities and regions, inside and outside of the FR network, in order to educate and disseminate vital information regarding the project to fishermen and to receive input back to the project. The FLs work to validate fisheries information through cross-referencing among data sources.

The FLs seeks to:

- develop relationships and direct lines of communication with individuals that are representative of all potentially impacted fishing regions, industries, and interests;
- understand and convey current fishing industry concerns and feedback to the Vineyard Wind development team in order to identify and work towards solutions, as needed;
- identify and engage new FRs;
- confirm appropriate identification of potentially affected fisheries; and
- develop communication methods and tools.

The FLs also work with the FRs and scientists to develop measures to reduce potential impacts to fisheries before any impacts may occur and develop resources and potential methods to monitor fisheries species and potential changes in species abundance and distribution pre/during/post construction. The FL is responsible for implementing this plan and updating it at least annually or as needed.

The FLs and FRs will work together to review, evaluate and improve the effectiveness of the outreach and two-way communication. Vineyard Wind will review these methods quarterly. The FLs and the FRs will also report progress to the Bureau of Ocean Energy Management and National Marine Fisheries Service.

b. Fisheries Liaison

Currently, Crista Bank and Caela Howard serve as Vineyard Wind FLs. Crista Bank serves as the lead fishery liaison. Caela Howard is a FL focused on the Connecticut and New York fishing community. The FL is employed by Vineyard Wind and works on behalf of the project. Crista and Caela's contact information, which is provided below, is posted on Vineyard Wind's website at www.vineyardwind.com/fisheries.

FL Name: Crista Bank
Phone: 508-525-0421
Email: cbank@vineyardwind.com

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FL Name: Caela Howard
Phone: 508-386-9832
Email: choward@vineyardwind.com

The FLs are available by phone, email, text, and through our website for ongoing communication. There is a specific form on our website (https://www.vineyardwind.com/fisheries) for fishermen to fill out their contact information and concerns. The form is sent directly to the FLs' email, and a follow-up phone call and/or email is made shortly after receipt of the contact information.

A full job description for the FL is included as Appendix 1.

c. Fisheries Representatives

The current list of FRs, along with contact information, is provided below and posted on Vineyard Wind's website:

FR Name: New Bedford Seafood Consulting
Contact: Jim Kendall
Phone: 508-287-2010 - cell
Email: nbsc@comcast.net

FR Name: New Bedford Port Authority
Contact: Ed Washburn
Phone: 508-961-3000

FR Name: Massachusetts Lobster Association
Contact: Beth Casoni
Phone: 781-545-6984
Email: beth.casoni@lobstermen.com

FR Name: Martha's Vineyard Fishermen's Preservation Trust
Contact: Shelley Edmundson
Phone: 508-687-0344
Email: mvfishermen@gmail.com

Full roles and responsibilities for the FR are included as Appendix 2. FR biographies can be found in Appendix 3.

Vineyard Wind continuously seeks additional FRs to provide regular input to the project development work. Specifically, at this time, Vineyard Wind is seeking FRs in Rhode Island, Connecticut, and New York. If you are interested or have suggestions, please contact Vineyard Wind's FLS Crista and Caela (see above).

d. RODA Joint Industry Task Force Member

Vineyard Wind is a member of RODA's Joint Industry Task force. This group was created to improve communications between the commercial fishing industry and offshore wind energy developers. The goal is to provide a more structured process to explore improved approaches to project siting, design, and

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operations between the two industries. RODA is a broad membership-based coalition of fishing industry associations and fishing companies.

Name:	Responsible Offshore Development Alliance
Contact:	Annie Hawkins
Phone:	617 359-2576
Email:	annie@rodafisheries.org

In addition to the formal FR roles and participation in RODA's joint industry task force, several organizations and working groups provide direct access to fishermen and have been helpful in disseminating information and providing feedback. Vineyard Wind strives to provide project updates to these organization and working groups regularly. For example, Vineyard Wind has committed to meeting with the Connecticut Commission on Environmental standards on a quarterly basis to provide updates and discuss issues related to the Park City Wind project.

These groups include, but are not limited to:

- NYSERDA Fisheries Technical Working Group (F-TWG)
- Massachusetts Fisheries Working Group
- Rhode Island Fisheries Advisory Board (FAB)
- Massachusetts Department of Marine Fisheries
- Rhode Island Department of Environmental Management
- New England Fishery Management Council
- Mid-Atlantic Fishery Management Council
- Commercial Fisheries Center of Rhode Island
- Long Island Commercial Fishing Association
- Atlantic States Marine Fisheries Commission
- Connecticut Commission on Environmental Standards

Vineyard Wind is committed to working with fishermen and fishing organizations. If you would like to receive emails or text message updates and mariner notices please email the project at fisheries@vineyardwind.com.

VI. Stakeholder Identification and Outreach

a. Overview

Vineyard Wind has proactively engaged with potentially affected fisheries throughout the development of its lease areas. Vineyard Wind regularly communicates with stakeholders and has incorporated input from stakeholders into the project's design, communication plans, and mitigation measures. Vineyard Wind will maintain frequent dialogue with stakeholders as the Project moves forward.

b. Potentially Affected Fisheries

Based on Vineyard Wind's outreach and experience to-date, the fisheries most likely to potentially be affected in Lease Area OCS-A 0501 during the construction, operation and decommissioning of the projects are:

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- Nantucket Sound: conch, squid, surf clam, fluke, sea bass, demersal recreational
- Muskeget Channel: Surf Clam, commercial sea bass, demersal recreational
- Lease Areas: Surf clam, squid, fluke, mackerel, whiting, butterfish, scup, monkfish, lobster, scallop, large pelagic recreational

Based on Vineyard Wind's outreach and experience to-date, the fisheries most likely to potentially be affected in Lease Area OCS-A 0522 during the construction, operation, and decommissioning of the projects are:

- Mackerel, whiting, butterfish, Jonah crab, lobster, scallop, surf clam, large pelagic recreational

These groups are prioritized during the implementation of this plan. Regular reviews are used to modify or confirm this prioritization, as needed.

c. Outreach Approach and Tactics

Vineyard Wind employs a variety of outreach and engagement approaches to communicate and maintain relationships with fisheries stakeholders. These include informal conversations with existing contacts, expanding the company's network of FRs, attending fishing industry trade events and recreational fishing shows, presenting at commercial and recreational fishing group meetings, and working with the various associations and organizations that represent fishing interests. Vineyard Wind understands that some fishermen do not feel adequately represented by fishing organizations, or FRs, and therefore prefer to share information and concerns individually and through different channels of communication. Vineyard Wind is committed to recognizing that individual concerns are just as important as group concerns and will continue efforts to respect anonymity.

Target Audience	Principle Channels	Supporting Tactics
Fishing sectors, fishing region, seasonal fisheries, specific fishery gear types, fishermen at sea, charter fishermen, fishing ports	• Fisheries Representatives (FRs) and Fisheries Liaisons (FLs) • Other fishermen • Port Agents • Fish houses • Sector Managers • Media – newspapers, internet, e-mail subscriptions, flyers, and thumb-drives • Fishing organizations, alliances, partnerships, commissions, coalitions, councils, state agencies, federal agencies, and advocacy groups • Local elected officials • Friends and family • Employers	• Access to information via internet, e-mail lists (state and Vineyard Wind), and social media • Industry specific publications or e-mails • Trade magazines • 24-hour phone service for up-to-date project info and emergencies. • Project specific radio alerts to fishermen at sea • FLs contact info on website • Attending and speaking at fishermen working group meetings • Fishermen open house information meetings • FL/FR communication channels • Clear daily two-way communication channels between fishery/fishermen and project during construction

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Target Audience	Principle Channels	Supporting Tactics
Recreational fisherman, recreational boaters	• Same as above • Bait shops	• Access to information via Vineyard Wind's website, social media, and newsletters • Advertisements through recreational fishing magazines and websites • FL contact info on website • Attending and speaking at recreational fishing group meetings • Fishermen open house information meetings.

VII. Communication Protocols

a. Overview

Communication is a high priority for Vineyard Wind. It is important to ensure fishermen are aware of the activities in Vineyard Wind's lease areas and along the cable route and feel comfortable to reach out with questions and concerns. It is also important to communicate to the Vineyard Wind survey vessels the expected fishing activities in and around the lease areas, what to be aware of, and how to handle any interactions with the fishing fleet. The protocols outlined below are procedures Vineyard Wind has implemented to date and will continue to adjust and adapt protocols as needed. Similar protocols will be standardized and implemented during project construction.

b. Communication and Notification to Fishing Industry Prior to and During Offshore Work

Our communication strategy, which includes recommendations from fishermen and adopts protocols the MA DMF uses for their biannual inshore trawl survey, are as follows:

1. Send Notices to Mariners to Coast Guard
2. Send notifications with all survey vessel identifying features to Vineyard Wind fisheries email list
3. Publicize through organization websites and newsletters (MA DMF, RI DEM, MLA, sector managers, NOAA port agents, Fishing Support Services navigators, etc.)
4. Publicize through skymate and other current Vessel Monitoring System (VMS) email alerts
5. Maintain a list of fishermen who wish to receive updates via email or text
6. One week before offshore work begins send out an email/text to fixed gear permit holders reminding them that offshore work is about to begin
7. Three days before offshore work begins send out an email/text to fixed gear permit holders that offshore work is on schedule
8. During offshore work send out a regular email updates detailing progress, both for completed areas and areas next on the list. (DMF, MLA, NBPA, MVFPT).
9. Implement a text notification system where fishermen can sign up to receive daily texts of offshore work progress (i.e. more frequently than general updates, and specific to an area or time of work)
10. Attend fisheries trade shows and outreach events to encourage fishermen to sign up for alerts regarding the project's offshore work

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11. Vineyard Wind will hire an OFL, preferably a fisherman, to be on project vessels to be on the lookout for fixed gear and fishing activity in the area and to help facilitate communication via VHF radio during project activities.
12. Vineyard Wind will hire, with help from FRs, local fisherman respected among the fleet to help spread the word exactly when the project vessels will be in their immediate area, relay any work zone areas to stay clear of, and communicate when vessels have left the area.
13. Maintain an email (fisheries@vineyardwind.com) that is monitored by a team, so as to ensure timely response even if the FLs are not immediately available. A fisheries team dedicated cell phone number will also be established.

In addition to the protocols listed above, in the time leading up to offshore construction we will hold regular meetings with fishing groups that will be affected during the construction phase to go over the timing of anticipated work, what to expect during construction, and how to best communicate. We will work with our FRs to help coordinate and reach the right fishermen to attend the meetings. Some of the small groups we've identified to date include squid vessels in Nantucket Sound, the conch fleet from the Cape and islands, state permitted clam vessels, and the squid fleet from Pt. Judith.

Additional groups or individuals who want to stay updated on vessel activity and construction plans please visit our website and sign up for email and /or text alerts at fisheries@vineyardwind.com.

c. Communication and Fisheries Protocols on Geological Survey Vessels Working for Vineyard Wind

To help communicate with the fishing industry, Vineyard Wind will have an Onboard Fisheries Liaison (OFL) to assist the Captain with communication and to document fishing gear in the area to help avoid interactions, as described above. The OFL's role is, simply put, to continue the role of the FL offshore, so that there is effective communication on-site, in real time. The OFL reports to the FLs, and serves as the FL's "eyes, ears, and voice" during offshore operations. The OFL records observed fisheries activities, ensures vessel operations are compliant with this FCP and other fisheries related policies, and in particular seeks to avoid negative fisheries interactions by looking out for fixed gear and establishing communications (usually by VHF radio) with fishing vessels when appropriate. If there is a negative fisheries interaction, the OFL works with the FLs and relevant FRs to quickly resolve the matter safely, fairly, and efficiently. Typically, the OFL is contracted for the duration of a vessel's operations for Vineyard Wind, and is an individual familiar with marine operations and fishing practices in the region. Vineyard Wind is currently in the process of establishing a mechanism to hire fishermen, preferably fixed gear fishermen, as OFLs.

Before the survey trip begins, the FL and OFL attends the pre-trip meetings with captain, and crew to go over specific fisheries active in the area. If the FL has known coordinates of fixed gear in the area, the information is shared with the captain and OFL. Captain and crew are instructed to communicate respectfully with fishing industries and to work around fishing gear to the greatest extent practicable.

Captain, crew chief, VW client rep, and OFL sign off on communication protocols and gear interaction protocols outlined below:

Vineyard Wind Protocols for Survey Vessel Captains:

1) Captains establish an agreed upon safety zone to relay to fishing vessels in the area
2) Any communication with fishing vessels is reported to the OFL and will be conducted in a professional manner
3) Preferably the OFL will have their own VHF unit to monitor radio communications and communicate directly with fishermen, as may be necessary or agreed upon with the Captain, especially if language or accent may be a hinderance to communications with fishermen
4) Alert OFL to all gear interactions at the time it occurs, waking the OFL if necessary
5) Have one GPS unit in the wheelhouse set up for LORAN coordinates
6) Work around fishing gear to the greatest extent practicable
7) Plot fixed gear locations while onboard fisheries liaison is off watch and relay information when back on watch

Vineyard Wind Fixed Gear Interaction Protocols for Survey Vessels:

If an incident between a survey vessel and static fishing gear does occur, the following outlines the roles and procedures for such an event:

ON BOARD

1) Immediately alert OFL (wake if off watch)
2) Fishing gear interaction is logged in daily vessel report, recording time, location, photos, etc.
3) If feasible and safe, Vineyard Wind will attach a float or buoy to any gear that is brought on board, moved, or if a line was cut, should the gear be returned or remain in the water. The buoy is intended to help the fishermen locate the gear, and is also marked with Vineyard Wind contact information so that communications can be readily established with the affected fishermen
4) GPS location and time of relocation is recorded
5) Buoy permit number and color is logged
6) Pictures are taken of the gear
7) FL on land is notified of incident as soon as possible

ON LAND

1) FL will cross reference buoy color and permit number with current fishing databases to identify owner of gear
2) If FL is unsuccessful in finding owner of gear, FL will give notice to FRs and other fishing organizations. If still unsuccessful in locating the owner, FL will send notice to the relevant state Environmental Police of gear entanglement
3) Once fisherman/owner of gear is identified, information regarding buoy location and timeline of interaction will be relayed
4) Follow up with fisherman to confirm gear was found
5) If gear is not found Gear Loss form will be filled out and processed

The above procedures will be updated prior to construction and will reflect any feedback and lessons learned on Vineyard Wind projects or learned from other project experiences.

d. Communication during Operations / Safety Management System

An important objective of this plan is to use fisheries communications to enhance safety of all those who work on the ocean in the project area through construction, operations, and decommissioning. Vineyard Wind's Safety Management System (SMS) will outline clear communication protocols and procedures for emergency events such as: collision of a vessel with a turbine structure, gear entanglement, damage to cabling by fishing activity, catastrophic failure of a turbine, or other event. Safety planning will be further elaborated in this plan and the SMS will be a publicly available document that is completed prior to the start of project construction. Tower lighting and marking will adhere to US Coast Guard, Federal Aviation Administration, and Bureau of Ocean Energy Management requirements.

VIII. Financial Compensation

a. Overview

Vineyard Wind is developing and implementing procedures for handling compensation to fishermen for potential gear loss and the loss or reduction of income to fishermen. The level of financial support requires detailed discussions between the impacted fishing community and Vineyard Wind. To start the discussions and gauge the possible economic loss to the fishing fleet Vineyard Wind hired an economist to look at different data sets of fisheries landing values and to produce an economic exposure report. These reports can be found on Vineyard Wind's **website:** www.vineyardwind.com.

b. Gear Loss / Damage

Any potential gear loss or damage from a VW survey vessel should be reported immediately to the FLs. We've heard from many fishermen and FRs that gear loss/damage claims should be simple and direct and be the same across lease holders. Vineyard Wind has not created an official gear loss/damage form yet, but is currently working with the other developers to design one in the hopes that a standardized form and protocol will be established soon. In the interim, the Massachusetts Department of Marine Fisheries has a standardized form that Vineyard Wind can also utilize to a large extent.

c. Lost Revenue

Vineyard Wind will also create a process for filing fishery compensation claims. A third-party fiduciary agent will handle claims, and a review board consisting of members from the fishing industry will assist with the claims process. Until this process is developed fishermen should make any such request through the FLs whose contact information can be found at www.vineyardwind.com/fisheries. If fishermen are displaced at any phase during the construction term, fishermen will be required to submit evidence of income and fishing location(s) to Vineyard Wind to be compensated.

IX. Fisheries Initiatives

a. Overview

Vineyard Wind takes the concerns of the fishing community seriously and understands that while the conversations between stakeholders are not always easy, it is necessary. We understand the time it takes to meet with us or attend working groups is potentially time away from fishing and we have offered compensation for participation in project specific meetings and will continue to do so, if appropriate and helpful to the process. We recognize that continued engagement with the fishing industry improves the overall project and although it seems slow at times, it improves the understanding between industries.

Some of the key initiatives Vineyard Wind has engaged in as a result of consultations with the fishing industry include, but are not limited to:

- Providing thumb drive electronic charts, showing Lease Area OCS-A 0501 and areas of offshore survey work to area fishermen.
- Including Loran navigation lines and closed areas on project charts to facilitate discussion of fishing activities in the area.
- Orienting the wind turbines in a regular grid pattern to allow for navigable uninterrupted travel in multiple directions (to avoid 'zig-zagging').
- Committing to east/west north/south 1 NM alignment
- Considering use of the largest commercially available wind turbines on the market in order to reduce overall project footprints and installation-related impacts
- Removing turbine locations along the 20-fathom contour
- Installing AIS on turbines and Electrical Service Platforms (ESPs) to improve navigation and safety.
- Creating protocols for project vessels to adhere to when encountering fishing activity
- Dedicating a page on Vineyard Wind's website for fishermen (www.vineyardwind.com/fisheries) to find the latest information on surveys and construction, and sign up to receive email or text message alert updates
- Hosting port hours in MA, RI, CT and NY to provide fishermen on the docks access to FLs and project information

b. Fisheries Research

FISHERIES RESEARCH

Vineyard Wind understands how important science and research is to the fishing community. This is one of the primary reasons why Vineyard Wind created an extensive fisheries science program. Vineyard Wind currently provides more than $2 million in annual funding to fisheries research making it the largest offshore wind developer supported program in the US.

The Vineyard Wind fisheries science program prioritizes:

- Establishing relationships with academic institutions and research organizations that engage in collaborative fisheries research;
- Defining research objectives with input from fisheries stakeholders;
- Supporting a regional approach to fisheries research for offshore wind; and
- Making data easily accessible and publicly available.

For Massachusetts, Vineyard Wind has taken steps to address industry concerns by partnering with UMass Dartmouth's School for Marine Sciences and Technology (SMAST), an academic institution trusted throughout the fishing community, and the New England Aquarium. For Connecticut, Vineyard Wind is currently developing partnerships with the University of Connecticut Department of Marine Sciences and Mystic Aquarium.

A video trawl survey of Vineyard Wind's Lease Area OCS-A 0501 and an adjacent control area was completed in October 2018 by researchers from SMAST on the New Bedford-based Fishing Vessel Justice. The goal was to gather preliminary data and to determine the best methods for pre/during/post

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construction studies in the first project area. This video trawl was an innovative survey method that SMAST scientists wanted to test for use in surveys in the wind energy areas. The result of the test was that further improvements would be needed for the method to be effective, given the soft sea-bottom in the area causing sediment dispersal and hindering video observations.

Vineyard Wind also contracted with SMAST to actively engage with the fishing industry to provide feedback for the pre/during/post construction studies of the project. Four workshops were held in different ports during November and December of 2018 (New Bedford, MA; Kingston, RI; Chatham, MA; and West Tisbury, MA) to share results from the video trawl survey, discuss other potential survey methods, and to work with the fishing industry to help identify research questions for species of concern, both site-specific and regionally. Just over 100 people attended the workshops including over 75 active fishermen. Based on the feedback from the fishing industry, and state and federal regulators, SMAST produced a report with their research recommendations in early 2019. The complete report is available at https://www.vineyardwind.com/document-room (listed under Fisheries/Fisheries Studies). Vineyard Wind has adopted the recommendations and surveys began in Spring of 2019, which include a trawl survey, plankton survey, drop camera survey of macroinvertebrates and benthic communities, and a ventless lobster trap survey. The survey areas for trawl and drop camera include all lease areas in order to support baseline data collection for future projects. Data collected and reports from these studies will be used in future permit applications and will be made public through our website and shared with agencies and other institutions.

Recreational fishermen raised concerns that highly migratory species were not addressed in the SMAST research recommendations. Vineyard Wind reached out to recreational fishing groups and individual fishermen to understand their concerns and brainstorm what could be done to better understand recreational fishing in the area and potential impacts. This led to partnering with the New England Aquarium to initiate a study to document highly migratory species presence across all MA/RI lease areas with help from the pelagic recreational fleet. The results of this effort will be included in future permit applications and made publicly available through our website and shared with agencies and academic institutions.

Data Sharing

The survey and monitoring work Vineyard Wind will conduct will generate a substantial body of environmental, fisheries, and other data, all of which will be available in the public domain in a manner consistent with other academic research. Much of the data is publicly available through the federal and state permitting process, as well as reports or academic publications that may come out of the survey or monitoring work. Vineyard Wind also plans to make all fisheries monitoring data generated by the Project publicly available on its website. For all other environmental and fisheries data, Vineyard Wind will explore cost-effective and appropriate ways to store and make data publicly available and easy to access. Through ROSA and a Regional Science Entity (RSE), Vineyard Wind will work with stakeholders and neighboring developers to find ways to streamline and standardize available data across all offshore efforts.

Responsible Offshore Science Alliance

The need for a regional science approach to offshore wind development is an important component to understand how this new industry may be affecting fisheries and the environment. The absence of a regional science framework has made it challenging for developers and concerned stakeholders to design appropriate studies that can provide consistency across all lease areas. The organization Responsible

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Offshore Science Alliance (ROSA) is an attempt to fill that void and bring developers, fishing industry, state, and federal agencies together to develop a regional science framework. Vineyard Wind was part of the working group to get the organization launched, and is currently on the ROSA board of this recently established group that is committed to regional fisheries science.

In engaging SMAST to design pre/during/post-construction studies, as described above, Vineyard Wind asked SMAST (at the suggestion of a comment from NMFS) to consider how these studies might contribute to both a regional and long-term approach to fisheries studies. The study protocol that was developed is considered to be "modular and nested," allowing specific project studies to contribute to larger regional and longer-term study efforts.

c. Opportunities

At this stage, many in the fishing industry see offshore wind as a threat to their business. However, it is in the developer's best interest for the fishing industry to thrive and grow. Vineyard Wind is in support of research development to help the fishing industry adjust to the changes offshore wind may bring, either by testing different gear to target species in the wind farm, or testing different technologies to fish more efficiently among turbines.

Vineyard Wind is not proposing to replace fishing jobs with wind development jobs, but there can be opportunities for fishing vessel owners, individual fishermen, and shore side businesses. Some examples include:

1) Fishing vessels as safety zone vessels and scout vessels during construction
2) Fishermen owned shore support businesses
    a. sign up by emailing b2b@vineyardwind.com to be listed on the supply chain network and to learn about supply chain events
    b. attend Meet the Buyer events that are intended to introduce local businesses to wind project contractors
3) Fishermen as OFLs on project vessels to help communicate with fishermen working in the vicinity.
4) Scholarship availability for fishermen and family members to get free training through the local community colleges and MMA for offshore wind technician certifications

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Appendix 1 – Fisheries Liaison Roles and Responsibilities

The role & responsibilities of the Fisheries Liaison (FL) include but are not limited to:

- The FL represents the project to fishermen, on behalf of Vineyard Wind, and is the principal contact to the fishing community
- The FL is not someone currently actively engaged in commercial fishing
- The FL is responsible for the overall effective implementation of the fisheries communications plan
- During project pre-construction development, the FL will communicate directly with FRs via email, in person meetings, and conference calls and will provide monthly written reports to management on this outreach. Project management will provide feedback, when necessary, to ensure timely dissemination of information regarding all project activities.
- During project construction, the FL will have direct access to the project management team in order to ensure updated project information is available to the fishing community. It should be noted that changes may take place in real time during construction. Vineyard Wind will endeavor to disseminate that information as quickly and widely as possible either through our website or a 24-hour phone line.
- Refine and enhance this communications plan, given learning experiences and new information received.
- Ensure the project's fisheries communication and communication strategy is effective across all relevant fishing communities, organizations, sectors, regions/ports, seasons, and gear types.
- Establish a clear line of communication with entities from affected fishing regions to ensure all states where the fishing industry could be impacted are well informed during all phases of development and through decommissioning.
- Maintain awareness of ongoing fishery management action development by the New England and Mid-Atlantic Fishery Management Councils and the Atlantic States Fisheries Commission.
- Help develop and refine communication materials in addition to communication plans to ensure effective messaging.
- Develop or recommend mitigation measures.
- Provide a record of relevant project information and communications, including presentations and individual conversations, but maintaining confidentiality as appropriate.
- Participate in BOEM, F-TWG, FAB and MA Fisheries Working Group Meetings
- Maintain a fishery stakeholder database and contacts list for all identified fisheries operating within the vicinity of the offshore development area and export cable corridor throughout all stages of the project.
- Investigate and follow-up on complaints and concerns received or heard about.
- The FL shall have a direct line of communication to the project company's senior management, through which to make recommendations for improvement and address complaints, concerns, and other input received.
- Pro-actively make fisheries aware of upcoming efforts and activities related to the project so as to facilitate shared use of the lease area(s).
- Be available to meet with fishermen representatives in person, via email or social media, phone, or radio outside of regular business hours and on weekends.
- Participate in weekly calls with the project team on conversations, activities, suggestions, questions, and concerns from the fishing community about the project.
- Coordinate and work with FRs, who are active fishermen and serve to facilitate communications between the project and specific fisheries sectors.

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- Identify potential FRs and establish working relations; contract OFLs as needed.
- Attend meetings with fisheries groups, regulators, non-government organizations, policy makers, contractors working on the project, and other offshore wind project developers to best ensure shared use of the lease area(s) and good, working relations among the offshore wind industry, fisheries, government, and other stakeholders.
- Supervise and manage contracts as necessary for the effective fisheries surveys and science work undertaken by or on behalf of Vineyard Wind, and participate and provide input into relevant fisheries science initiatives.

Appendix 2 – Fisheries Representatives Roles and Responsibilities

An individual or group's time serving as the Fisheries Representative (FR) will be compensated by Vineyard Wind, but the FR is considered to be an independent, third party agent, serving the fisheries interests, not the project's interests. Role & responsibilities of FRs include but are not limited to:

- Be available to meet with fellow fishermen in person or via email, social media, phone, or radio.
- Pro-actively make the project team aware of fisheries practices, upcoming efforts, and seasons to facilitate shared use of lease area(s).
- Meet directly with the project team at least every quarter to help evaluate communication and outreach efforts, and learn more about project plans.
- Provide a monthly email report to the project team on conversations, activities, suggestions, questions, and concerns from the fishing community about the project; communicate with project management in real time, if needed.
- On occasion, FRs may be asked to serve as guides and points of contact during a particular activity offshore. This may involve, for example, using their own vessel as a guide or scout vessel to the survey vessels, helping to monitor for fishing activities in the area of operation, and communicating with fishing vessels working in the same area.
- Communicate directly with FLs for the purpose of effectively disseminating project information to the FR's constituency.
- Disseminate project information to the fishermen who are based in or visit ports in Massachusetts, Rhode Island, Connecticut, New Jersey and New York and may fish in the Vineyard Wind lease areas and cable route area(s).
- Be available and accessible to their represented fishery.
- Communicate to FLs any potential conflicts regarding surveys and project development.
- Assist FL to understand fishing activity in Vineyard Wind's lease areas and submarine cable routes (e.g. gear types, specific fisheries).
- Work with FLs to develop and refine fisheries communication plan(s).
- Communication planning, identification of communication methods and frequency, outreach meeting facilitation and support, and other tasks, as needed, for engaging local fishermen during all project phases to ensure effective messaging.
- FR will meet directly with the FLs and project management every quarter and evaluate communication and outreach efforts and review quarterly outreach and mitigation measures employed by Vineyard Wind
- Maintain awareness of ongoing fishery management action development by the New England and Mid-Atlantic Fishery Management Councils and the Atlantic States Fisheries Commission.
- Provide input to, or recommend, mitigation measures.
- Participate in working group meetings, such as the Massachusetts Fisheries Working Group, when appropriate for the fishery they represent.

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Appendix 3 – Fisheries Representatives

New Bedford Seafood Consulting

Mr. Kendall is the Executive Director of New Bedford Seafood Consulting. He is a former scallop fisherman with over 50 years of experience in the fishing industry and with fisheries issues. Mr. Kendall was a member of a research team for the Commercial Fisheries Research Foundation that focused on discard mortality rates of Southern New England flatfish. Mr. Kendall served as a New England Fishery Management Council member for numerous terms. He has also served on the Massachusetts Fisheries Recovery Commission, the New England Commercial Fishing Law Enforcement Working Group, and is a founding member of the Massachusetts Fishermen's Partnership. Mr. Kendall was featured in the book A Doryman's Reflection: A Fisherman's Life. Additionally, Mr. Kendall has been interviewed on WBSM radio and by the New Bedford Standard Times, the Gloucester Times, and the Boston Globe on fisheries issues.

New Bedford Port Authority

The New Bedford Port Authority (NBPA) is the governing body for New Bedford's harbor and city-owned waterfront properties. It is chaired by the Mayor of New Bedford with six other members. The role of the NBPA is to support the Port of New Bedford by continually upgrading port resources; preserving its spot as the #1 U.S. fishing port; and expanding the New Bedford economy.

The NBPA oversees all the commercial and recreational vessel activity within New Bedford city limits, incorporating the city's entire coastline and harbor.

Massachusetts Lobstermen's Association

The Massachusetts Lobstermen's Association is a member-driven organization that accepts and supports the interdependence of species conservation and the members' collective economic interests. The Massachusetts Lobstermen's Association was established in 1963 by the fishermen, for the fishermen, and is presently one of the leading commercial fishing industry associations in New England. On behalf of the 1,800 members, the MLA works to maintain both the industry and the resource. The MLA strives to be proactive on issues affecting the lobster industry and is active in the management process at both the state and federal levels. The MLA communicates with its members through a monthly newspaper, weekly email, Facebook, Twitter and attendance at meetings. For the past 54 years, the MLA has become a trustworthy voice for the industry on important issues, and is looked to by both the fishing industry and the management community

The Martha's Vineyard Fishermen's Preservation Trust

The Martha's Vineyard Fishermen's Preservation Trust is a Massachusetts 501(c)(3) non-profit corporation established in 2011 to: (i) Preserve the historic fishing fleets, communities, and economies of Martha's Vineyard; (ii) Protect the marine populations and fishing grounds off the coast of Martha's Vineyard and New England; (iii) Educate the community about its local fisheries.

VINEYARD WIND

ATTACHMENT TO SECTION 7

Attachment 7.5-1: Environmental Mitigation Plan

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VINEYARD WIND

ATTACHMENT TO SECTION 7

Attachment 7.6-1: Environmental Justice Impact Assessment

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ATTACHMENT TO SECTION 7

Attachment 7.7-1: Community Engagement Plan

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ATTACHMENT TO SECTION 7

Attachment 7.7-2: Community Letters of Support

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ATTACHMENT TO SECTION 7

Attachment 7.7-3: Vineyard Wind South COP Comments

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Attachment 7.7-3 Vineyard Wind South COP Comments

SELECT COMMENTS FROM EIS SCOPING PROCESS PUBLIC COMMENT PERIOD

OVERVIEW

On June 30, 2021, the Bureau of Ocean Energy Management (BOEM) issued a Notice of Intent regarding its plans to prepare an Environmental Impact Statement (EIS) for the review of a Construction and Operations Plan (COP) submitted by Vineyard Wind LLC for Vineyard Wind South, which is comprised of Park City Wind and Vineyard Wind 2. The NOI opened a public comment period, which concluded on July 30, 2021. A total of 83 written and oral comments were made public as of August 25, 2021, of which approximately 78% were supportive, 5% were opposing, and 17% were unknown. A sample of supportive written comments received by BOEM is provided below, followed by oral comments beginning on page 12.

WRITTEN COMMENTS

Carl Borchert – Nantucket Resident

https://www.regulations.gov/comment/BOEM-2021-0047-0006

I write in support of the Vineyard Wind South Energy Projects. I live on Nantucket Island which is approximately 15-20 miles from the project site. Our island is particularly vulnerable to the negative effects of climate change such as more powerful storms, coastal flooding and sea level rise. Wind energy produces zero emissions of greenhouse gases such as carbon dioxide and methane. More and more scientific evidence points to fossil fuel burning as being responsible for major damage to the atmosphere by the release of carbon dioxide and methane. With a power rating at completion of all of its phases of 2,000 to 2,300 megawatts, Vineyard Wind South would displace over 2 million tons of CO2 per year and power about a million homes and businesses annually. This would be like taking almost 1 million cars off the road annually. Wind energy uses no water and requires no fuel. To our south of Nantucket are some of the strongest offshore breezes in New England. The capacity factor of the turbines would be in the area of 45-60% due to these strong offshore winds. In the summer during peak electricity demand from air conditioning the ocean breezes pick up in the afternoon and would power the grid when the demand is greatest. In conclusion I support Vineyard Wind South and clean renewable wind energy in general. It makes sense to build wind farms in New England offshore because of space constraints on land. I have toured offshore wind farms in Europe and they are very benign and out there at sea generating power for 20-25 years. It is time to phase out fossil fuel burning and phase in clean renewable energy like wind power to reduce emissions of greenhouse gasses and address the negative effects of climate change.

Susan Starkey – Barnstable Resident

https://www.regulations.gov/comment/BOEM-2021-0047-0009

As a Barnstable County stakeholder in this process, I want to voice my support for Vineyard Wind 2, Phase 2. Since the initial VW1 Project stakeholders were engaged and kept informed by the local staff of VW. I encourage them to continue this effort with further education of local

residents who will be impacted during the construction of the expanded cable corridor and the decision about which landing sites are best. I also appreciate all the consultations that VW and BOEM are doing and will continue to do to study and assess mitigation as well as the best design of ways to care for wildlife, marine life and ocean health.

Erik Anderson – Fisherman near Martha's Vineyard

https://www.regulations.gov/comment/BOEM-2021-0047-0003

I am writing to express my support for the Vineyard South Project. The Northeast US is in need of a transition to non fossil fuel energy production. As a residential consumer of electricity, I look forward to it being produced by offshore wind. Also as a recreational fisherman that uses the area south of Martha's Vineyard I support the installation of offshore wind turbines. I understand that commercial fisherman have concerns, but the recreational fishing industry will benefit in the potential increase of fish stocks due the habitat created by the turbine foundations.

Lindsay Crouch – Hyannis Resident

https://www.regulations.gov/comment/BOEM-2021-0047-0038

I'm writing in support of the Vineyard Wind South project. The region and the country very much need to transition away from fossil fuels in order to slow the progression of the effects of climate change, and investing in clean, renewable energy sources like wind that will create jobs and leave us less dependent on foreign oil for our power is the way to go. I know from previous experience with Vineyard Wind that they go above and beyond their due diligence when it comes to mitigating environmental impacts of the construction of the wind turbines as well as working with other stakeholders in the area so that the outcome is a net positive for the local surroundings. I very much want to see this project get approved and move forward. Thank you for considering my comment.

Paul Vigeant – Westport Resident

https://www.regulations.gov/comment/BOEM-2021-0047-0005

Excerpt:

My name is Paul L. Vigeant. I reside at 1380A Drift Road, Westport, Massachusetts, 02790 and want to express my support for the Construction Operating Plan (COP) submitted by Vineyard Wind for the proposed "Vineyard Wind South Project Offshore Massachusetts".

…

In developing its COP, Vineyard Wind has engaged in extensive community outreach with numerous ocean stakeholders, including both recreational and commercial fishing interests. Their proposed design and layout of the offshore wind farm includes the spatial distribution of towers in such a manner as to minimize the potential for adverse impacts on commercial and

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recreational fishing stakeholders. The proposed layout includes transit corridors through the wind farm to facilitate navigation and reduce the risks of collisions and other potentially catastrophic incidents.

…

Chris Katilus – Martha's Vineyard Resident

https://www.regulations.gov/comment/BOEM-2021-0047-0017

I am in support of Vineyard Wind South as a Martha's Vineyard homeowner and a concerned citizen. This project needs to be set in place to ensure our clean energy future. To meet our climate goals, BOEM should advance review of Vineyard Wind South (and other offshore wind proposals) promptly and predictably. The environmental review process should focus on positive impacts, including environment and climate, economic and energy benefits of these projects. Build on the long review of Vineyard Wind 1, and reinforce the standards from that project, including uniform layouts across projects, robust protections for marine mammals and other species, and valuable contributions to marine research.

Phil Rugile – Composite Prototyping Center / DBA Institute for Workforce Advancement

https://www.regulations.gov/comment/BOEM-2021-0047-0011

I am writing in support of the COP submitted for the Vineyard Wind South Project. As Executive Director of the Institute for Workforce Advancement and the web platform oswsupplychain.org, both with a mission to create sustainable jobs in emerging industries and areas of manufacturing for the New York region, I believe the opportunities for positive economic impact through this and other sited projects off the coast of Long Island are "once in a generation" in scope. Like most of the nation, our region is in post-Covid recovery mode, with more job openings than people to fill them. We have also, due to the high cost of living, been in a population decline in recent years, in part due to a lack of job opportunities in well paid, sustainable industries. The Vineyard Wind project, and all pending projects, represent unprecedented job growth opportunities for all economic and educational strata.

With over 2,600 statute miles of shoreline, the negative impact being felt by climate change is undeniable. We are already behind the curve in addressing C02 emissions and have fallen behind on the scoping and approvals required for clean energy generating offshore wind farms. The Vineyard Wind proposal estimates a CO2 reduction of almost 4 million tons per year. The Biden administration stated in an April 22, 2021 briefing that they are targeting a "50-52 percent reduction from 2005 levels in economy-wide net greenhouse gas pollution in 2030." This cannot be achieved unless we speed up the approval processes required to build and operate wind farms like the Vineyard Wind South Project.

The opportunity for our innovation economy is tremendous. We are already seeing Long Island, NY-based startup companies doing amazing research and product commercialization

in critical related fields such as hydrogen and clean-battery storage. If these companies do not have a large enough domestic market to sell to, they will either look toward Europe and Asia or simply fail. A truly green energy network will require these related technologies working within the power grids being generated by offshore wind. For all the above reasons, I urge BOEM to fast track the approvals process so we can not only meet our national needs but become competitive on a global scale.

Michael Jacobs – Chilmark Resident

https://www.regulations.gov/comment/BOEM-2021-0047-0010

Excerpt:

The circumstance for BOEM in reviewing the proposed project after the recent completion of the Record of Decision on the EIS for the Vineyard Wind I offshore wind farm in this same federal lease area provides an opportunity to make an EIS review process that is particularly well-design and well-informed by that previous review. The environmental assessments and design reviews for the Vineyard Wind 1 project showed that the Federal EIS process worked. We need to build on that process and make Vineyard Wind South environmental review more efficient and predictable by using and thereby reinforcing the standards from the Vineyard Wind 1 project, including uniform layouts across projects, robust protections for marine mammals and other species, and valuable contributions to marine research. Extensive work done for the first project should serve to settle design questions for the wind farm and review questions for agencies that are involved.

Timmons Roberts – Brown University Climate and Development Lab – Providence, RI Resident (Frequenter of Cape Cod)

https://www.regulations.gov/comment/BOEM-2021-0047-0008

Excerpt:

The Vineyard Wind South plan is thoughtful and minimizes environmental impacts, and we must consider the benefits as well as the impacts, including the 4 million tons of CO2e/year emissions reductions it will allow. 140 turbines replacing major fossil gas power plants, the equivalent of 780,000 cars, is testimony to how big the impact of this project will be.

I strongly support the expedient approval and construction of Vineyard Wind South Phases 1 and 2.

Thanks for your work on this important project. – Timmons Roberts

Randi Allfather – Nantucket Resident

https://www.regulations.gov/comment/BOEM-2021-0047-0007

I write in support of the Vineyard Wind South Energy Project. The possibilities of the new offshore wind industry in the United States are very exciting to me. As more offshore wind farms are entering the permitting process the potential for economic development and job creation is huge. I live in Nantucket Ma and the New Bedford Marine Commerce Terminal is going to

be used for staging offshore wind components for Vineyard Wind and other projects in the Mass. Resource Area. Ports up and down the East coast could be reused for offshore wind projects. Foundations, blades, nacelles and towers can all be manufactured here in the US and there is a possibility of 70,000 jobs being created in the supply chain for offshore wind here. Billions of dollars of investment will come with these jobs and development. Offshore wind on the East and West coasts is close to the majority of the population of the country. Therefore a transmission system does not need to be as complicated to bring in the power to coastal cities. I would urge the government to approve Vineyard Wind South and help jumpstart a whole new industry in the United States with all of the investment and jobs that would go with it.

Bradley Lima – Massachusetts Maritime Academy

https://www.regulations.gov/comment/BOEM-2021-0047-0012

The United States is more than a decade behind the rest of the world when adopting offshore wind technology. Yet as a country, we are most vocal regarding climate change and necessary actions to reduce the carbon footprint.

The field of power generation has gone through transformation where the heavy fuel and coal fired plants built in the 40's, 50's and 60's, were augmented by nuclear fueled plants in the 60's and 70's to gas-fired combined-cycle plants in the 80's and 90's. As older plants are decommissioned, replacement power generation concepts must account for technological advances for improved efficiency and reductions of carbon emissions.

Projects such as the Park City Wind project and other offshore projects not only bring an economic stimulus to the region but also address how power can be generated from a renewable resource resulting in a reduced carbon footprint. The economic stimulus to the region, particularly during the construction phase, will have a wide-ranging ripple effect where good paying jobs will result in consumer confidence and local spending.

The United States has experienced extreme weather conditions during the summer of 2021 resulting from climate change. Supporting the Park City wind projects and other offshore wind projects should be fully supported as a means of addressing growing climate concerns while providing significant positive economic impact on the region.

Now is the time to adopt offshore wind technology as a viable power generation concept and not place the burden on future generations to fix the problems resulting from decades old practices.

Respectfully submitted, Commodore Bradley K. Lima Massachusetts Maritime Academy, RET

Maureen Condon – Local Resident

https://www.regulations.gov/comment/BOEM-2021-0047-0015

Vineyard Wind South Project Offshore Massachusetts is a much needed project that will help supply electricity to Cape Cod, and help reduce the U.S. dependence on fossil fuels. We are seeing the disastrous impacts of climate change already and every day, every year we delay reducing our dependence on fossil fuel, we are adding to the total costs of climate change

impacts, both for the economy and for society in general and individuals in particular. We can save billions of dollars in disaster relief and rebuilding after the destructive storms generated by climate change, if we act now. Please move the Vineyard Wind South Project forward, granting all the necessary permits and let's do our country's part in preventing further climate change.

Caro Marrero – Bridgeport Resident, IBEW Local 488 Member

https://www.regulations.gov/comment/BOEM-2021-0047-0020

To whom it may concern, I'm a Bridgeport resident and a member of IBEW Local 488, active within the community, and hope that BOEM has a favorable decision on the project moving forward. The Vineyard Wind South project will have a positive economic impact on the city of Bridgeport residents by creating good paying union jobs. Aside from jobs and economic impact, I also believe climate change is real and this project will help the country and the region reduce carbon emissions and put our country on the track to provide cleaner renewable energy. Thank you for taking the time out to consider my petition.

Ann Berwick – Newton, MA – Vineyard Power Board Member

https://www.regulations.gov/comment/BOEM-2021-0047-0013

Excerpt:

I am writing in support of permitting for the Vineyard Wind South project, which is being developed in two phases, including the Park City Wind project in phase 1 and one or more future projects in Phase 2. I won't belabor the details of the projects, e.g., up to 130 wind turbines, approximately 2,000 MW of generation, with which you are deeply familiar.

I was Undersecretary for Energy in Massachusetts from 2006 to 2010 and chair of the Massachusetts Department of Public Utilities from 2010 to 2015. From 2006 to 2015 I was also a member of the MA Energy Facilities Siting Board. I am a member of the board of Vineyard Power and am on the Mothers Out Front legislative team and chair of its legislative Rapid Response Team.

Massachusetts has recently enacted a statutory mandate of net zero greenhouse gas emissions by 2050. Offshore wind is among the many approaches to achieving this mandate (a mandate, not a goal). Indeed, without offshore wind this directive is unachievable. The legislation, An Act Creating a Next-Generation Roadmap for Massachusetts Climate, also requires our electric utilities to procure increased amounts of offshore wind. Further, President Biden has recently pledged the country to reach 30,000 MW of offshore wind by 2030.

Here in New England there is no resource that can compete with offshore wind. After a decade and a half of vigorous development of solar power in Massachusetts, which is an important resource even in our climate, we have approximately 2,600 MW of solar nameplate capacity. At a 14% capacity factor, that means 364 MW of solar power.

Compare the capacity of offshore wind: at 2,000 MW nameplate capacity and a capacity factor of 45%, Vineyard Wind South alone will contribute 900 MW of power to the NE grid. In other

words, we get well more than double the energy from a single offshore wind project than from a decade and a half of solar development.

Like Vineyard Wind 1, the Vineyard Wind South project also brings additional benefits to the state and the region: an increase in the diversity and reliability of New England's energy supply, especially critical during the winter and in light of nuclear plant closings; increases in tax revenues to local governments; and thousands of local jobs.

I want in particular to highlight the jobs. Vineyard Wind is engaged in a continued effort to train and develop a southern New England-based labor force to support aspects of construction, operation, and maintenance for offshore wind projects. These efforts will continue in collaboration with area universities, community colleges, and vocational programs.

An Environmental Impact Statement often considers only the negative impacts of a project. Please, do not stop there. Although there is no way to build anything—or to keep the economy functioning—without some negative impacts, in this case any such impacts are minimal and temporary. But more importantly, any such impacts from this and other offshore wind projects are small compared to the massive impacts of climate change: on birds, on fisheries, on humans, and especially on the most disadvantaged communities. We are not comparing this project to no generation; we are comparing it to fossil fuel generation, which is immeasurably more harmful to the environment.

Finally, after five years of conversations, and multiple reviews of Vineyard Wind 1—not to mention needless delays— the country needs a more streamlined process to get projects up and running. We have the necessary template, from Vineyard Wind 1, to design other projects. Let's not recreate the wheel. The industry has agreed to the uniform, predictable and wide spacing across all projects in the region, and that layout has been supported by the US Coast Guard and affirmed through the Vineyard Wind 1 record of decision. It's time to move forward with a streamlined, efficient, and predictable process. Thank you for considering my comments.

Susannah Hatch – New England for Offshore Wind

https://www.regulations.gov/comment/BOEM-2021-0047-0028

Excerpt:

Dear Director Lefton and BOEM team, Please find attached the written comments from the New England for Offshore Wind coalition on behalf of the over 80 organizations in our coalition and our thousands of supporters across New England. We applaud the announcement to conduct an environmental impact statement for Vineyard Wind South. This is an important step toward a bright, clean energy future for New England, and we stand ready to work with the Biden-Harris Administration to help fulfill our region's offshore wind commitments in a responsible way. --Susannah Hatch, Regional Lead, New England for Offshore Wind

Rep. Jim Himes – 4th District Connecticut

https://www.regulations.gov/comment/BOEM-2021-0047-0039

Dear Mr. Bennett, I write regarding the Vineyard Wind South project. The Bureau of Ocean Energy Management's (BOEM) issuance of a Notice of Intent to Prepare an Environmental Impact Statement marks a major milestone in the development of the Park City Wind project.

Climate change is here, and it's affecting more Americans every day. Record-breaking heatwaves are devastating communities across the country, and with hurricane season around the corner, my constituents are reminded of the real and deadly impacts of natural disasters like Hurricane Irene, Superstorm Sandy, and countless others that have wreaked havoc on our coastal communities.

The offshore wind industry will help mitigate this damage and move us towards a greener, cleaner, and safer zero-carbon energy future. Projects like Park City Wind aim to do just that. If approved, the 804 MW project would provide 14% of Connecticut's electricity and bring the state closer to achieving zero-carbon electricity by 2040.1 Moreover, Vineyard Wind has pledged to bring thousands of good-paying jobs to Connecticut. Put simply, Park City Wind could help transform Bridgeport into a hub for green-collar jobs.

I am confident that BOEM can move quickly in reviewing this project while still maintaining its high environmental review standards. BOEM's Draft Environmental Impact Statement (DEIS) for the Vineyard Wind South lease area should identify any outstanding issues, alternatives, or important mitigation measures. This DEIS can provide insight into potential impacts and benefits, inform important stakeholder discussions, answer stakeholder questions, and create a smooth transition from procurement to permitting to the construction of one of our nation's first large-scale offshore wind projects.

I commend BOEM and the federal agencies involved in the federal permitting process for their valuable work and continued dedication to ensuring the timely, transparent, and thorough review of the potential environmental and economic impacts of the emerging offshore wind industry.

I urge BOEM to swiftly review all input into this project's development and issue a Draft Environmental Impact Statement without delay.

Brandon W. Burke – Business Network for Offshore Wind

https://www.regulations.gov/comment/BOEM-2021-0047-0025

Excerpt:

To meet state and federal climate goals, the Network encourages BOEM to continue advancing Vineyard Wind South through the federal permitting process so that it can commence operations soon and avoid delays. By meeting these crucial timelines, BOEM will foster greater certainty in the U.S. offshore wind market. This certainty drives investment decisions that will create jobs and provide economic benefits to New England residents and businesses.

…

The Network also encourages a comprehensive analysis of benefits, not just costs, as part of BOEM's environmental review process for Vineyard Wind South and other offshore wind proposals. Studies conducted by the federal and state governments and other organizations have observed that offshore wind projects provide measurable positive benefits to the environment, grid reliability, ratepayers, and the state, regional, and national economies.

…

The recently approved Vineyard Wind 1 project can serve as a template for the environmental review of Vineyard Wind South. Vineyard Wind 1's recent approval is proof that the EIS process worked. The offshore wind developers in the New England region – Vineyard Wind, Equinor & bp, Ørsted & Eversource, and Mayflower Wind – have agreed to uniform, predictably-spaced turbine positions across all offshore wind projects within the New England region. This layout, which is supported by the U.S. Coast Guard, means that the area is available for shared use. The layout has also been affirmed through the issuance of the Vineyard Wind 1 Record of Decision. The Business Network for Offshore Wind thanks the Bureau of Ocean Energy Management for the opportunity to provide these comments and looks forward to continued engagement regarding the Vineyard Wind South project.

Environmental League of Massachusetts

https://www.regulations.gov/comment/BOEM-2021-0047-0029

Dear Director Lefton and BOEM team, Please find attached the written comments from 426 supporters of the Environmental League of Massachusetts. We applaud the announcement to conduct an environmental impact statement for Vineyard Wind South and urge you to act expeditiously and with care. We have no time to lose in advancing clean energy solutions that respond to the environmental, economic, and public health crises our nation faces. It's time to chart another course, and make responsibly developed offshore wind power a pillar of our energy future.

Cape Cod Climate Change Collaborative

https://www.regulations.gov/comment/BOEM-2021-0047-0019

The Cape Cod Climate Change Collaborative is a coalition of hundreds of businesses, institutions, municipalities, and citizens from Cape Cod and the Islands of Nantucket and Martha's Vineyard. We work to unite knowledge, resources, talent and tools to mitigate climate change impacts, reduce greenhouse gas emissions, and work toward achieving net zero-based goals on the Cape & Islands. The need to address the climate crisis, both worldwide and particularly here on the Cape & Islands has become increasingly urgent.

We support the continued development and growth of Offshore Wind in the eastern US. Offshore wind energy is critical for meeting the clean energy goals of the Cape & Islands, south coastal Massachusetts, Rhode Island and Connecticut, and beyond. The untapped offshore wind resource along the U.S. Eastern Seaboard is one of the most powerful in the world and

within reach of densely populated areas where energy demands are high and new resource options are few. In our region, offshore wind holds the potential to provide over 50% of the potential clean energy resource for our region.

Specifically, we enthusiastically support the Vineyard Wind South project. Beyond the clear emissions reduction and climate mitigation benefits that have been cited by other speakers, this project also will create more than 3000 good paying, union jobs (thanks to the agreement to utilize a union workforce on the Vineyard Wind 1 Project)) and new career opportunities and to generate hundreds of millions of dollars in annual economic input are both additional important benefits. So too is the opportunity for local educational institutions to develop the training programs that will be needed during the planning, construction and operation of this project. While we understand that this resource must be bult responsibly, to transition our grid to locally sourced clean energy, the need to move forward is urgent, and projects such as Vineyard Wind South should advance as quickly as responsible development will allow.

The Cape Cod Climate Collaborative is a large and diverse coalition representing many interests and points of view, united by our common desire to avoid the devastating effects of climate change in our region. And we are here tonight speaking with a single voice in expressing our support for the Vineyard Wind South project.

As BOEM moves forward through this process, approves this COP and prepares an Environmental Impact Statement, we urge you to conduct a comprehensive and thorough analysis of not only the obvious environmental and climate impacts of the proposed project, but also the economic and workforce benefits that are so important to our region. We are grateful and appreciative for the careful way BOES has conducted its reviews of Vineyard Wind proposal to date. We urge BOEM to conduct this review in an expeditious manner and advance the permitting of this critically important project. Thank you for considering our comments.

Jason Walsh, Executive Director – BlueGreen Alliance

https://www.regulations.gov/comment/BOEM-2021-0047-0035

Excerpt:

On behalf of the BlueGreen Alliance, our partners, and the millions of members and supporters they represent, we thank you for the opportunity to submit these comments to inform the preparation by the Bureau of Ocean Energy Management ("BOEM") of an Environmental Impact Statement (EIS) for the review of a construction and operations plan (COP) submitted by Vineyard Wind, LLC (Vineyard Wind) for its Vineyard Wind South Project.

…

Environmental Impacts:

To comply with state and federal policies and achieve all necessary permits, all offshore wind energy must be developed in an environmentally responsible manner that avoids, minimizes and mitigates impacts to ocean and coastal wildlife and habitat and traditional ocean uses, meaningfully engages stakeholders from the start, and uses the best available science and data

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to ensure science-based and stakeholder-informed decision making. This includes analysis of cumulative impacts and adaptive management strategies, obtaining all necessary and relevant data, and requires BOEM to identify all methodologies, and indicate when information is incomplete or unavailable, acknowledge scientific disagreement and data gaps, and evaluate intermediate adverse impacts based on approaches or methods generally accepted in the scientific community. Avoiding sensitive habitat areas, requiring strong measures to protect wildlife throughout each state of the development process, and comprehensive monitoring of wildlife and habitat before, during, and after construction, are all essential for the responsible development of offshore wind energy.

…

Socio-Economic Impacts:

To achieve the Biden Administration's vision for maximizing union job creation, and to comply with NEPA's requirement that federal projects "fulfill the social, economic, and other requirements of present and future generations of Americans," the EIS should include a robust analysis of socioeconomic impacts associated with Vineyard's COP.

In particular, BOEM's analysis of socioeconomic impacts should include consideration of Vineyard's commitments around use of domestic content; Project Labor Agreements (PLAs), Labor Peace Agreements (LPA's), Community Benefits Agreement (CBAs); utilization of registered apprentices and other labor-management training programs, protection against worker misclassification and wage theft, neutrality agreements, local hire, and prevailing wage.

In its proposed sale notice (PSN) for the sale of commercial wind energy leases on the Outer Continental Shelf (OCS) in the New York Bight, BOEM stated that high road labor standards, specifical PLAs, may support the achievement of Outer Continental Shelf Lands Act factors"—including expeditious development and potentially more years of receipt of operating fees—by assuring labor stability."

Plans to support utilization and growth of a domestic supply chain should be analyzed and evaluated to maximize U.S. employment for the projected life cycle of the project. A recent study by researchers at Princeton University found that increasing domestic content in renewable energy projects can create tens of thousands of American jobs without significantly increasing capital costs.

The EIS should also evaluate the programs necessary for training and expanding the domestic workforce with an emphasis on ensuring opportunities for displaced energy workers, as well as fostering equitable access to career pathways in the industry. Particular attention should be paid to creating jobs in construction as well as operations and maintenance for residents of the impacted region.

When done right, offshore wind power will create thousands of high-quality, family-sustaining jobs in manufacturing, construction, operations and maintenance, and in the development of port facilities, transmission, and other associated infrastructure. We appreciate your work to prepare an EIS, informed by early-stakeholder input, and to conduct a diligent socioeconomic

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review of this project so that we may realize the thousands of jobs and millions of dollars in economic benefits that will be provided by offshore wind.

ORAL COMMENTS

Adrienne Esposito – Executive Director of Citizens Campaign for the Environment

https://www.regulations.gov/comment/BOEM-2021-0047-0066

My name is Adrienne Esposito. It's A-D-R-I-E-N-N-E, last name, E-S-P-O-S-I-T-O. I'm the executive director of Citizens Campaign for the Environment. And thank you very much for the opportunity to comment.

We also are very enthusiastic about advancing this wind project. And as we slip into hurricane season, we on the east coast are at ground zero for climate change impacts. And you know what, it's no fun and it's no joke. If gives new, you know, fear to us. These new intense -- heightened intensification of storms, more frequency of storms really has caused us to have a lot more fear when we live on the east coast. It impacts our insurance rates, our home values. It impacts how we have to prepare. And it's really at the critical point where we can't afford to do nothing.

So in that vein, I have three comments, you know, for this scoping document. One is that we need to do a comparative analysis in the scoping document of wind versus fossil fuels. And what I mean by that is that it's not a reasonable analysis just to say it's wind or nothing. Because that's not the reality. So we believe very strongly that the environmental evaluation should do a comparison of the 2300 megawatts generated by wind against 2300 megawatts generated by fossil fuels. And that includes such things as what are the air pollution impacts of 2300 megawatts by wind and 2300 megawatts by fossil fuels.

What are the public health impacts. What are the impacts to ocean acidification. We know that ocean acidification is not just impacting ocean waters, but also embayment's and also estuaries, which really are the heartbeat of nursery grounds and breeding grounds for finfish, shellfish, and a multitude of migrating birds.

Also what are the impacts of extraction of fossil fuels for 2300 megawatts, as compared to the extraction of wind, which we know doesn't happen. So there really should be all energy infrastructure has some impact to the environment, and it's our obligation, societal obligation to choose the one with the least impact. And that's why we need to see the comparative analysis of wind juxtaposed against fossil fuels.

The second thing worth mentioning is I think that the EIS should include a component of the stability of energy prices that occurs because of wind. If we look at the cost of natural gas and oil, we don't know what it's going to be in five years. We don't know what it's going to be in five days. During Covid oil went down to 38-, $39 a barrel. Now it's back up to 72- to $75 a barrel. If you plot the cost of oil on a chart it looks like a heart attack patient. But if you chart the cost of wind power, it's a reliable known cost over the next 20 years. And it would be I think of

public benefit to have that contained in the scoping document so we understand the projection of this cost is a known. The projection of the cost of fossil fuel is a great unknown.

And the last thing I just want to say is any data that is obtained through this process, whether it's on marine mammals, finfish, shellfish, birds, we would request that it becomes, you know, a transparent process and made public on the BOEM website, so that those in academia and independent scientists and also stakeholders would have access to the data to increase our knowledge in our review of offshore wind. And we think that would be helpful. Thank you for the opportunity to comment, and we appreciate all the work that BOEM is doing.

John Cox – President of Cape Cod Community College

https://www.regulations.gov/comment/BOEM-2021-0047-0076

"Hello. This is John Cox. That's J-O-H-N, C-O-X, and I am president of Cape Cod Community College and a part of the Connect Consortium of Southeastern Massachusetts Public Higher Education Institutions that are working in unison with Vineyard Wind and Massachusetts CEC, that would include Bristol Community College, U-Mass, Dartmouth, Bridgewater State University, Mass Maritime Academy, and Massasoit Community College. I just wanted to reiterate, sort of building off of the comments that were made by Maria Hartnett of Epsilon on the job creation, and how critically important this is to us that you're continuing with your studies. We have, through the support of the Massachusetts Clean Energy Center and with Vineyard Wind, we have worked to expand our courses, our certification program in the sustainable energy area. And we've also worked with the Cape Cod Regional STEM Committee to expand our outreach to the teachers, elementary and secondary education across the region to really raise the expectations and the awareness around this project what's going on. And we've had tremendous enrollment connected with this, as I'm sure you've heard from our folks on the vineyard, as well as Bristol Community College. So I just want to reiterate our support, our thanks for your support in enabling us to provide some of this training, and we look forward to working with you."

Hanna Maria – President of Survival Systems USA (Broughton, CT)

https://www.regulations.gov/comment/BOEM-2021-0047-0077

Hello. My name is Maria Hanna. I am -- H-A-N-N-A -- and I am the president and owner of Survival Systems USA based in Broughton, Connecticut. We've been discussing the project with Vineyard for a few years now. And a lot of what was just stated before me was the investments that Vineyard is making in the local universities and colleges, really in an effort to educate the students on the new emerging industry. It's not often that a new industry becomes available, and that it becomes available with a time horizon that allows you to prepare the kids that are in middle school, high school, maybe looking at going into something postsecondary that isn't necessarily the traditional college route.

The commercial offshore wind industry for it to be successful is going to have to have a skilled and educated workforce. And, really, it's a workforce that does not exist today. Yes, there are

trades that can transfer over, and that is expected to happen as with any many industries, but eventually a dedicated workforce and a dedicated industry will develop for offshore wind.

Vineyard committed many years ago to educating students in the various degrees and certificates to be eligible to work on any and all of the projects that Vineyard is pursuing. And they've committed to partnering with local colleges and local educational institutions, such as Survival Systems to make sure that the training is accessible. Specifically, because it's not readily accessible to us right now. Part of their support is scholarships. Particularly part of it toward low income individuals that are interested in working in the offshore wind industry, and really trying to meet the needs of the workforce, a workforce that is really necessary to build this project. The barriers to employment for a lot of disadvantaged individuals are really high. The state of Connecticut is a particularly high cost area to live in and to remain in, and so the ability to be able to access training and the support for the programs and Vineyard has put in place is really going to make a difference for those kids and those youngsters that are going to become the workforce of the future for New England. Not just for this project, but for all of the offshore projects that are going to come up once they start rolling up and becoming available.

With the -- with the underutilized and underdeveloped ports and areas, the Bridgeport facility and the Bridgeport Pier, that development is going to revitalize the area. That's an area that has long suffered from neglect and no ability to grow itself organically. So Vineyard's influx and Vineyard's investment into the area is going to significantly affect the local people. It's going to affect housing, the retail markets, the service corridors, and it's going to influx much needed cash into the economy in Connecticut.

For us up in Broughton the development of the workforce is particularly exciting. It allows us to introduce kids, like I said before, as young as middle school and high school to training that really hadn't occurred to them as a possible avenue to a long-term career.

Offshore wind is not something that is readily discussed in schools, or has not been discussed in schools up until now. But now we're seeing efforts from the local colleges, schools such as us. We lean into this project very, very heavily to invest (indiscernible) development, and we did it in partnership with Vineyard Wind. Part of the discussion was specifically targeting the workforce and the ability to be able to have a resource available for them to gain the skills necessary to enter the workforce. And that allows for the workforce to grow rapidly, develop rapidly to a more mature industry, as opposed to having a lot of European workers come in and do the offshore wind development.

So for us it's a very exciting time. It's a new industry, and in the area that we happen to be in, the biggest employers are the Navy and Electric Boat. So the opportunity to be able to offer training in something different, in a different industry, in a new industry is very, very exciting. And we have a platform to be able to showcase that to the kids as they're coming through, to the communities as they ask questions or they want to come and observe the training. So it's a very exciting time.

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We'd like to simply state our support for the project, our support for Vineyard Wind, and our excitement that we are part of this project, and that all of the people will benefit from it. Thank you very much.

Anthony Sapienza – President of New Bedford Massachusetts Economic Development Council

https://www.regulations.gov/comment/BOEM-2021-0047-0059

Yeah, I'd like to comment. I mean, there are clearly significant economic benefits that will accrue from this – this development and I don't think that we should, you know, proceed without understanding how important they are to the region. For all of these projects, as they -- as they go forward. Whether they're in Connecticut, Massachusetts or -- or New York or New Jersey, there is absolutely an opportunity for significant investment that will result in thousands of direct and indirect jobs. And these coastal areas are particularly dependent on other kinds of industries that can be supported by this – these projects.

I particularly want to see that there is an investment made in training workers and that that workforce is diverse. And I think that Vineyard Wind has a history of -- of saying that that is exactly what they intend to do in terms of the hiring and in the support for educational opportunities and institutions that will, in fact, provide the kinds of workers that are -- that are necessary for -- for both the construction projects, as well as the ongoing operations and maintenance projects. Particularly important to remember that operations and maintenance are 20- and 25-year kinds of jobs. These are career jobs, and they can lift people for a long time into a career that is lasting.

So underutilized ports, underdeveloped areas must have new investment, and whereas Vineyard Wind has committed significant dollars in that regard, I'd like to make sure that those dollars are used effectively.

Other offshore wind farms will also be included in what Vineyard Wind does, and any of these investments I think build the industry. And by building the industry, I think we create a national, as well as a regional, platform for support. And I think Vineyard Wind is particularly significant, it being the first nationally recognized offshore project in Massachusetts that is, you know, is -- is moving forward. And this Vineyard Wind South area will be certainly just a tremendous addition to what is already been contemplated, planned, and in fact, developed. Thank you.

I serve as the president of the New Bedford Massachusetts Economic Development Council, and I have been following this industry and supporting it, and these companies for a considerable period of time, and want to continue to support the efforts that companies like – projects like Vineyard Wind and Vineyard Wind South. They are I think particularly important to the -- to the growth, to the -- of the -- of the region, of the nation, and certainly to supporting our tremendous disastrous-type problem with climate change that has been made so much worse by fossil fuels. Thank you.

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Dan McInerney – Business Manager for Local 48 of the International Brotherhood of Electrical Workers

https://www.regulations.gov/comment/BOEM-2021-0047-0058

Good afternoon. My name is Dan McInerney, D-A-N, M-c-I-N-E-R-N-E-Y. I'm the business manager for Local 48 of the International Brotherhood of Electrical Workers. I know that most of the comments are on the environmental impact that this project will have, but whether on land or sea great care must be taken to limit that impact.

I would like to speak to the economic impact that Vineyard Wind South will have specifically to the city of Bridgeport and its neighboring towns. Bridgeport at one time was a bustling industrial city that manufactured a variety of consumer goods, a city that enjoyed the fruits of its labor with a strong community that took pride in their city. Unfortunately, like most other industrial cities and towns, its companies outsourced the work for a cheaper bottom line. The city declined to a shell of what it once was.

Vineyard Wind South, which includes Park City Wind, can help reverse that trend. Park City Wind will be done under a project labor agreement which will guarantee good paying construction jobs, as well as a workforce development plan to help create career opportunities for local residents and the surrounding area for generations to come. Over time the supply chain that will be needed in the future can be manufactured locally throughout the area, creating a greater chance for economic stability in the region. I, for one, look forward to a chance to see the region get back a little bit of its luster that it once had. Vineyard Wind South will also help us to reduce our carbon footprint and our reliability on fossil fuel and aid in the reversal of the global warming, which we can see is having an increasing impact worldwide each year.

The Vineyard Wind South project can help reduce the environmental impact, as well as a positive impact on the Bridgeport region and its residents. I look forward to that opportunity. Thank you again for the opportunity to speak today.

Dennis Lassige – Representative of the North Atlantic States Regional Council of Carpenters

https://www.regulations.gov/comment/BOEM-2021-0047-0053

Okay. My name is Dennis Lassige, and I represent the North Atlantic States Regional Council of Carpenters. My organization represents 30,000 carpenters, pile drivers, and millwrights within New England and the state of New York. Today I'm speaking in full support of Vineyard Wind South and its construction and operating plan as presented.

Our organization is strongly aligned with President Biden's Executive Order 14008, which puts the current climate crises front and center, and directs all agencies of government to aggressively address this and to deliver environmental and economic justice in the process. We also support Connecticut's mandate of procuring 2000 megawatts of offshore wind energy

in their lofty goal of zero carbon emissions by 2040. This project is the most effective solution for that goal.

We believe in a clean energy future and a just transition to that future that includes family-sustaining jobs for the workers who build and operate the new clean energy facilities and generators. We believe in an industry that prioritizes meaningful vocational and educational opportunities to those who seek entry into and career advancement in this exciting new field.

This proposal is a great example of a just transition for workers, frontline communities, and rate payors alike to be incorporated into a plan, even in the initial planning and approval phases, and we would be remiss to pass up this opportunity. I urge a thorough review and swift approval.

Thank you for the opportunity to speak.

William (Bill) Lake – Director (Board Member) of Vineyard Power

https://www.regulations.gov/comment/BOEM-2021-0047-0067

I'm William Lake. I'm a director of Vineyard Power, which is a nonprofit on Martha's Vineyard formed to promote migration of the island to renewable energy. We are a local partner of Vineyard Wind.

Vineyard Power is one of the sponsors of a 100 percent renewable resolution that has been approved by Martha's Vineyard Commission and five of the six towns on the island. It establishes a goal of converting the island to 100 percent renewable energy by 2040. If that goal is to be achieved we need first to convert the use of fossil fuels on the island to electricity. This involves particularly home heating and transportation. But it's equally essential that the electricity we receive from the grid be generated from renewable sources.

In other parts of the country there may be other potential sources of renewable energy, but in the northeast the one major source we have is offshore wind. If we're to convert to renewable energy, exploitation of offshore wind is essential.

For some types of federal actions the main environmental impacts may be negative. That's not true for a renewable energy project. It's essential that the agency not just look at the cost of the project but also analyze the benefits to the environment, to energy reliability, to rate payors, and to the regional economy.

We have the benefit of following the review of Vineyard Wind 1. It provides a template to follow in this review. After five years of public input, conversations, and multiple reviews of that project, we're ready for a more streamlined process to get projects up and running.

The industry has agreed to a uniform predictable and wide spacing of turbines across all projects in the region. That layout has been supported by the U.S. Coast Guard and affirmed

through the Vineyard Wind 1 record of decision. This makes the area available for shared use, even though it reduces the amount of clean energy produced.

The urgency of mitigating climate change is evident. One only needs to watch the evening news to see the impacts that are occurring today. I urge the agency to advance the review of Vineyard Wind South promptly and predictably. Thank you.

Chris Mancini – Executive Director of Save The Harbor Save The Bay

https://www.regulations.gov/comment/BOEM-2021-0047-0071

I'm Chris Mancini, C-H-R-I-S, M-A-N-C-I-N-I. I'm the executive director of Save The Harbor Save the Bay, and from our offices on Boston Fish Pier, we are acutely aware of the effects of climate change and sea level rise, as we work every day to protect and restore Boston Harbor, our region's public beaches, the harbor islands, and we share them with tens of thousands of youth and families every year through free events, education, and programming throughout the region.

And I think a lot of people in here agree the pressing issue that affects the work that we've done and our vision of the future is sea level rise, which is literally eating and eroding the beaches that we worked so hard to clean up and program over the past 35 years.

And, of course, reliance on fossil fuels continues to be a critical issue facing our generation. And projects like this one are an incredibly important strategy to reduce our addiction to fossil fuels, create good local jobs, and move us toward a more hospitable and just society.

We do acknowledge the concerns of fisherman that development of the seabed floor can affect certain fisheries, and we are counting on regulators and proponents to appropriately address the concerns of both recreational and commercial fisherman and, of course, to protect the seabirds and migrating rafters with whom this project will coexist.

With that said, reliance on fossil fuel is jeopardizing life and habitat worldwide, and wind power is a critical piece to address the global challenges we're all facing and which, as we all know, are dramatically harming people of color disproportionately over white people everywhere.

So, again, we're really proud to speak in favor of this -- of this project and, you know, the faster we can get onto a sustainable energy course matters. So thank you for the opportunity to speak tonight, and to all of you who are working so persistently to make this vision a reality.

Janet Williams – Secretary for Cape Cod Climate Change Collaborative

https://www.regulations.gov/comment/BOEM-2021-0047-0079

Yes, good evening. Thank you very much. My name is Janet Williams, J-A-N-E-T, W-I-L-L-I-A-M-S. I'd like to thank the Bureau of Ocean Energy Management for the opportunity to provide a very brief comment on this proposed Vineyard Wind South construction and operations plan and its Phase 1 Park City Wind project.

I'm here tonight representing the Cape Cod Climate Change Collaborative. Our organization is a coalition of hundreds of businesses, institutions, municipalities, and citizens from Cape Cod and the islands of Nantucket and Martha's Vineyard. We work to unite knowledge, resources, talents, and tools to mitigate climate change impacts, reduce greenhouse gas emissions, and work toward achieving net zero goals on the cape and islands. The need to address the climate crisis, both worldwide and particularly here on the cape and islands has become increasingly urgent.

We generally support the continued development and growth of offshore wind in the Eastern United States. Offshore wind energy is critical for meeting the clean energy goals of the cape and islands, south coastal Massachusetts, Rhode Island, Connecticut, and beyond. The untapped offshore wind resource along the U.S. Eastern Seaboard is one of the most powerful in the world and within reach of a densely populated area, where energy demands are high and new resource options are few.

In our region, offshore wind holds the potential to provide over 50 percent of the potential clean energy resource we need for our region. We specifically, enthusiastically support the Vineyard Wind South project. Beyond the clear emissions reductions and climate mitigation benefits that have been cited by other speakers, this project will also create more than 3000 good paying union jobs, thanks to the agreement to utilize a union workforce on the Vineyard Wind project that we expect to carry forward here, new career opportunities, and to generate millions of dollars in annual economic input.

Those are all important benefits. And so, too, is the opportunity for local educational institutions to develop training programs that will be needed during the planning, construction, and operation of this project. And while we understand that this resource must be built responsibly to transition our grid to locally sourced clean energy, the need to move forward quickly is urgent, and projects such as Vineyard Wind South should advance as quickly as responsible development will allow.

The Cape Cod Climate Collaborative is a large and diverse coalition representing many interests and points of view, united by our common desire to avoid the devastating effects of climate change in our region. We are here tonight speaking with a single voice in expressing our support for the Vineyard Wind project. And as BOEM moves forward through this process, approves this COP, and prepares an environmental impact statement, we urge you to conduct a comprehensive and thorough analysis of not only the obvious environmental and climate impacts and benefits of this proposed project but also, as I said, the economic and workforce benefits that are so important to our region.

We are grateful and appreciative for the careful way BOEM has conducted its reviews of Vineyard Wind 1 to date, and we urge BOEM to conduct this review in an expeditious manner and advance the permitting of this critically important project. Thank you for considering our comments.

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Director Amanda Lefton
Bureau of Ocean Energy Management
1849 C Street, NW
Washington, D.C. 20240

Responsibly Developed Offshore Wind is a Win for People, Wildlife, and the Planet

Dear Director Lefton,

New England is perfectly positioned to seize the environmental, economic, and public health benefits of offshore wind power. While energy demand is high and new clean energy options are few, we are within reach of one of the strongest offshore wind resources in the world. The Bureau of Ocean Energy Management's swift and thorough review of Vineyard Wind South's Construction and Operations Plan is critical for us to stand up this clean energy solution in a timely and responsible manner.

Offshore wind energy is in a unique position to address the unprecedented and intersecting environmental, public health, and economic crises that exacerbate racial and social injustices. We can transition away from fossil fuels that are concentrated in low-income and communities of color, and develop this renewable energy resource with attention to stakeholder input, improving access to public comment opportunities to ensure that impacts are properly evaluated. We can prioritize training a local workforce and people that have been the hardest hit by the COVID-19 pandemic, and revitalize U.S. manufacturing to maximize economic benefits from this industry. And we can protect wildlife and ecosystems while we do it, requiring the use of best management practices informed by the latest science. We can do all of this – and we must.

We have no time to lose in advancing clean energy solutions that respond to the environmental, economic, and public health crises our nation faces. It's time to chart another course, and make responsibly developed offshore wind power a pillar of our energy future.

I urge you to act expediently and with thorough care to complete the environmental review of the Vineyard Wind South project.

Kind regards,

(Full name, Zip Code)

Mike Matthews, 10005
Ellen Tomlinson, 01850

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Richard Kite, 20001
Lara Miletta, 01453
Charles Dietrick, 02139
Kristin Neville, 01050
Robert Gould, 02540
Jonathan Clapp, 02645
Susan Elam, 01950
Harry Newell, 01754-1486
Eric Studer, 02072
Cashman Kerr Prince, 02062
Sr St. Pierre, 02453
Carolyn Britt, 01938
Frederick Hewett, 02138
Bambi Kenney, 01001
Ailsa Hermann-Wu, 02451
Gabriela Romanow, 02138
Susannah Hatch, 02476
Charles Lidz, 01721
Heide Messing, 01420
Bethany Patten, 02116
Peter Johnson, 01420
Sarah Griffith, 02139
Bonnie Gorman RN, 02169
Daniel Ruben, 02466
Steven Lanou, 01890
Barbara Brown, 01890
Kris leary, 01602-2830
Tony Moureilles, 02360
Babak Moaveni, 01890
Carolyn Dann, 01810
Isaiah Plovnick, 02445
Constance Graham, 02043
Alan Nogee, 02461
Orian Greene, 01754
Betty Krikorian, 02478
Philip Randazzo, 01075
William Constable, 01773
Laura Kohn, 81632
Lynn L. Hallowell, 01105
Paul Cormier, 01905
Samuel Shiroff, 18955

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Angelika Evans, 02090
Craig Anderson, 02458
Eugene Brusin, 02169
Shayna Nestor, 01844
Robert Livingston, 01007
Frederick Wang, 02116
Harriet Chenkin, 02155
Betsy Taylor-Kennedy, 01740
Bryan Kahn, 02481
Michael Mahaney, 02645
Jim Strickland, 02132-3229
Helene Bank, 02139
Vidya Sivan, 02134
Laurie Toner, 02135-2565
Margot Lenhart, 02445
Kim McCoy, 01606
Andrew Costigan, 02053
Michael Talbot, 02649
Susan Abrams, 01267
Holiday Houck, 02116
Robert Blair, 01503
Clare Deucher, 01430
Robert Blair, 01503
Elise Schlaikjer, 01301
Keren Kumar, 01581
Rachel Zaff, 02494
Resa Blatman, 02145
Rosemary Hewett, 01982
Christine Lazar, 01568
Grant Thomas-Lepore, 01913
Sarah Stewart, 02472
Robert Tuchmann, 02465
Susan Anderson, 02210
Bill Himelhoch, 02130
Nico Bezz, 02445
Anne Robinson, 01938
Karen Kennedy, 01742
Janet Rome, 02478
Don Hnatowich, 02446
David Schochet, 01370
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Denise Mallen, 01906
Jean Conway, 01301-9687
Jay Conway, 01301
Stuart Lynn, 01602
Al Blake, 01223
Lois Grossman, 02155
Sue Stafford, 02138
David Sheehan, 01095
Donalyn Gross, 01106
Linc Cole, 01730
Michael Duclos, 01775
Dennis Rogers, 01452
Sarah Hughes, 02153
Amy Henry, 01060
Joan Kaufman, 01730
Ann Colageo, 02132
Carolyn Liu, 02143
Marvin J Ward, 01027
Ken Kipen, 01330
Kelly Larkin, 97223-7925
Davida Michaels, 06082
Betsy Sowers, 02190
Benjamin Thorn, 01913
Ronald L Jantzen, 01770
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VINEYARD WIND

ATTACHMENT TO SECTION 7

Attachment 7.7-4: Vineyard Wind in the Media

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VINEYARD WIND

Media Coverage

1. **Energy Wire**: *Vineyard Wind CEO testifies on future of U.S. projects* (July 30, 2021)
2. **The Herald News**: *Vineyard Wind signs project labor agreement for offshore wind project; 500 union jobs guaranteed* (July 16, 2021)
3. **The Inquirer and Mirror**: *Vineyard Wind receives another federal approval* (July 9, 2021)
4. **Renewables Now**: *BOEM launches enviro review of up-to-2.3-GW Vineyard Wind South* (June 29, 2021)
5. **reNEWS.BIZ**: *BOEM starts review of 2GW Vineyard Wind South* (June 29, 2021)
6. **MV Times**: *Vineyard Wind awarded airport heli hangar bid* (May 27, 2021)
7. **Boston Herald**: *Vineyard Wind paying UMass scientists to survey ocean area it's leasing* (May 22, 2021)
8. **Energy News Network**: *Vineyard Wind approval injects fresh optimism into offshore wind industry* (May 13, 2021)
9. **The Barnstable Patriot**: *Feds give final approval for Vineyard Wind* (May 13, 2021)
10. **Mass.gov**: *Baker-Polito Administration Applauds Federal Approval of Vineyard Wind Project* (May 11, 2021)
11. **Business Insider**: *The US has approved a huge offshore wind farm off the coast of Martha's Vineyard — the first of its kind* (May 11, 2021)
12. **The Washington Post**: *Interior Department approves first large-scale offshore wind farm in the U.S.* (May 11, 2021)
13. **Boston Globe**: *Biden administration grants Vineyard Wind its final major permit* (May 11, 2021)
14. **New York Times**: *Biden Administration Approves Nation's First Major Offshore Wind Farm* (May 11, 2021)
15. **Vineyard Wind**: *Vineyard Wind Receives Record of Decision for First in the Nation Commercial Scale Offshore Wind Project* (May 11, 2021)
16. **North American Wind Power**: *Vineyard Wind: Sailing Uncharted Waters* (April 29, 2021)
17. **Boston Globe**: *Letter: Biden backing of Vineyard Wind is welcome and promising* (February 16, 2021)
18. **Power**: *BOEM, Bolstered by Biden Offshore Wind Agenda, Resumes Vineyard Wind Review* (February 4, 2021)
19. **Cape Cod Times**: *Biden administration puts Vineyard Wind back on track* (February 4, 2021)

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20. **The Boston Globe**: *Biden administration puts Vineyard Wind energy project back on track* (February 3, 2021)
21. **Martha's Vineyard Times**: *BOEM reopens review of Vineyard Wind* (February 3, 2021)
22. **WBUR and State House News Service**: *Feds Put Vineyard Wind Back On Permitting Front Burner* (February 3, 2021)
23. **MV Times**: *Vineyard Wind reawakens in the Biden era* (January 25, 2021)
24. **The Barnstable Patriot**: *Vineyard Wind completes technical review, resumes federal permitting* (January 25, 2021)
25. **OffshoreWIND.biz**: *APEM and Vineyard Wind Continue Cooperation* (January 6, 2021)

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E&E NEWS | ENERGYWIRE

Vineyard Wind CEO testifies on future of U.S. projects

BY

HEATHER RICHARDS | 07/30/2021 07:35 AM EDT

ENERGYWIRE | The head of a major U.S. renewable energy project and a prominent advocate for climate action addressed lawmakers yesterday on the future of offshore wind, the need for clear rules and China's monopoly on critical minerals.

“The future of the U.S. offshore wind industry is poised to be thoroughly and uniquely American,” said Lars Pedersen, CEO of the Vineyard Wind project — a joint venture of Avangrid Renewables and Copenhagen Infrastructure Partners, the first to secure a federal permit for offshore wind.

The offshore wind industry is expected to grow exponentially in the coming decade, helped in no small part by the Biden administration’s promise to approve more than a dozen wind arrays by the end of the president’s first term and reach 30 gigawatts of offshore wind power by 2030.

That rapid growth will depend on expertise from Europe, where the industry was pioneered, said Massachusetts Rep. Bill Keating (D), chairman of the House Foreign Affairs Subcommittee on Europe, Energy, the Environment and Cyber, in a hearing yesterday to probe the “lessons learned” in Europe’s offshore wind sector.

“We must also explore how we here in Congress can facilitate our own nation’s growth in this critical green energy sector by understanding lessons learned from our friends across the Atlantic,” he said.

The hearing comes just a day after an infrastructure deal was sealed between a group of senators and the White House that would direct $73 billion toward clean energy, despite deliberations that stripped many climate and utility asks, like clean energy tax credits.

Pedersen and Heather Zichal, CEO of the American Clean Power Association and a White House climate and energy adviser during the Obama years, were joined by Giles Dickson, CEO of WindEurope, on a panel that stressed policies to drive greater coordination with fishermen and other players, and long-term planning for offshore wind growth that includes grid preparation and public investment.

Pedersen said dozens of U.S. companies in more than 20 states could be involved in Vineyard's first project off the coast of Massachusetts. Still, offshore wind is in its early stages in the United States, with just two pilot projects currently operating.

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By contrast, offshore wind power now accounts for 3 percent of the electricity supply in Europe. And, dwarfing the most ambitious goals in the United States, the European Union aims to reach 300 gigawatts of offshore wind power by midcentury.

That path so far has included extensive planning across countries to line up the pace of new offshore wind facilities coming online, address supply chain bottlenecks and respond to workforce concerns, like transferable certification for wind workers across countries. Witnesses said these are all issues the United States will need to address on its own terms.

Workforce issues, permitting

The workforce could be a primary concern in these early stages of the U.S. industry, and European companies will help support some of the first projects, Zichal said. “There simply is not enough time to ramp up domestic capacity prior to an initial wave of offshore wind facilities being constructed,” she said.

That's why legislation like Keating’s "Offshore Wind Jobs and Opportunity Act," H.R. 998, could prove crucial in helping build that workforce, she added. The bill would provide grants through the Interior Department to unions and higher education institutions to train offshore wind workers.

Rep. Dean Phillips (D-Minn.) said he was concerned that renewable industries, which he supports, could displace other jobs. But Zichal maintained that the industry would also sustain many traditional and nontraditional jobs.

“Even just thinking about the tens of thousands of pieces in an onshore wind turbine — we know that pieces of those are manufactured in 48 states today,” she said. “For offshore wind, we are going to have to build an entire new workforce to go out to sea and build these turbines.”

She nodded to how regulatory uncertainty has affected the pace of the supply chain build-out: “Companies were understandably not willing to invest billions of dollars to build vessels or a domestic supply chain previously, given a lack of certainty about whether offshore wind projects would get through the federal permitting process.”

The offshore wind sector slowed to a standstill during the final years of the Trump administration, when officials froze permitting to do a comprehensive assessment of industry’s potential impact on other ocean users, like fishermen.

Pedersen touched on Vineyard’s difficulties during this time, noting that it had initially planned for an 18-month process for permitting. It turned into 3 ½ years.

“Right before the finish line, there was a decision to study a wider group of projects,” he said, noting that the company had already purchased materials and signed contracts for vessels and suppliers.

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Stakeholder input is critical, as are "meaningful" collaborations with fishermen and coastal communities, Pedersen said, but predictable timelines are, as well. “That’s a key lesson as we scale up this industry,” he said.

Chinese competition

Witnesses also noted offshore wind’s rapid growth elsewhere in the world, and lawmakers voiced their disquiet about China’s aggressive plans to build out the sector. Renewable energy proponents have raised concerns over China's current dominance over the world market of critical minerals needed for clean technologies.

“If we stand still, they continue to go forward,” said Keating.

Dickson, of WindEurope, agreed, but said the only response is for the West to lead on expertise and technology. “China will build a lot of offshore wind. There is nothing we can do about that," he said. "The key thing is that we remain ahead of China in the quality of the technology and in the technology that we apply to integrate wind power in the wider energy system."

Zichal said the Biden administration, too, is thinking of critical minerals, and said she hopes the White House can address it to some degree through trade negotiations.

Several Republican lawmakers repeated concerns about reliability. “This source of energy is not always reliable,” said Rep. August Pfluger, a Republican from West Texas.

Dickson said reliability is an issue of grid readiness and the ability to fling power at distance to meet demand. “Grid investments have a key role to play in managing that variability,” he said. “The wind is always going to be blowing somewhere.”

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The Herald News

ENVIRONMENT

Vineyard Wind signs labor agreement for offshore wind project; 500 union jobs guaranteed

Anastasia E. Lennon Standard-Times

Published 6:22 p.m. ET Jul. 16, 2021 | **Updated 7:34 p.m. ET Jul. 16, 2021**

NEW BEDFORD — Vineyard Wind and a regional union organization signed a project labor agreement along the city's waterfront Friday, guaranteeing at least 500 union jobs for the project's construction and installation off the coast of Martha's Vineyard.

Lars T. Pedersen, CEO of Vineyard Wind, and David Araujo, president of the Southeastern Massachusetts Building Trades Council, signed the agreement at the New Bedford Marine Commerce Terminal (which will serve as the project's staging and deployment base) in the company of federal, state and local officials.

According to Vineyard Wind, the jobs will go to area residents who will be employed on both land and sea for construction of the 800-megawatt project 15 miles off the coast of Martha's Vineyard. The workers will come from 20 local union affiliates of the regional building trades council.

The terms of the agreement will ensure a majority of the workforce will be from local communities, specifically Bristol, Plymouth, Barnstable, and Dukes counties. It also sets hiring targets for women and people of color, according to the company and council.

More: Following Vineyard Wind's final approval, Mayflower Wind is next up seeking permits

"There's been this false choice, this uneasy tension at best and conflict at worst, between organized labor and the environmental community, and the push for renewable energy," said Massachusetts Building Trades Council President Frank Callahan.

"It has always been presented that in order to convert to a renewable energy economy, we have to sacrifice good union jobs," he said, referencing jobs for coal, gas and oil. "With this

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project, we're showing that that's been a false choice ... We can do both, we can have both and we're going to have both here off the coast of Massachusetts with Vineyard Wind."

Lisa Lemieux, president of the Southeastern Massachusetts Central Labor Council, said the project labor agreement brings good wages, education and training that they look forward to building on.

More: Offshore wind staging facility coming to New Bedford waterfront

"We know that not all unions are in it, but it's been a long time coming for building trades," she said. "We're super excited about a new beginning for New Bedford and a lot more jobs for a lot of people."

The council she leads is comprised of thousands of union members and works to improve the quality of life for workers and their families.

"The Massachusetts Building Trades Council and Southeastern Massachusetts Building Trades Council both did a wonderful job at facilitating this agreement and we're super proud of the work they did and think it will benefit lots of local workers for years to come," Lemieux said.

In celebration of the labor agreement and project, officials hearkened back to New Bedford's history as a whaling port and the "city that lit the world."

"Two-hundred years later, the city is reclaiming that title by leading renewable offshore wind energy," said U.S. Sen. Elizabeth Warren. "This is America's first large-scale commercial offshore wind project and it really positions New Bedford, the South Coast region and the entire commonwealth to be leaders in this sector."

Like Callahan, she said the Vineyard Wind project and labor agreement are "proof that we don't have to choose between addressing climate change or creating economic development."

U.S. Sen. Ed Markey said the labor agreement would put $500,000 toward bolstering apprenticeship and recruitment programs to create opportunities for workers to enter the wind industry.

Markey, like other officials, also emphasized equity and recruiting a diverse pool of workers, particularly from underserved communities and people, "many of whom have been most directly affected by our polluting past and ongoing climate crisis."

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Joshua Grigsby, a member of the Local 56 pile drivers and divers union in Boston, told the crowd he looked forward to telling his son, now 5 years old, about his experience working on the project.

Grigsby, 36, will soon start the Global Wind Organization safety training program, offered by the Massachusetts Maritime Academy. He expects to be out at sea helping to install the 800-foot tall General Electric turbines when that phase of the project begins.

The Marine Commerce Terminal currently has lease agreements with Vineyard Wind and Mayflower Wind, which will use the terminal as the primary staging and deployment base for construction and installation of the projects.

Vineyard Wind's lease is scheduled to start in January 2023 and end in 2024 at a rate of $6 million per year, according to a spokesperson from the Massachusetts Executive Office of Energy and Environmental Affairs. The terminal will be committed to offshore wind activity through at least the first half of 2027.

According to Vineyard Wind, the project will generate electricity for more than 400,000 homes and businesses in the state, create 3,600 jobs, save ratepayers $1.4 billion over the first 20 years of operation and reduce carbon emissions by more than 1.6 million tons annually.

State Rep. Jeffrey Roy, who chairs the Joint Committee on Telecommunications, Utilities and Energy, said he hoped Friday marked the first of many events in New Bedford to celebrate the development of the offshore wind industry.

Standard-Times reporter Anastasia E. Lennon can be reached at alennon@s-t.com. You can follow her on Twitter at @aelennon1. Support local journalism by purchasing a digital or print subscription to The Standard-Times today.

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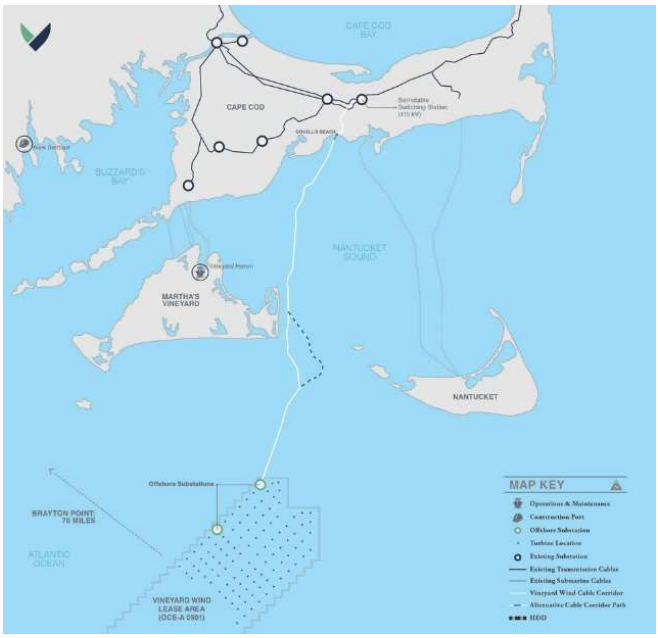
Vineyard Wind receives another federal approval



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Vineyard Wind's proposed offshore energy project southwest of Nantucket

COURTESY OF VINEYARD WIND

Posted Friday, July 9, 2021 3:02 pm

By Brian Bushard
Email: bbushard@inkym.com (mailto:bbushard@inkym.com)
Twitter: @bbushardim (https://twitter.com/bbushardim)

(July 9, 2021) Vineyard Wind received another federal approval last week for its $2.8 billion offshore windfarm 14 miles southwest of Madaket.

The National Oceanic and Atmospheric Administration issued Vineyard Wind an "incidental harassment authorization," an approval that both acknowledges the installation of the project could harm marine life, and states that it expects no "serious injury or mortality to result from this activity."

Vineyard Wind received its approval from the U.S. Bureau of Ocean Energy Management in May. It was one of the final hurdles before construction of its 62 13-megawatt turbines.

Project proponents estimate it will start delivering energy through an undersea cable to a substation in Centerville in 2021. It is projected to generate 800 megawatts of electricity each year, enough to power 400,000 homes, or the equivalent of removing 325,000 vehicles off the road, Vineyard Wind officials said.

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BOEM launches enviro review of up-to-2.3-GW Vineyard Wind South

Offshore wind turbines. Source: LICengineering

June 29 (Renewables Now) - The US Department of the Interior's Bureau of Ocean Energy Management (BOEM) on Monday said it is launching the environmental review process for the Vineyard Wind South offshore wind project with a capacity of about 2 GW-2.3 GW.

The plan submitted by Vineyard Wind LLC, a joint venture between the renewables unit of Avangrid Inc (NYSE:AGR) and Copenhagen Infrastructure Partners (CIP), calls for the installation of up to 130 wind turbines offshore Massachusetts and Rhode Island. The project is to be developed in phases, with phase one being the 804-MW Park City Wind project that has a power purchase agreement (PPA) with Connecticut's Public Utilities Regulatory Authority.

On June 30, BOEM will publish a notice of intent (NOI) to prepare an environmental impact statement (EIS) for the Vineyard Wind South project, which will initiate a 30-day public comment period. BOEM will then use the comments to prepare a scoping report identifying the issues that should be analysed in the Vineyard Wind South draft EIS.

The proposed project also includes two to five offshore substations, inter-array cables and up to five export cables that will link to the onshore grid in Barnstable County, Massachusetts at up to three onshore substations. Most of the project is located within Lease OCS-A 0534, with a small portion of the area within Lease OCS-A 0501 also identified for potential development, explains BOEM.

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set an objective [illegible] installing 30 GW of offshore wind power by 2030.

Earlier in June, BOEM kicked off the environmental review process for the Empire Wind offshore wind project that is being developed by Norway's Equinor ASA (NYSE:EQNR) in partnership with BP Plc (LON:BP) and would provide over 2 GW of offshore wind generation to the state of New York.

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OFFSHORE WIND ONSHORE WIND SOLAR WAVE & TIDAL OTHER NEWS

BOEM starts review of 2GW Vineyard Wind project - reNews - Renewable Energy News

The Bureau of Ocean Energy Management (BOEM) will begin conducting an environmental review of the construction and operations plan (COP) for the Vineyard Wind South offshore wind project off the US.

If approved by BOEM, Vineyard Wind would be allowed to construct and operate an approximately 2-2.3GW offshore wind project off Rhode Island and Massachusetts, which would be developed in phases.

Phase 1, called Park City Wind, would contribute to Connecticut's mandate of 2GW of offshore wind energy by 2030, through Vineyard Wind's 804MW power purchase agreement with Connecticut's Public Utilities Regulatory Authority.

“The Biden-Harris administration has set an ambitious target of 30GW of installed offshore wind energy by 2030, which will create nearly 80,000 jobs,” said BOEM Director Amanda Lefton.

“By moving forward on this environmental review, we are making progress toward confronting climate change, creating good-paying jobs, and beginning the Nation’s transition to a cleaner energy future.”

The publication of the Notice of Intent (NoI) to prepare an Environmental Impact Statement (EIS) opens a 30-day public comment period.

During this time, BOEM will hold three virtual public scoping meetings and accept comments to inform the preparation of the EIS.

The proposed Vineyard Wind South project includes up to 130 wind turbines, two to five offshore substations, array cables, and up to five export cables connecting to the onshore electric grid in Barnstable County, Massachusetts at up to three onshore substations.

BOEM’s scoping process is intended to identify what should be considered in the EIS.

Throughout the scoping process, there will be “multiple opportunities” to help BOEM determine the important resources and issues, reasonable alternatives, and potential mitigation measures to be analysed in the EIS.

The 30-day public comment period finishes on 30 July.

Vineyard Wind awarded airport heli hangar bid

Helicopter operations aren't expected to begin until 2023.

By **Lucas Thors** - May 27, 2021

Vineyard Wind will lease a hangar at Martha's Vineyard Airport to use for helicopter operations in the construction and maintenance of their offshore wind farm. -Lucas Thors

The former Dutchess Hangar at Martha's Vineyard Airport will soon serve as a helicopter base for Vineyard Wind's offshore wind farm.

The hangar was approved for bidding as surplus property at a prior commission meeting in February, and a request for proposals (RFP) was issued. The hangar lease also includes the approximately 19,190-square-foot property that it sits on. Vineyard Wind was the sole bidder on the hangar property, and was awarded the lease by the Martha's Vineyard Airport Commission during a special meeting Thursday morning.

The land rental rate for the property is $1.34 per square foot, and Vineyard Wind has agreed in its contract with the airport to review the lease rate every five years and make adjustments if necessary, based on fair market value requirements set forth by the Federal Aviation Administration. An annual Consumer Price Index evaluation and adjustment is also stipulated in the lease.

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Vineyard Wind will be responsible for removing the existing hangar and building the new helicopter hangar.

Vineyard Wind has agreed to tow its helicopters to and from the takeoff site, so they won't need to run their turbines in areas near where other aircraft are taking off and landing.

After the 40-year lease expires, the property will either revert directly back to the airport as owned land, or another RFP will be issued, and Vineyard Wind will have the opportunity to bid again.

Airport director Geoff Freeman said that after 40 years and potentially three master plans later, the hangar area could be needed for a use that is more directly related to airport operations.

"So at the end of that 40 years, that lease could end completely, the airport takes over control, removes that hangar, and creates more apron space, terminal space, or whatever else we need at that time," Freeman said, although that decision is far down the road.

Aviation activities aren't expected to begin out of the Vineyard Wind hangar until 2023, and the massive commercial wind farm is slated to begin operating in 2024, with a federal government lease of 25 years from the start of operation.

Commissioners voted to award Vineyard Wind the lease, with commissioner Kristin Zern abstaining due to her prior work with Richard Andre (president of Vineyard Power, a partner in the wind farm) on Adult Continuing Education of Martha's Vineyard.

Commissioner Bob Zeltzer said the airport should be pleased to welcome Vineyard Wind. "From a conservation point of view, it's a wonderful venture. In reading their background material, they are extremely proficient and experienced in this area, and I don't think we could expect to have a better organization here. It's good for the Vineyard Airport to be the base of Vineyard Wind," Zeltzer said.

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LOCAL NEWS

Vineyard Wind paying UMass scientists to survey ocean area it’s leasing

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New Bedford, MA. – May 19: The New Bedford fishing fleet on May 19, 2021 in Downtown, New Bedford, MA. (Staff Photo By Stuart Cahill/MediaNews Group/Boston Herald)

By **MARIE SZANISZLO** | Boston Herald
PUBLISHED: May 22, 2021 at 4:06 p.m. | UPDATED: May 22, 2021 at 4:06 p.m.

The company that intends to build a $2.8 billion offshore wind project south of Martha's Vineyard is paying the UMass Dartmouth and the Massachusetts Lobstermen's Association about $2 million a year to survey the sea floor before, during and after construction and see what impact the project has on the ocean.

Vineyard Wind has contracted with the School for Marine Science and Technology to send scientists out on local lobster and fishing vessels to measure, tag and count the lobsters and fish they catch before releasing them back into the ocean. The data they collect will establish a baseline of what sea life inhabits the 167,000 acres of ocean that the company is leasing, as well as an adjacent area for comparison.

"We have a strong interest in using local mariners with local knowledge as much as possible," said Andrew Doba, a Vineyard Wind spokesman.

Fisheries surveys began two years ago and another will be conducted before construction, Doba said. The surveys will continue during construction and for three years after the project is complete, he said.

Last week, scientists used a New Bedford scalloper to drop cameras with lights onto the sea floor to document animal and plant life, said research technician Travis Lowery.

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Scientists also will be conducting passive acoustic monitoring for large whales in the lease area, said John Filostrat, a spokesman for the federal Bureau of Ocean Energy Management.

All of the data that's collected will be made public, Doba said.

Tags: **UMass Dartmouth**, **Vineyard Wind**, **wind energy**, **Wind farms**

Marie Szaniszlo | Reporter

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NORTHEAST

Vineyard Wind approval injects fresh optimism into offshore wind industry

Offshore wind developers were reviewing the 100-page decision as they consider adjustments to their projects — including the possibility of accelerated timelines under the Biden administration.

by **Lisa Prevost** and **Sarah Shemkus**
May 13, 2021

The Block Island wind farm off the coast of Rhode Island was the nation's first offshore wind project. Credit: District 4 United Steelworkers / Creative Commons

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Offshore wind developers are reassessing projects with new confidence about their timelines following the Biden administration's approval this week of the country's first large-scale offshore wind project.

The 100-page decision granting Vineyard Wind approval to install up to 84 wind turbines in the Atlantic Ocean off Massachusetts offers a template for the dozen other projects seeking similar federal approvals. And it comes as the process overall appears to be moving ahead more quickly, industry officials said.

"Overall, I think it's a monumental and spectacular milestone for the industry," said Jeff Grybowski, the chief executive officer of US Wind, which holds an 80,000-acre federal lease area off Maryland. "It signals to the world that the United States is prepared to move forward with large-scale, offshore wind farms. And it has provided some evidence that the Biden administration intends to make good on its promises about building out this large clean-energy economy."

The Vineyard Wind decision had been delayed by more than a year under the Trump administration, causing many other developers waiting in the wings to extend the timelines for their projects.

The administration **announced** in March that it is aiming to deploy 30 gigawatts of offshore wind by 2030 as a way of driving economic growth. The plan includes establishing a priority wind energy area in the shallow waters between Long Island and the New Jersey coast, advancing the permitting process for other projects, providing $230 million in port infrastructure development grants, and $3 billion in federal financing for wind and transmission developers.

The decision on Vineyard Wind demonstrates the administration's "remarkable focus on how to move the machinery of government to reach decisions on these projects," Grybowski said. "These are not simple decisions. They involve many federal agencies. In order for all of that to come together, on something that has never been decided before, it requires leadership."

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Offshore wind wasn't an area of focus under the Trump administration, he said, which created a situation "where things were just languishing and there wasn't much clarity on how to move forward."

Even smaller steps in the offshore wind approval process seem to be feeling the impact of the new, more wind-friendly leadership, developers said. Mayflower Wind, the second project selected to provide offshore wind power to Massachusetts, has been seeking regulatory approvals to conduct various engineering, environmental, and cultural surveys as it develops its plans, said Seth Kaplan, director of external affairs for the project.

"Survey approvals are moving very well since, let's say, late January," Kaplan said. "They seem to be moving more expeditiously than they were before, which is a really hopeful sign."

Now, wind developers will dig deep into the details of the Bureau of Ocean Energy Management's decision on Vineyard Wind, and decide whether they should make adjustments to their own projects to better ensure approval, Grybowski said.

"This is the first large template that projects have to follow," he said.

US Wind submitted a construction and operation plan to the Bureau of Ocean Energy Management last year for a 270-megawatt wind farm, one of 13 projects in varying stages of planning or approval along the Eastern Seaboard.

After Vineyard Wind, a joint venture between Avangrid Renewables and Copenhagen Infrastructure Partners, the project next furthest along in the approval process is Southfork Wind, a 90-megawatt facility to be built east of Montauk Point in New York. It is expected to be operating by the end of 2023, according to Meaghan Wims, a spokesperson for Ørsted, which is developing the project in partnership with Eversource.

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And last month, the Bureau of Ocean Energy Management issued notification of its intent to begin the formal environmental review of Revolution Wind, a 704-megawatt project also being developed by Ørsted and Eversource off Rhode Island.

While the company has previously indicated that construction on Revolution Wind will likely be delayed beyond the original 2023 schedule, "now that BOEM has released its notice of intent, we will soon be in a position to better refine the project's timeline," Wims said. "We'll have more details on that in the near future."

Liz Burdock, president and chief executive officer of the Business Network for Offshore Wind, said the decision removes a lot of the uncertainty that the industry faced over the last five years.

"It is the start of commercial-scale construction for offshore wind in the U.S. — we now have a green light," Burdock said. "I think we're going to see a lot of money that's been sitting on the sidelines start pouring in now."

A lingering concern, despite the administration's commitment to offshore wind, is whether the agencies overseeing the federal approvals processes will have the staffing and resources to handle the forthcoming surge of activity.

"Given all of the projects that are moving forward, the burden on those agencies is going to be very real," Kaplan said. "There is going to be a need for them to have the resources to be able to manage everything that's coming at them."

Nonetheless, Laura Morton, offshore lead for the American Clean Power Association, said the Vineyard Wind decision marks a "transformational moment" that will effectively launch an industry in the U.S.

"Before, we didn't have that absolute commitment to move forward," she said. "Now we have an opportunity to stimulate the market with this project and

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the others sitting in the queue at BOEM. The investment community is certainly seeing now that it needs to jump on."

Both Morton and Grybowski noted, however, that this doesn't mean that all projects have a clear path forward. The approval process is still rigorous, and ongoing communication with all stakeholders is key, they said.

Grybowski, the former head of Deepwater Wind — which developed the Block Island Wind Farm, a small project off Rhode Island — said a big takeaway from that project was that "we cannot always convince every stakeholder to support the project. The best way to get the most people to support the project is to be as transparent about the facts as possible, including the things that some people won't like.

LISA PREVOST

Lisa Prevost is a longtime journalist based in Connecticut. She writes regularly about housing, development and business for the New York Times. Her work has also appeared in the Boston Globe, CNBC.com, Next City and many other publications. She is the author of "Snob Zones: Fear, Prejudice and Real Estate." A native New Englander, Lisa covers Connecticut and Rhode Island.

More by Lisa Prevost

SARAH SHEMKUS

Sarah is a longtime journalist who covers business, technology, sustainability, and the places they all meet. She has covered the workings of small-town government in New Hampshire, the doings of alleged swindlers and con men, and the minutiae of local food systems. Her work has appeared in the Guardian, the Boston Globe, TheAtlantic.com, Slate, and other publications. Sarah covers the state of Massachusetts.

More by Sarah Shemkus

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The Barnstable Patriot

NEWS

Feds give final approval for Vineyard Wind

Doug Fraser Cape Cod Times

Published 5:55 a.m. ET May 13, 2021

WASHINGTON – Twenty years ago, it seemed as if the Cape and Islands were ready to tap into the wind off our shores and lead the nation into a new era of renewable energy.

Cape Wind, located in Nantucket Sound, faltered after a tortuous 16-year regulatory process, but on Tuesday Vineyard Wind received its final approval from the federal government and will become the nation's first industrial-scale offshore wind farm.

Secretary of Interior Deb Haaland and Secretary of Commerce Gina Raimondo announced final approval of construction and operation for Vineyard Wind on Tuesday morning, clearing the way for construction to begin.

"This approval shows Massachusetts developed a successful model for promoting offshore wind energy," Gov. Charlie Baker wrote on Twitter following Tuesday's announcement. "We appreciate the federal government's partnership and look forward to working with Vineyard Wind to create thousands of jobs and set MA on a path to achieve Net Zero emissions."

The Bureau of Ocean Energy Management was working on final approval of the project's Environmental Impact Statement. It took four years to gain approval from the project's application to BOEM in 2017.

Vineyard Wind's lease area is approximately 12 miles south of Martha's Vineyard. Federal officials said they could build up to 84 turbines at this location to produce 800 megawatts of power.

"Today's announcement cements that Southeastern Massachusetts, with the Port of New Bedford, is the undisputed national leader in the offshore wind industry," U.S. Rep. William Keating said in a statement Tuesday. "This decision means we will have good, clean energy jobs coming to our shores and a new generation of economic growth that reduces our carbon footprint."

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Looking to the future: Offshore wind projects the 'linchpin' of Biden's clean energy plan

Haaland called Tuesday's approval "a significant milestone" toward the Biden administration's goal of developing 30 gigawatts (30,000 megawatts) of offshore wind power by 2030 that they say will power 10 million homes and avoids 86 million tons of CO_2 emissions annually.

With 17 more wind farm projects either in the permitting pipeline or about to enter, the Vineyard Wind approval marked a jumping-off point for a brand-new industry, advocates said.

“This is an incredible moment for the offshore wind industry," said Laura Morton, senior director of policy and regulatory affairs for offshore wind at American Clean Power Association. "Vineyard 1 is a transformative project that will launch an industry that is the linchpin to meeting the Biden-Harris administration’s ambitious climate change and energy goals.”

From RI to DC: U.S. Senate committee confirms Raimondo commerce secretary nomination

After perceived foot-dragging and political interference in the permitting process under the Trump administration, Bureau of Ocean Energy Management Director Amanda Lefton, a Biden appointee, promised transparency and greater certainty for critical stakeholders.

“The key, welcome change has been the commitment to meeting timelines and deadlines,” said Michael Brown, president and CEO of Mayflower Wind. “But Director Lefton is right that the No. 1 thing that we need from the government is a good, open and fair process – as she said “transparent and efficient” – and that isn’t just true of BOEM, but also the other federal agencies that are involved in the regulation and permitting of offshore wind.”

Report to policymakers: 'Remove barriers' and 'go big' on offshore wind off Cape Cod

The success of Vineyard Wind in obtaining the final federal permits will provide certainty to those projects now under consideration, help spur the creation of an American offshore wind workforce and revolutionize the domestic supply chain, Morton said.

In a separate press conference Tuesday, Vineyard Wind CEO Lars Pedersen said his company would be spending the rest of the year working on financial details and contract negotiations. Onshore work on the power cables that will carry power from the turbines will start after that, with offshore work laying cables commencing in 2022. By 2023, foundations and the

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turbines themselves will be installed, leading to the first power flowing to land in the second half of 2023, Pedersen said.

After decades of frustration with a byzantine and politically charged permitting process, local climate change activists cheered the news with cautious optimism.

“I think this is the launch of an industry," said Brad Campbell, president of the Conservation Law Foundation. "Certainly, this is a momentous decision.”

Campbell said he felt Biden’s 30-megawatt goal in just nine years was possible, and that the Vineyard Wind approval made it all the more likely. But, he said, “the only thing that will make it real is to see steel in the water.”

Cape Codders know firsthand the impacts of climate change. The ocean on our doorstep is warming faster than any other ocean on earth, and species such as cod and lobster are on the move seeking cooler waters. The sea has risen approximately a foot in the past century, and warming seas also lead to more intense storms and increased erosion.

“This is a really significant step forward,” said Richard Delaney, founder of the Cape Cod Climate Change Collaborative.

Delaney said he was optimistic that infrastructure, manufacturing and supply chain industries and labor would all fall into place to make the Biden goal possible.

Climate activist Chris Powicki recalled that it was a decade ago that Cape Wind had its construction and operations plan authorized. He planted a sign on his lawn in celebration, thinking that construction was imminent.

In the end, he said, Cape Wind was too costly. But technological advances and regulatory changes have made offshore wind power competitive price-wise.

“The economics of offshore wind have changed so much that this project will be bankable,” Powicki said.

Powicki is also an adjunct faculty member at Cape Cod Community College in the Engineering Sciences and Applied Technology Department. His focus is on training and education for those looking to land jobs in the offshore wind industry.

“What we’ll see first is construction jobs on land, hopefully in 2022,” he said. “It’s the start of what I like to say is a jobs gravy train. It’s important for Cape Cod Community College and others to make sure the workforce here is ready.”

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Job creation was a major talking point at Tuesday's press conference in Washington.

"I've always believed that fighting climate change is not only good for the environment, but good for the economy," Raimondo said.

Lefton said the Vineyard Wind project would create 3,600 jobs, and that nearly 80,000 jobs would be created over the next decade as other wind farms reach the construction phase.

Administration officials echoed President Joe Biden's statements that these offshore wind farms would be built and operated by union members who make a sustainable middle-class wage.

“It’s an exciting day for the country and in the building trades in Massachusetts,” said Francis Callahan Jr., president of the Massachusetts Building Trades Council, speaking at the Washington press conference. Callahan said council members and affiliates on Monday had ratified an agreement to work on Vineyard Wind.

Pedersen confirmed that a project labor agreement had been reached with unions, although he did not have a breakdown of the jobs. He said they were able to identify more roles for U.S. workers than he’d hoped.

“It’s been a really long process in great detail about what kind of jobs can be provided by American workers,” he said.

Earlier this spring, the Biden administration estimated that it would take one to two new U.S. factories to produce each major wind farm component, such as nacelles, blades, towers and foundations, and that 7 million tons of steel would be needed, equivalent to the four-year output of a steel mill.

But Pedersen said the U.S. supply chain and support industries haven’t developed to the point where the Vineyard Wind 1 project could depend on using exclusively American ships and parts. U.S. cables will be used, he said, but they will have to use a mix of American and foreign manufacturers for the turbines and other parts. A mix of U.S.-flagged and overseas vessels will do the installation work offshore.

“Ambitions in the U.S. market have increased so much that suppliers are looking to become part of the American supply chain really, really fast,” Pedersen said.

But there are already those whose livelihood depend on the sea, and commercial fishing industry groups, who were critical of the decision Tuesday.

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In a response letter, the Responsible Offshore Development Alliance said BOEM “continues to abdicate its responsibility to the public and leave all decision making to large, multinational corporations, including this Decision which includes effectively no mitigation measures to offset the impacts to critical ocean ecosystems and commercial fisheries.”

In particular, RODA said fishermen felt the spacing of turbines at 1-nautical-mile intervals in a grid pattern was “insufficient to ensure safety at sea for all types of fishermen and other seagoing vessels.”

Last May, the U.S. Coast Guard did endorse that layout.

Lefton said the permitting process included input from the fishing community, and that mitigation measures were included. She said Vineyard Wind provided an opportunity to see how those measures, including the 1-mile spacing, actually worked.

“We feel very, very comfortable that every concern was analyzed and addressed,” Pedersen said. He said Vineyard Wind does maintain separate funds totaling $32 million for Massachusetts and Rhode Island fishermen to address any unanticipated loss of fishing opportunities.

“We feel a thorough review with substantial mitigation puts us in a good place,” he said.

Campbell, of the Conservation Law Foundation, said there will be challenges ahead in balancing the needs of a new industry, the fisheries and the possibility for harm to endangered species such as highly endangered North Atlantic right whales.

“But far and away the greatest threat to the health of the oceans and our way of life is the climate crisis,” Campbell said. “We would like to see a reasonable accommodation of commercial fishermen. We continue to think that is possible. But overall, given the urgency of the climate crisis, we have to learn to strike a balance in a way that doesn’t hold up these projects forever.”

Contact Doug Fraser at dfraser@capecodonline.com. Follow him on Twitter: @dougfrasercct.

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PRESS RELEASE

Baker-Polito Administration Applauds Federal Approval of Vineyard Wind Project

Massachusetts to Launch U.S. Offshore Wind Industry with First Commercial-Scale Project in Nation

FOR IMMEDIATE RELEASE:

5/11/2021

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BOSTON — The Baker-Polito Administration today applauded the Record of Decision issued by the U.S. Bureau of Ocean Energy Management (BOEM) granting approval to the Vineyard Wind project and concluding environmental review of the project through the National Environmental Policy Act. The key federal permitting

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approval allows Vineyard Wind to advance its Construction and Operations Plan to bring 800 Megawatts of cost-effective, renewable offshore wind power to Massachusetts ratepayers, enough energy to power 400,000 homes. Following the announcement, Energy and Environmental Affairs Secretary Kathleen Theoharides will join Vineyard Wind CEO Lars Pedersen at the Wind Technology Testing Center in Charlestown to celebrate the decision.

"Massachusetts should be proud that this decision launches the nation's first commercial-scale offshore wind project on the Commonwealth's shores," **said Governor Charlie Baker.** "This groundbreaking project will produce affordable, renewable energy, create jobs and prove Massachusetts developed a successful model for developing offshore wind energy. We appreciate the federal government's partnership to grant this approval and look forward to working with Vineyard Wind to create thousands of jobs and set the Commonwealth on a path to achieve Net Zero emissions."

"Offshore wind represents a once-in-a-generation opportunity for communities across Massachusetts, especially in the South Coast region, to pioneer this new clean energy industry in the U.S.," **said Lieutenant Governor Karyn Polito.** "Building this new industry will bring new jobs and economic development to cities and towns in the Commonwealth, while providing a significant clean energy resource that will save ratepayers money while helping to meet our ambitious climate goals."

Through a competitive procurement process established in comprehensive energy legislation signed by Governor Baker in 2016, the Vineyard Wind project was **selected** (/news/project-selected-to-bring-offshore-wind-energy-to-the-commonwealth) in May 2018 to provide 800 MW of cost-effective renewable offshore wind power to Massachusetts. Following the selection of the Vineyard Wind project, a second competitive procurement process resulted in the **selection** (/news/project-selected-to-increase-offshore-wind-energy-in-the-commonwealth) of the Mayflower Wind project in October 2019. Together the two projects represent major steps in meeting the state's greenhouse gas emission reduction mandates and growing the Commonwealth's clean energy economy.

"Offshore wind is critical to meeting Massachusetts' nation-leading commitment to achieving Net Zero greenhouse gas emissions in 2050, and today's decision by the Bureau of Ocean Energy Management is a monumental step in our shared effort to take on the generational challenge of climate change," **said Energy and Environmental Affairs Secretary Kathleen Theoharides.** "With this key federal approval, the Vineyard Wind project is positioned to break ground as the first commercial-scale offshore wind project in the U.S., and the Baker-Polito Administration will continue to build on its national climate leadership by ensuring that all residents benefit from the affordable clean energy and economic opportunities offered by this new American industry."

"Today's Record of Decision is not about the start of a single project, but the launch of a new industry," **said Vineyard Wind CEO Lars T. Pedersen**. "Receiving this final federal approval means the jobs, economic benefits and clean energy revolution that have been long talked about can finally come to fruition. It's been a long road to get to this point, but ultimately, we are reaching the end of this process with the strongest possible project. I want to thank BOEM, the Department of Interior and the Biden Administration for their efforts in finalizing the review of this project. I also want to thank Governor Baker, the Massachusetts federal delegation and State Legislature for their steadfast commitment to seeing this endeavor through to today. And of course, I want to extend my sincerest appreciation to all our supporters and stakeholders for all of their work, input and dedication. We could not have reached this milestone without you."

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The 800 MW Vineyard Wind project will utilize 62 GE Haliade-X turbines, currently the world's most powerful turbine with a capacity of 13 MW per machine utilizing wind blades spanning 107 meters. In November 2019, GE shipped a 107 meter Haliade-X blade to the Wind Technology Testing Center – the only facility of its kind in North America – for stress and durability testing that validated the technology can withstand more than 25 years of operation at sea, a key part of the technology development process.

"Cost-effective offshore wind energy plays a pivotal role in advancing the Commonwealth's efforts to reduce greenhouse gas emissions, promote economic development, and ultimately meet our ambitious long-term climate goals," **said Department of Energy Resources Commissioner Patrick Woodcock.** "Today's decision from the Bureau of Ocean Energy Management marks a historic day for the country and Massachusetts and is the testament of the hard work of state and federal agencies over nearly a decade. Our leadership in offshore wind has established a new industry in the United States that has the opportunity to reduce emissions, boost our economy, and lower energy costs for our residents and businesses."

"On behalf of the Massachusetts Clean Energy Center, I would like to congratulate Lars Pedersen and the entire Vineyard Wind team for today's major milestone," **said Steve Pike, CEO of MassCEC.** "We look forward to hosting Vineyard Wind at the New Bedford Marine Commerce Terminal and continuing our mutual efforts to advance workforce and supply chain development as well as science, research and innovation for the Nation's first commercial offshore wind farm."

The Record of Decision concludes NEPA review by BOEM, outlining along with its final decision an approval of the project's mitigation package. In response to extensive stakeholder engagement, including with the Massachusetts Fisheries Working Group, the Massachusetts Habitat Working Group, and other state and local entities, Vineyard Wind has agreed to provide millions of dollars to compensate Massachusetts and Rhode Island fishermen for potential loss of revenue and lost gear, and to enhance their ability to fish in and around the lease area. Vineyard Wind has also committed to continue funding pre- and-post construction survey studies with the University of Massachusetts Dartmouth School for Marine Science and Technology (SMAST) and the Massachusetts Lobstermen's Association (MLA) to measure any impacts to the marine environment.

To ensure that the project is developed in an environmentally responsible manner that protects and preserves marine wildlife, including the critically endangered North American Right Whale, Vineyard Wind will invest millions of dollars to develop and deploy innovative technologies and undertake scientific research to further safeguard marine mammals; institute comprehensive monitoring protocols to ensure that construction doesn't take place when right whales are near the lease area; utilize acoustic monitoring technology throughout construction including in transit corridors, and employ trained protective species observers to spot right whales visually during transit and foundation installation.

In August 2020, the Baker-Polito Administration announced the signing of lease agreements with Vineyard Wind and Mayflower Wind to utilize the New Bedford Marine Commerce Terminal as the primary staging and deployment base for the construction and installation of their offshore wind projects located in federal waters south of Martha's Vineyard. The lease agreements commit the facility to full-time offshore wind work from 2023 into 2027 and are worth more than $32.5 million.

Constructed and operated by the Massachusetts Clean Energy Center (MassCEC), the New Bedford Marine Commerce Terminal is a 29-acre heavy-lift facility and the first port in North America specifically purpose-built to support the staging and installation of offshore wind components.

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On March 26, 2021, Governor Baker **signed comprehensive climate change legislation** (/news/governor-baker-signs-climate-legislation-to-reduce-greenhouse-gas-emissions-protect-environmental-justice-communities) that increased the Administration's authorization to solicit an additional 2,400 Megawatts of offshore wind, bringing the state's total commitment to 5,600 Megawatts. On December 30, 2020, the Administration released two reports – the Massachusetts 2050 Decarbonization Roadmap Report and an interim 2030 Clean Energy and Climate Plan (CECP) – that detail policies and strategies to equitably and cost-effectively reduce emissions and combat climate change. The 2050 Roadmap found that the most cost-effective, low-risk pathways to Net Zero share core elements, including a balanced clean energy portfolio anchored by a significant offshore wind resource, more interstate transmission, and widespread electrification of transportation and building heat.

On May 7, 2021, the Baker-Polito Administration, in the third round of its offshore wind solicitation process, issued a Request for Proposals seeking up to 1,600 Megawatts of affordable, resilient clean energy. Bids are due on September 17, 2021, and a selection of project(s) will be announced by December 17, 2021.

###

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The US has approved a huge offshore wind farm off the coast of Martha's Vineyard — the first of its kind

Connor Perrett May 11, 2021, 12:38 PM

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REUTERS/Nick Oxford

The Biden administration granted approval Tuesday for the nation's first large-scale offshore wind farm.

The Vineyard Wind project would be built off the coast of Matha's Vineyard.

The project is expected to power as many as 400,000 homes and businesses.

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The US Department of the Interior approved Vineyard Wind — the first large-scale wind farm in the US — on Tuesday.

The Vineyard Wind project would be built off the coast of Martha's Vineyard in Massachusetts and is slated to create up to 800 megawatts of electricity.

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Interior Department said.

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"A clean energy future is within our grasp in the United States," Secretary of the Interior Deb Haaland said in a statement. "The approval of this project is an important step toward advancing the Administration's goals to create good-paying union jobs while combatting climate change and powering our nation."

According to NBC Boston, the project is estimated to cost $2 billion and is part of President Joe Biden's agenda to reduce carbon emissions in the US and generate 30 gigawatts of energy from offshore wind by 2030.

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The Washington Post
Democracy Dies in Darkness

Interior Department approves first large-scale offshore wind farm in the U.S.

The Vineyard Wind project envisions building 62 turbines off Martha's Vineyard producing enough electricity to power 400,000 homes

By Joshua Partlow

May 11, 2021 at 12:48 p.m. EDT

The Biden administration on Tuesday approved the first large-scale offshore wind farm in the United States, a project that envisions building 62 turbines off Martha's Vineyard in Massachusetts and creating enough electricity to power 400,000 homes.

Vineyard Wind is the first of several massive offshore wind-farm proposals that could put more than 3,000 wind turbines in the Atlantic Ocean from Maine to North Carolina. The Biden administration has committed to processing the other 13 projects under federal review by 2025 in an attempt to meet the administration's ambitious goal of producing 30,000 megawatts of electricity from offshore wind by 2030, powering some 10 million homes.

The goal is part of the Biden administration's effort to fight climate change by shifting away from fossil fuels.

"I believe that a clean-energy future is within our grasp in the United States," Interior Secretary Deb Haaland said in a conference call Tuesday, describing the approval of Vineyard Wind as "a significant milestone in our efforts to build a clean and more equitable energy future while addressing the climate emergency."

Biden administration officials said that the Vineyard Wind project will create about 3,600 jobs for American workers.

So far, just two offshore pilot projects are operational — one off Rhode Island and the other off Virginia. Together, their seven turbines produce 42 megawatts of electricity.

Commerce Secretary Gina Raimondo was governor of Rhode Island when the five-turbine Block Island wind farm was completed in late 2016.

"As governor, I saw this is complicated. This is complex in order to do it right," Raimondo said on the conference call, adding, "We created thousands of jobs just in that wind farm."

"If you think about how complex it is to erect a wind turbine in the middle of the ocean — you need engineers, you need operating engineers, you need laborers, you need electricians, plumbers, pipe fitters, and they have to be highly trained, highly skilled," she said. "It's actually very dangerous work. And it's skilled work. But they're good, high-paying jobs."

The coming projects are far larger than the existing pilot projects and have generated opposition from some coastal communities and commercial fishermen. Environmentalists have also raised concerns about the potential impact on

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birds, fish and marine mammals, including the North Atlantic right whale, a critically endangered species that migrates through swaths of ocean designated for wind-farm construction.

“This is a pivotal moment, and one with high stakes for birds,” Joel Merriman, director of the American Bird Conservancy’s Bird-Smart Wind Energy campaign, said in a statement. “We will be looking for strict protections for wildlife as this new industry takes flight in U.S. waters.”

Vineyard Wind is a joint venture of Avangrid, which is a U.S. offshoot of the Spanish energy company Iberdrola, and Copenhagen Infrastructure Partners out of Denmark. Europe’s offshore wind industry is decades ahead of the United States, and European companies dominate the industry and its supply chain.

Vineyard Wind’s final federal permit from the Interior Department will allow it to build up to 84 turbines in its lease area on the outer continental shelf in an area that is 12 nautical miles off the coasts of Martha’s Vineyard and Nantucket, said Amanda Lefton, the director of the Bureau of Ocean Energy Management, which oversees permitting.

The project will have a capacity to produce 800 megawatts of electricity using turbines supplied by General Electric that are more than 800 feet tall.

“If you think about where this is going for this country and the goals that the administration has to have 30 gigawatts for offshore wind and this is the start of it, I think it really is a historic day for the industry and also for our government,” Dennis V. Arriola, chief executive of Avangrid, said in an interview.

Once financing is finalized, Vineyard Wind’s construction is expected to begin later this year, along with work on the onshore substation in Barnstable, Mass., where the cables from the turbines will reach land. Turbines are projected to be built and begin producing electricity by 2023, with the project being completed the following year.

The Vineyard Wind project has been more than a decade in the making; the first meetings to talk about possible locations for the wind farm were in 2009. The federal government has been reviewing it for more than three years and developers have taken more than 400 public meetings with various stakeholders, Arriola said. Along the way, the project size was reduced by 60 percent and turbines were spaced one nautical mile apart in response to concern from commercial fishermen and others, as well as advances in turbine technology.

Vineyard Wind developers have agreed to pay $37.7 million to commercial fishermen in Massachusetts and Rhode Island to compensate them for future losses.

But many commercial fishermen in New England remain staunchly opposed to the wind turbines, proposed to be built on traditional fishing grounds for scallops, squid, sea bass and other fish. Fishermen say that it will be dangerous to navigate among turbines, particularly in poor weather and because of interference with radar navigation systems.

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Biden administration grants Vineyard Wind its final major permit

The offshore energy project could provide enough electricity for as many as 400,000 homes

A wind farm off Block Island, R.I., is one of only two built so far in the United States.Stan Grossfeld/ Globe Staff

After two decades of false starts and lengthy delays, Massachusetts is poised to get the nation's first large-scale offshore wind farm with the approval Tuesday by the Biden administration of a massive energy project in federal waters some 15 miles south of Martha's Vineyard.

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The decision is an important milestone for the Biden administration's effort to battle climate change by moving the nation's energy policy away from fossil fuels and toward renewable sources. It is also validation of a push for wind power that started in Massachusetts some 20 years ago with the Cape Wind project that was proposed for waters in Nantucket Sound and eventually collapsed in the face of stiff opposition.

The Vineyard Wind project approved Tuesday would generate up to 800 megawatts of electricity from 62 giant turbines, enough to power at least 400,000 homes. Construction is expected to begin before the end of the year, once the developers have secured financing for the nearly $3 billion project. They hope to be generating electricity from a portion of the project by late 2023, with construction ending the following year.

"It's not just the approval of a project, but it really is the birth of an industry," said Dennis Arriola, chief executive of Avangrid, an energy company that is developing Vineyard Wind in a partnership with Copenhagen Infrastructure Partners. "It's really historic. It shows that when a private and public partnership want to get something done like this, it can be done."

The approval will also accelerate an arms race among at least a half-dozen East Coast states for the renewable energy and the jobs that these projects bring. New York and New Jersey, for example, are pursuing their own ambitious offshore wind goals. Massachusetts also has a second utility-scale wind farm project under development, Mayflower Wind, which is proposed for nearby waters south of the Vineyard.

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Baker administration kicks off new round of bidding for offshore wind contractsIn the offshore wind industry's East Coast arms race, Mass. falls behind New York
Related: Vineyard Wind will use GE turbines for its massive project off Martha's Vineyard

The Vineyard Wind turbines, manufactured by General Electric, would be massive, some 800 feet tall, and would send electricity along underwater cables to the regional power grid near Hyannis. While Boston-based GE will manufacture the major components in Europe, as many as 2,000 workers will be employed locally during the construction of the project, and dozens will work in operations and maintenance after the wind farm is complete.

Amanda Lefton, director of the Bureau of Ocean Energy Management, said Tuesday that her agency's approval of Vineyard Wind should send an important signal to the largely European-based offshore wind industry.
Related: Biden administration puts Vineyard Wind energy project back on track

"We know we need to create greater certainty for offshore wind as we move forward," Lefton said. "We are seeing this investment happening already in our supply chain in the United States, which is why today's milestone is so critical in getting this progress moving forward."

The federal agency's review of the Vineyard Wind project had slowed considerably under the Trump administration, in part because of concerns raised by the fishing industry. But the Biden administration made it clear Vineyard Wind would be put on a fast track as part of a broader effort to shift the country's grid to cleaner sources of electricity. The new administration wants to see as many as 30,000

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megawatts of offshore wind capacity — the equivalent of more than 36 additional wind farms of Vineyard Wind's size — built off the US coastline by 2030.
Related: Biden wants to move energy offshore, but choppy seas are ahead

The new federal permit will help developers secure financing, as will a federal tax credit program. Perhaps most important: The Vineyard Wind developers won contracts with three major utilities to provide electricity to Massachusetts ratepayers from the wind farm, through a process established by the state Legislature in 2016.

While long expected, the federal approval of Vineyard Wind was still hailed by industry supporters as a watershed moment in the country's move to a greener energy supply, while it was again criticized by fishermen who worry about disruption to their fishing grounds.

Representatives for the fishing industry say the towering turbines pose navigational hazards to their boats, even when spaced one mile apart — as is planned with Vineyard Wind. The Responsible Offshore Development Alliance issued a statement on Tuesday condemning the BOEM decision. The fishing industry group accused the agency of failing to consider adequate mitigation measures and of taking a scattershot, politically motivated approach indicating that it cares more about "multinational businesses and energy politics" than domestic food sources provided by local fishermen. RODA said prime fishing grounds and other parts of the ocean "are at risk of becoming fields of steel and fiberglass."

Until now, the only two offshore wind farms built in the United States have been small pilot projects; one is off Block Island, R.I., and the other off Virginia Beach.

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Mayflower Wind, a partnership owned by Shell, EDP Renewables, and Engie, won Massachusetts contracts in 2019 to build a wind farm that would be similar in size to Vineyard Wind. Both Vineyard Wind and Mayflower Wind have agreed to use a state-funded terminal in New Bedford for staging during construction.

On Friday, the Baker administration launched a third bidding competition, this time for up to 1,600 megawatts of additional offshore wind capacity, essentially doubling what has already been awarded. In addition to Vineyard Wind and Mayflower Wind, two other development teams with lease rights in the area south of Martha's Vineyard and Nantucket could participate: Equinor (formerly Statoil) and a partnership between Eversource and Danish energy company Ørsted.

Governor Charlie Baker issued a statement saying the Vineyard Wind project will "prove Massachusetts developed a successful model for developing offshore wind energy." Baker's energy secretary, Katie Theoharides, hosted Vineyard Wind and GE executives on Tuesday at the state's wind blade testing center in Charlestown to celebrate the milestone.

The administration has made getting a low price the primary reason for picking a winner in all three contests for utility contracts so far, raising concerns among some in the industry that state officials aren't doing enough to prioritize economic development. The administration said ratepayers could see modest savings on their electric bills over the life of the 20-year contracts, when the contracts were awarded to Vineyard Wind in 2018; Mayflower Wind was required to beat Vineyard Wind's price.

These energy prices are a stark contrast to the relatively high rates that were offered by Cape Wind, which faced opposition in part

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because of its potential impact on ratepayers.

An image of the Vineyard Wind project, which would allow as many as 84 wind-powered turbines in federal waters 12 nautical miles south of the Vineyard.Courtesy of Vineyard Wind

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Biden Administration Approves Nation's First Major Offshore Wind Farm

The Vineyard Wind project, off the coast of Massachusetts, would generate enough electricity to power 400,000 homes.

Wind turbines near Block Island, R.I., one of only two offshore wind farms operating in the United States.Credit...Chang W. Lee/The New York Times

Construction on the nation's first commercial-scale offshore wind farm is expected to begin this summer, after the Biden administration gave final approval Tuesday to a project it hopes will herald a new era of wind energy across the United States.

The Vineyard Wind project calls for up to 84 turbines to be installed in the Atlantic Ocean about 12 nautical miles off the coast of Martha's Vineyard, Mass. Together, they could generate about 800 megawatts of electricity, enough to power about 400,000 homes.

The project would dwarf the scale of the country's two existing wind farms, off the coasts of Virginia and Rhode Island. Together, they produce just 42 megawatts of electricity.

In addition to Vineyard Wind, a dozen other offshore wind projects along the East Coast are now under federal review. The Interior Department has estimated that by the end of the decade, some 2,000 turbines could be churning in the wind along the coast from Massachusetts to North Carolina.

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“A clean energy future is within our grasp in the United States,” Interior Secretary Deb Haaland said Tuesday. “The approval of this project is an important step toward advancing the administration’s goals to create good paying union jobs while combating climate change and powering our nation. Today is one of many actions we are determined to take to open the doors of economic opportunity to more Americans.”

The idea of a wind farm off the Massachusetts coast was conceived two decades ago but ran into repeated setbacks, delays and well-funded opposition from waterfront property owners before the Trump administration moved to cancel the project’s permitting process.

The Biden administration revived the Vineyard Wind project in March as part of its larger push to tackle climate change.

The effort fuses the administration’s goal of cutting planet-warming greenhouse gas emissions with its promise that renewable energy will create new economic opportunities. The administration has pledged to build 30,000 megawatts of offshore wind in the United States by 2030. It’s a target the White House has said would spark $12 billion in capital investments annually, supporting 77,000 direct and indirect jobs by the end of the decade.

But it’s not all smooth waters ahead for offshore wind power. Commercial fishing groups and coastal landowners are expected to sue to stop the projects. Some environmental groups worry that they will harm marine life.

And some economists are skeptical that wind farms can create jobs on the scale predicted by the Biden administration. The supply chain for wind farms — and the manufacturing jobs associated with it — is mostly located in Europe.

But union leaders, heavily courted by the Biden administration, said they are optimistic that the large-scale projects could spur companies to manufacture massive wind turbines and related equipment in the United States. “I think it’s an important message that these jobs will be good union jobs with good wages and benefits,” said Frank Callahan, president of the Massachusetts Building Trades Council. He praised the administration for approving a project that is first of its kind and said that labor leaders have sought to ensure that the project will be built and maintained by union workers. The administration estimates that the project will create about 3,600 jobs.

The $2.8 billion project is a joint venture of the energy firms Avangrid Renewables and Copenhagen Infrastructure Partners. “We are very excited and proud to be part of the birth of an incredibly important new industry for the U.S.,” said Dennis V. Arriola, Avangrid’s chief executive officer.

Electricity generated by the Vineyard Wind turbines will travel via cables buried six feet below the ocean floor to Cape Cod, where they would connect to a substation and feed into the New England grid. The company said that it expects to begin delivering wind-powered electricity in 2023.

The Biden administration said that it intended to fast-track permits for other projects off the Atlantic Coast and that it would offer $3 billion in federal loan guarantees for offshore wind projects and invest in upgrades to ports across the United States to support wind turbine construction. “It’s a big deal, and not just

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for Vineyard Wind. This is the icebreaker, it's the first one, it's charting the course," Rafael McDonald, an electricity and renewable analyst at IHS Markit, said after the Biden administration released its initial environmental review in March. "There's all this pent-up demand from state mandates, and Vineyard Wind is the bellwether."

If Mr. Biden's offshore wind targets are met, it could avoid 78 million metric tons of carbon dioxide emissions, while creating new jobs and even new industries along the way, the administration said. That would also accomplish a significant chunk of the President's pledge to cut United States emissions roughly in half by 2035.

Many Republicans are skeptical of Mr. Biden's job creation claims and say the president's plans — particularly his suspension of new oil and gas leases on federal lands and waters — are already hurting union workers in fossil fuel industries. "The Biden administration is pushing expensive fantasy jobs, and killing real ones at a time that America cannot afford to lose these jobs," Senator John Barrasso of Wyoming, the ranking Republican on the Senate Energy Committee, said Tuesday.

Offshore wind, which is booming in Europe, is a nascent industry in the United States. But several Atlantic Coast states, including Connecticut, Maryland, Massachusetts, New Jersey, New York and Virginia, have committed to buying more than 25,000 megawatts of offshore wind power by 2035, according to the American Clean Power Association.

That alarms the fishing industry, which is worried boats and trawlers will have difficulty navigating around the hulking turbines, the largest of which now have rotor diameters the length of two football fields. That could limit the amount of seafood they can catch, potentially affecting millions of dollars in revenue.

"For the past decade, fishermen have participated in offshore wind meetings whenever they were asked and produced reasonable requests, only to be met with silence," says Anne Hawkins, executive director of the Responsible Offshore Development Alliance, a coalition of fishing groups. "From this silence now emerges unilateral action and a clear indication that those in authority care more about multinational businesses and energy politics than our environment, domestic food sources, or U.S. citizens."

Amanda Lefton, the director of the Interior Department's Bureau of Ocean Energy Management, said that the agency would continue to seek input from fishing groups as the project moves forward. "We are considering those impacts and considering members of the fishing community in that process," she said. "We can ensure that we have the best science to help address some of the concerns that are out there."

Brad Plumer contributed reporting.

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VINEYARD WIND

Vineyard Wind Receives Record of Decision for First in the Nation Commercial Scale Offshore Wind Project

Federal Milestone will Launch Offshore Wind Industry and Bring Thousands of Jobs, Reduce Carbon Pollution and Lower Costs for Ratepayers

(**NEW BEDFORD, MA**) – Vineyard Wind, a joint venture between Avangrid Renewables, a subsidiary of AVANGRID, Inc. (NYSE: AGR), and Copenhagen Infrastructure Partners (CIP), today received the Record of Decision (ROD) from the U.S. Department of the Interior Bureau of Ocean Energy Management (BOEM), the final major step in the federal review process for the first commercial scale offshore wind farm in the United States.

"Today's Record of Decision is not about the start of a single project, but the launch of a new industry," said **Vineyard Wind CEO Lars T. Pedersen**. "Receiving this final major federal approval means the jobs, economic benefits and clean energy revolution associated with the Vineyard Wind 1 project can finally come to fruition. It's been a long road to get to this point, but ultimately, we are reaching the end of this process with the strongest possible project. I want to thank the Biden Administration, Secretaries Haaland and Raimondo and BOEM for their efforts in finalizing the review of this project. I also want to thank Governor Baker, the Massachusetts federal delegation and State Legislature for their steadfast commitment to seeing this endeavor through to today. And of course, I want to extend my sincerest appreciation to all our supporters and stakeholders for all of their work, input and dedication. We could not have reached this milestone without you."

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part of the birth of an incredibly important new industry the U.S. Offshore wind is a key part of America's clean energy future, and Vineyard Wind 1 is a major step forward to the clean and connected future we envision and work toward every day," said **AVANGRID CEO Dennis V. Arriola**. "We appreciate the thorough review by BOEM as well as the considerable input from stakeholders. The broad engagement from many parties throughout this process has improved the project and positioned both Vineyard Wind 1 and the broader offshore wind industry for long-term success."

"We are very proud to have been part of developing this landmark project," said **Christian T. Skakkebæk, a Senior Partner and Co-founder of CIP**. "Vineyard Wind 1 is slated to become one of the world's largest offshore wind projects, creating significant investments and good paying jobs in the U.S. For many years we have been actively engaged in the development of the U.S. offshore wind market, and we are confident that Vineyard Wind will pave the way for a successful and growing wind industry in the country. This market will play an important role for CIP's renewable investments for years to come, and we look forward to being an integral part in the transition to green energy in the U.S."

"Massachusetts should be proud that this decision launches the nation's first commercial-scale offshore wind project here on the Commonwealth's shores," **said Governor Charlie Baker.** "This groundbreaking project will produce affordable, renewable energy, create jobs and prove Massachusetts developed a successful model for developing offshore wind energy. We appreciate the federal government's partnership to grant this approval and look forward to working with Vineyard Wind to create thousands of jobs and set the Commonwealth on a path to achieve Net Zero emissions."

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and GE is excited to support that goal by providing our Haliade-X turbines, the most powerful offshore wind turbine built to date, for this project, said **John Lavelle,**

President & CEO, Offshore Wind at GE Renewable Energy. "Today's decision is one more reason to be optimistic about the potential of offshore wind in the US, an abundant source of clean, renewable energy that can help coastal communities address the threat of climate change and accelerate the energy transition."

Since 2017, the Vineyard Wind 1 project has been through an unprecedented and exhaustive public review process that generated more than 30,000 public comments, more than 90% of which supported the project. The Construction and Operations Plan (COP) was reviewed by more than two dozen federal, state, and local agencies over the course of more than three and a half years.

The project design includes the world's most powerful wind turbine, the GE Haliade-X, with a capacity of 13 megawatts (MW). The larger turbine capacity has allowed the project to reduce the total number of turbines from 108 to 62 while still delivering a total capacity of 800 MW to Massachusetts ratepayers. The turbine layout, which features consistent spacing of one nautical mile between turbines, was endorsed by the United States Coast Guard for transit, fishing and navigational safety.

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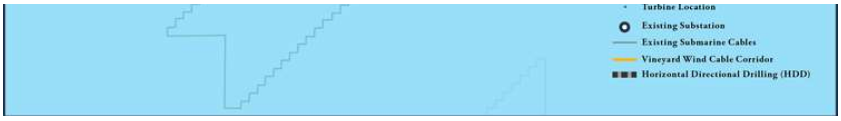
VINEYARD WIND



"With this record of decision on Vineyard Wind on the books, the era of American offshore wind is no longer on the horizon—it's here, now, off the coast of Massachusetts, and the answer to America's energy future is blowing in the offshore wind," said **U.S. Senator Edward Markey**. "Vineyard Wind will be the first of many offshore wind projects to come, and we can use our Bay State know-how to show the rest of the country how to get steel in the water, zero-emission energy on the grid, and union jobs to American workers. I applaud Vineyard Wind, Massachusetts stakeholders, and the Biden administration for moving forward with this project and following through on their commitment to jobs, climate, and American innovation."

"Today's Record of Decision for Vineyard Wind is great news for Massachusetts and our country," said **U.S. Senator Elizabeth Warren**. "The Vineyard Wind project will generate clean energy for Massachusetts families and businesses, create thousands of good jobs and is a bold step forward towards fighting the climate crisis. I will keep working with the Biden Administration, my delegation colleagues, local stakeholders, and Vineyard Wind to move this project forward and help make Massachusetts a leader in our clean energy future."

"What a difference today is from the last four years," said **Congressman Bill Keating**, who has been the leader in Congress in support of this project. "We have worked so hard to get to this point and I applaud Vineyard Wind for maintaining their commitment to the region in the face of challenge after challenge from the prior Administration. Today's announcement cements the Port of New Bedford and Southeastern Massachusetts as the undisputed national leader in the offshore wind industry. This decision means we will have good, clean energy jobs coming to our shores and a new generation of economic growth that reduces our carbon footprint."

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renewable energy in an industry poised to create good jobs and energize our economy," said **Massachusetts Senate President Karen E. Spilka.** "I am grateful to Vineyard Wind for their commitment to Massachusetts, and to the Biden Administration for their swift attention to this crucial part of our sustainable energy infrastructure. The Senate has long supported wind energy, most recently in our Next Generation climate change legislation, and we stand ready to continue that support."

"With today's news, Massachusetts is now able to realize the ambitious offshore wind energy goals the Legislature set in 2016," said **Speaker of the House Ronald J. Mariano**. "The Vineyard Wind project will power thousands of homes while helping us attain our emissions reduction goals. It will also boost our economy, reduce electricity rates, and create thousands of clean energy jobs. The House will continue to prioritize making Massachusetts a regional hub of the offshore wind industry, and most recently included a $10 million investment in the House budget to train the workforce that will fuel the offshore wind energy boom."

"This is a great day for our region, our state and our environment," said **State Representative Patricia Haddad**. "After years of discussion and debate, we're now poised to finally realize the potential for job creation, economic development and a huge reduction in emissions that the offshore wind industry can deliver. I want to thank the Biden Administration for their steadfast support for this industry and clear commitment to decarbonizing our grid."

"More than any earlier milestone, the Biden Administration's decision today marks the arrival of the offshore wind industry in America," said **New Bedford Mayor Jon Mitchell**. "As the country's first industrial-scale offshore wind farm, the Vineyard Wind project is at the head of a line of projects that together will be a pillar of America's clean energy future. After years of planning and key investments in infrastructure and workforce development, New Bedford is poised to lead the industry's rollout and

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"This is a great day for the hard-working men and women in the building trades because with the ROD in hand, we can finally get started creating the good paying union jobs this project is going to bring to our state and region," said **Frank Callahan of the Massachusetts Building Trades**. "I want to thank the Biden Administration for their support, our state government for their belief in this industry and many people who came out to support this first of its kind project."

In response to comments and direct engagement with neighboring communities, environmental organizations and advocates, fisheries organizations, and governmental and tribal entities, the project has incorporated significant mitigation measures, including:

Historic Protections for the North Atlantic Right Whale (NARW):

- Commitment to invest millions of dollars to develop and deploy innovative technologies and undertake scientific research to further safeguard marine mammals. Last year, Vineyard Wind partnered with Greentown Labs to work with the startup community to innovative technologies to the forefront. To learn more about that initiative, click here.
- Institute comprehensive monitoring protocols to ensure that construction doesn't take place when NARWs are near the lease area. The project will utilize acoustic monitoring technology throughout construction including in transit corridors and will employ trained protective species observers to spot NARW visually during transits and foundation installation.
- Deploy industry leading technology to dampen construction noise during installation in order to protect the NARW and all marine species.

Substantial Fisheries Investment and Mitigation Funding:

- Agreements with the states of Massachusetts and Rhode Island to provide millions

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- Commitment to continue funding pre and post construction survey studies with both the University of Massachusetts Dartmouth School for Marine Science and Technology (SMAST) and the Massachusetts Lobstermen's Association (MLA) to measure what impact, if any, the windfarm is having on the marine environment. To learn more about the fisheries studies, click here.

Cultural and Historical Protections:

- Project will use an Aircraft Detection Lighting System (ALDS) to ensure that nighttime lights will only operate a few hours a year when aircrafts are present
- Turbines will be painted to reduce visual impacts to historical properties
- Funds will be allocated to conduct ethnographic studies for local Native American Tribes that will serve as the basis for submissions to the National Register of Historic Places to allow for greater recognition of tribal heritage sites.

Vineyard Wind 1 is an 800 MW project located 15 miles off the coast of Martha's Vineyard and will be the first commercial scale offshore wind project in the United States. The project will generate electricity for more than 400,000 homes and businesses in the Commonwealth of Massachusetts, create 3,600 Full Time Equivalent (FTE) job years over the life of the project, save ratepayers $1.4 billion over the first 20 years of operation and is expected to reduce carbon emissions by more than 1.6 million tons per year.

Vineyard Wind will reach financial close in the second half of 2021 and begin delivering clean energy to Massachusetts in 2023.

About Vineyard Wind

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VINEYARD WIND

of Martha's Vineyard. Vineyard Wind, based in New Bedford, Massachusetts, is 50 percent owned by funds of Copenhagen Infrastructure Partners (CIP) and 50 percent by

Avangrid Renewables, a subsidiary of AVANGRID, Inc. (NYSE: AGR). For more information, visit www.vineyardwind.com.

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Vineyard Wind: Sailing Uncharted Waters

By **Matthew Mercure** - April 29, 2021

In the last five years, the Bureau of Ocean Management (BOEM) has issued 15 active commercial leases for offshore wind development that could support more than 21 GW of generating capacity. Excitement and public awareness has grown as well, with states up and down both the East and West Coasts and on the Great Lakes actively seeking, planning and integrating offshore wind into their carbon-reduction goals.

"We are on the verge of launching the first large-scale wind project in the U.S.," said Bill White, head of U.S. offshore wind at Avangrid Renewables, during the recent IPF Virtual: Expansion program hosted by the Business Network for Offshore Wind. "We've been waiting an awfully long time for this exciting industry with so much potential to become a reality."

With a record of decision likely to be issued this quarter, Vineyard Wind LLC – a joint venture between Avangrid Renewables and Copenhagen Infrastructure Partners (CIP) – says it is ready to begin onshore construction and transmission work on the project this year.

Bill White

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"In 2022, offshore work will begin relating to the underground cable installation," White noted. "In 2023, the New Bedford Marine Commerce Terminal, which will be the central staging area for the facility, will have hundreds of unionized workers working around the clock to deploy the project. We will be installing the foundations, the offshore transmission platform and we'll even commence with the construction of the first set of turbines."

Vineyard Wind was the first offshore wind project of its scale to go through the series of regulatory processes required to bring a project from its development to construction phase. BOEM applies a four-phase process in the authorization of an offshore wind development: 1) planning and analysis; 2) leasing; 3) site assessment; and 4) construction and operation. The initial talks that led to the inception of Vineyard Wind 1 took place in 2009.

"As the first project, everyone wants to make sure it's right," White said. "We're almost approaching four years in that permitting process. Once we begin to permit these first projects like Vineyard Wind 1, this process needs to get a bit streamlined. We need it to be thorough; we need it to be fully vetted and defensible. There are challenges – there's no doubt about it."

Although White has seen firsthand the reality of realizing a commercial-scale offshore wind farm, he remains optimistic about the industry's growth, its future and its potential to help transition the U.S. to renewable energy.

"It's quite possible that we are going to have a little bit of a log jam," he remarked. "There will be so many projects mobilizing so quickly. These are good problems to have; these are problems that are solvable. We are really looking forward to seeing that job creation and those small businesses get an opportunity."

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LETTERS

Biden backing of Vineyard Wind is welcome and promising

Updated February 16, 2021, 7:15 a.m.

Vineyard Wind has picked GE's Haliade-X turbines for its wind farm. A prototype is seen in this photo. GENERAL ELECTRIC

The Biden administration's decision to return the Vineyard Wind project to the Bureau of Ocean Energy Management's review process is welcome news ("Vineyard Wind energy project backed by new administration," Business, Feb. 4). If approved, it would help the Commonwealth in reaching net-zero carbon emissions by 2050, in developing a robust clean-energy infrastructure, and producing thousands of jobs.

The approval will also be the first opportunity for the administration to demonstrate that offshore wind projects can proceed while ensuring protection of birds, bats, sea turtles,

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marine mammals, and fish, and we fully support projects such as these so long as they include comprehensive and adaptive safeguards for wildlife.

The administration's positive action also aligns with the state's ambitious Clean Energy and Climate Plan for 2030, which promotes offshore wind, and the next-generation climate bill that aims to reduce Massachusetts' emissions 50 percent by the end of the decade.

Rapid, wildlife-responsible development of offshore wind is essential to protect people and nature from the impacts of climate change. Such meaningful renewable energy action in Washington, D.C., and on Beacon Hill signals that we are moving in the right direction on urgent climate solutions.

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Feb 4, 2021
by Sonal Patel

Offshore Wind

BOEM, Bolstered by Biden Offshore Wind Agenda, Resumes Vineyard Wind Review

The Bureau of Ocean Energy Management (BOEM) will resume an environmental review for the 800-MW Vineyard Wind project offshore Massachusetts as part of a larger push by the Department of Interior (DOI), its parent agency, to accelerate development of renewables on public lands and waters.

BOEM, an agency that manages U.S. offshore energy and mineral resources, also said on Feb. 3 it will proceed with development of a final environmental impact statement for the offshore wind farm. The development potentially keeps Vineyard Wind on track for completion by 2023, boosting its chances of becoming the first large-scale commercial offshore wind farm in the U.S.

Vineyard Wind, a joint venture between Avangrid Renewables and Copenhagen Infrastructure Partners (CIP), on Jan. 22 asked BOEM to rescind a December 2020 request to withdraw a December 2017–submitted Construction and Operations Plan (COP) for Vineyard Wind's first phase. The company paused federal permitting efforts in December after selecting GE Renewable Energy's 13-MW Haliade-X turbines in lieu of MHI Vestas 9.5-MW turbines originally planned for the project. On Jan. 25, Vineyard Wind said a final review determined the COP needed no changes to include Haliade-X turbines in the wind farm's final project design.

"Since there are no changes required to the COP, we expect that BOEM can finalize their review based on the extensive analysis and studies of the project over the last three years," noted Lars T. Pedersen, CEO of Vineyard Wind, last week. Vineyard Wind will now work to complete the permitting phase of the project, and finalize the engineering, contracting, and financing of the offshore wind project, he said.

According to Vineyard's COP, the proposed 800-MW project will be located in the northern portion of a 166,886-acre lease area about 12 nautical miles offshore Martha's Vineyard and 12 nautical miles offshore Nantucket. The plan accommodates installation of up to 100 wind turbines.

GE Boosts Haliade-X Capacity to 14 MW

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with SSE Renewables and Equinor—companies that are developing the 1.2-GW Dogger Bank C project in the UK—for supply of upscaled 14-MW Haliade-X turbines.

The uprated 13-MW Haliade-X features 107-meter (m)-long blades and a 220-m rotor. The 14-MW turbine has the same dimensions, including the same 248-m height, as the 13-MW machine, and it has the same swept area of 38,000 square meters. GE told *POWER* in December that the power boost to 14 MW "makes some enhancements to the cooling system and related electrical equipment, and builds on the learnings that we [have gained] in operating the Haliade-X prototype about how much power the Haliade-X platform can deliver."

GE's Haliade-X, notably, is also the turbine of choice under preferred supplier agreements for the 120-MW Skip Jack and 1,100-MW Ocean Wind projects off the coast of New Jersey and Maryland, which are being developed by Danish renewable energy company Ørsted. The Skip Jack project, located 20 miles offshore Maryland, is slated to come online at the end of 2023, putting it in the running with Vineyard Wind for the title of the nation's first large-scale commercial offshore wind farm. Ocean Wind is slated for commissioning at the end of 2024.

BOEM, meanwhile, has issued 15 active commercial wind energy leases. While the Department of Energy suggests the U.S. could develop a total of 86 GW of offshore wind projects by 2050, only two turbines at Dominion's 12-MW Coastal Virginia Offshore Wind (CVOW) pilot project off the the coast of Virginia Beach are operational on federal waters.

Dominion in December filed a COP with BOEM to build a 2.6-GW commercial project in an adjacent commercial lease area offshore Virginia, but company documents show Dominion expects BOEM's review—which is required before turbine installation can begin—could take up to two years. Dominion expects construction will begin in 2024 and be completed in 2026.

The Offshore Wind and Ocean Energy Horizon

On Wednesday, BOEM suggested more development may be on the horizon. President Biden's Jan. 27 "Executive Order on Tackling the Climate Crisis at Home and Abroad" directs the Secretary of the Interior to increase renewable energy production on federal lands, and sets a specific goal of doubling offshore wind by 2030, it noted.

BOEM's announcement Wednesday to resume review for Vineyard Wind came just hours after Amanda Lefton was appointed to lead the agency. In a statement, Laura Morton, the American Clean Power Association's (ACP's) senior director of Policy and Regulatory Affairs for Offshore Wind, noted Lefton has "experience in supporting New York's nation-leading effort to embrace the economic and environmental benefits of offshore wind."

Morton said the ACP is "pleased that she will bring that forward-looking vision to the Bureau. American Clean Power looks forward to working with Director Lefton in her new role as we at last move the first major offshore wind projects forward and advance America's largest untapped source of energy."

Under Biden's executive directive, BOEM, which also oversees development of ocean wave energy, ocean current energy, and offshore solar energy in federal waters, is also expected to kickstart research into marine power. On Jan. 19, BOEM notably offered the first marine renewable energy research lease in federal waters off the U.S. West Coast. BOEM offered the federal marine hydrokinetic energy (MHK) research lease to Oregon State University (OSU) for the PacWave South project, a proposed open ocean wave energy test center that could be located about 6 nautical miles off Newport, Oregon. The research lease area is approximately 1,696 acres or 2.65 square miles.

Lease issuance by BOEM is a prerequisite for a license from the Federal Energy Regulatory Commission (FERC), the agency noted. OSU filed the PacWave South final license application with FERC on May 30, 2019, seeking a 25-year original license that permits construction and operation of a project with an installed capacity limited to 20 MW. "The PacWave research lease is the first MHK lease to be issued off the West Coast under the joint BOEM-FERC authority over marine hydrokinetic projects on the U.S. Outer Continental Shelf (OCS). BOEM and FERC collaborate closely throughout the leasing and licensing processes," BOEM said.

—***Sonal Patel*** *is a POWER senior associate editor (@sonalcpatel, @POWERmagazine).*

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NEWS

Biden administration puts Vineyard Wind back on track

By Doug Fraser Cape Cod Times

Published 7:05 p.m. ET Feb. 3, 2021 | **Updated 7:36 a.m. ET Feb. 4, 2021**

A couple of days after President Joe Biden appointed Amanda Lefton as director of the Bureau of Ocean Energy Management, one of her first directives was for her agency to resume the review of Vineyard Wind, likely to be the nation's first industrial-scale offshore wind farm.

"Offshore wind has the potential to help our nation combat climate change, improve resilience through reliable power and spur economic development to create good-paying jobs," Lefton wrote in a statement Tuesday.

Massachusetts Secretary of Energy and the Environment Kathleen Theoharides said getting Vineyard Wind up and running is critical to reaching the state's emissions reduction targets for the energy sector.

"This project, Mayflower Wind (a second 800-megawatt wind farm), and our hydropower project need to come online to hit the 45% (emissions reduction) target by 2030," Theoharides said Wednesday.

Time is not on the side of the planet as the state, nation and world rush to reduce greenhouse gas emissions and dramatically increase the role of renewable energy technology to stave off the worst possible outcomes of global warming. Massachusetts, which is one of the nation's leading states in battling climate change and promoting clean energy solutions, has set a goal of developing 15 gigawatts of offshore wind power by 2050.

That output is the equivalent of 19 wind farms the size of Vineyard Wind, which is 800 megawatts.

Theoharides said the state needs to develop a gigawatt of renewable-energy power generation per year to meet its goal of net zero emissions by 2050.

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“We’re very pleased that (the federal) BOEM has decided to move forward with the permitting process for our Vineyard Wind 1 project,” a Vineyard Wind spokesman wrote in an email. “We look forward to working with the agency as we launch an industry that will create thousands of good-paying jobs while also taking meaningful steps to reduce the impact of climate change.”

The Vineyard Wind project seemed to be on track to get the necessary approval from BOEM in 2019. Then-Secretary of the Interior David Bernhardt had required that the agency expand its review to include cumulative impacts of the development of all 16 of the offshore wind areas currently under lease agreements.

That review resulted in a redesign of the layout of the turbines, with 1 nautical mile spacing and a pattern consistent across all project areas. Even so, the Trump administration lagged in resuming the permitting process, and Vineyard Wind late last year withdrew its construction and operations plan to incorporate technological upgrades to turbines that allowed them to reduce the number required to produce 800 megawatts of power.

Related: Vineyard Wind says project back on track

They recently refiled that plan.

“We applaud Director Lefton for hitting the ground running and moving President Biden’s offshore wind agenda forward as we move swiftly ahead to harness the 83,000 American jobs and $25 billion in annual investments this untapped energy source represents for the U.S. by the end of this decade. There is no time to waste,” said Heather Zichal, CEO of American Clean Power Association.

Lefton promised a thorough and timely review. She also indicated BOEM would proceed with preparing a Final Environmental Impact Statement, which seemed to address worries by the offshore wind industry that the agency might rewind the process to an earlier phase, extending the permitting process again.

Theoharides felt Vineyard Wind was a game-changer in starting the ramp-up for offshore wind ventures by signing contracts to deliver energy at a low price. But the review process also was thorough, she said, and would help both the fishing, shipping and wind power industries coexist.

In his Jan. 27 executive order addressing climate change, Biden pushed the goal of doubling offshore wind energy by 2030.

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Lefton was the deputy policy director for The Nature Conservancy for seven years, and for the past two years spearheaded renewable energy projects as New York's First Assistant Secretary for Energy and the Environment. Her appointment is widely seen by renewable energy advocates as a step in the right direction.

"The Biden administration is getting us back on track, providing business certainty to offshore wind projects that will power our economy by creating jobs and producing clean, affordable energy," Massachusetts Sen.Edward Markey said in an email Tuesday. "This is a far cry from the Trump-era delays and denials that put ideology over the interests of the American people."

Contact Doug Fraser at dfraser@capecodonline.com. Follow him on Twitter:@dougfrasercct.

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Biden administration puts Vineyard Wind energy project back on track

Offshore wind farm proposal's fate became uncertain after it faced delays under Trump

By Jon Chesto Globe Staff, Updated February 3, 2021, 5:59 p.m.

Vineyard Wind has picked GE's Haliade-X model. A prototype is seen in this photo. GENERAL ELECTRIC

The long-delayed Vineyard Wind offshore project has been put back on track by the Biden administration.

In one of her first actions as the new director of the Bureau of Ocean Energy

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Management, Amanda Lefton pledged on Wednesday to conduct a “robust and timely” review of Vineyard Wind and essentially resume the permitting process where it left off in December. That’s when the developers of Vineyard Wind withdrew their proposal for a wind farm that could generate 800 megawatts of electricity, enough power for more than 400,000 homes, to be built about 12 miles south of Martha’s Vineyard. Soon after Joe Biden became president last month, the developers rescinded their withdrawal and requested that BOEM resume its review.

Vineyard Wind, a joint venture of Avangrid and Copenhagen Infrastructure Partners, was to be the first major offshore wind farm in the United States. It would be financed through contracts with three major Massachusetts electric utilities. But the project ran into delays under the Trump administration, after commercial fishermen raised concerns that the giant turbines would be hazardous to their work.

The developers have changed the turbines they plan to use. The nearly $3 billion project will now include 62 of Boston-based General Electric’s Haliade-X turbines. A spokesman for Vineyard Wind said the project is still on track to obtain financing this year, with a goal of getting built in time to generate power by the end of 2023.

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Katie Theoharides, Governor Charlie Baker's energy secretary, praised the federal agency's decision to keep the Vineyard Wind project moving along.

"This puts Vineyard Wind, an 800-megawatt project that really kicked off the gold rush for the offshore industry here in the US, once again back in the position to deliver on that promise of clean, affordable energy and jobs here in Massachusetts," she said. "It's a very good indictor for all of the projects up and down the eastern seaboard."

Theoharides said the Baker administration expects Massachusetts will need 15 gigawatts of offshore wind power by 2050 to help meet the state's goal of achieving "net zero" carbon emissions by that date. That's 10 times the amount of offshore wind power that is under contract today in Massachusetts, including through Vineyard Wind and a similar-sized offshore proposal called Mayflower Wind. The administration and the utilities are authorized to offer contracts for another 1.6 gigawatts.

The Legislature just passed a wide-ranging climate bill last Thursday that allows for another 2.4 gigawatts. Baker previously vetoed this bill when it came before him about a month ago. It's unclear what Baker will do this time; he has 10 days from when he gets the bill to decide. Theoharides said officials in the administration are still negotiating with legislative leaders about aspects of the bill.

The Biden administration's decision prompted a word of caution from the Responsible Offshore Development Alliance, which represents the interests of dozens of fishing vessels in East Coast ports. The group issued a statement urging BOEM to stand by the administration's commitment to "responsible development" of the offshore wind industry.

Jon Chesto can be reached at jon.chesto@globe.com. Follow him on Twitter @jonchesto.

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BOEM reopens review of Vineyard Wind

By **George Brennan** - February 3, 2021

GE Haliade X are the turbines being proposed by Vineyard Wind. -Courtesy GE website

The environmental review of Vineyard Wind is back before the Bureau of Ocean Energy Management, the federal agency announced Wednesday.

"Offshore wind has the potential to help our nation combat climate change, improve resilience through reliable power, and spur economic development to create good-paying jobs," said BOEM Director Amanda Lefton in a press release. "BOEM is committed to conducting a robust and timely review of the proposed project."

The announcement that BOEM is reviewing the project comes after Vineyard Wind renewed its application for a federal permit on Jan. 22 to build the 800 megawatt project 15 miles south of the Island. Vineyard Wind withdrew its construction and operations plan on Dec. 1 in the waning days of the Trump administration.

The official reason for the pause was to review whether use of General Electric's Haliade-X turbines would require modifications to the application.

The project, known as Vineyard Wind 1, will feature 62 GE Haliade-X turbines, and is anticipated to have an overall cost of just over $2 billion. The 62 turbines

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are meant to generate 800 megawatts of electricity that will be sent through two export cables buried under the Atlantic seabed. The cables will pass through the Muskeget Channel off Chappaquiddick, and stretch across Nantucket Sound to a landfall at Barnstable, where they can send electricity into the grid. Edgartown's conservation commission butted heads with Vineyard Wind over the cables, but eventually reached a settlement.

In a statement posted on the company's website, Vineyard Wind praised the decision. "We are very pleased that BOEM has decided to move forward with the permitting process for our Vineyard Wind 1 project," the release states. "We look forward to working with the agency as we launch an industry that will create thousands of jobs while also taking meaningful steps to reduce the impact of climate change."

The release reiterates Vineyard Wind's timeline of winning approval in 2021 and "delivering clean energy to Massachusetts in 2023."

According to the BOEM release, President Joe Biden issued an executive order on Jan. 27, 2021, that called for the Interior Department to identify steps to accelerate responsible development of renewable energy on public lands and waters. Interior has initiated a review of processes and procedures to date as it reinvests in a rigorous renewable energy program.

In a statement released Wednesday evening, the Responsible Offshore Development Alliance (RODA) urged BOEM to stand by its commitment for "responsible development" and to set the tone for public engagement.

"RODA reaffirms our concerns about the flawed process for offshore wind leasing and development in U.S. waters, and hopes BOEM will capitalize on this opportunity to improve public engagement," the release states. "Given the complexity of the leasing process, the fact that the public was informed that the review had been terminated, and renewable power goals have increased since the initiation of the review, the re-initiation merits additional opportunities for public comment."

In closing RODA welcomed Lefton and called on her to "move toward a system that truly empowers and engages with American communities that will be impacted for decades to come."

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Feds Put Vineyard Wind Back On Permitting Front Burner

February 03, 2021 | By Colin A. Young, State House News Service

Vineyard Wind appears to have regained its place at the front of the offshore wind project permitting line and is back on track to becoming the first utility-scale offshore wind farm in the United States.

Story continues below

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As Final Vote On Electrical Substation Nears, East Boston Residents Say State's Approval Process Has Left Them Out

Earthwhile 07:17 Feb 3, 2021

The federal Bureau of Ocean Energy Management announced Wednesday afternoon that it will resume its review of the 800-megawatt wind farm planned for 15 miles south of Martha's Vineyard and will "proceed with development of a Final Environmental Impact Statement," one of the last steps before the project can truly get underway. The decision could help ensure Massachusetts starts getting clean power from the project by the end of 2023.

"We're very pleased that BOEM has decided to move forward with the permitting process for our Vineyard Wind 1 project," a Vineyard Wind spokesperson said. "We look forward to working with the agency as we launch an industry that will create thousands of good paying jobs while also taking meaningful steps to reduce the impact of climate change."

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Following a string of permitting delays imposed on the project by the Trump administration, Vineyard Wind on Dec. 1 announced that it was pulling its project out of the federal review pipeline in order to complete an internal study on whether the decision to use a certain type of turbine would warrant changes to construction and operations plan. The Trump administration declared the federal review of the project "terminated."

Vineyard Wind's decision to yank its plan from review also meant the project's ultimate fate would not be decided under Trump, who frequently

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expressed concerns about wind power and held the project back while his administration looked into impacts that the burgeoning industry will have on commercial fishing.

The company said last week that its internal review determined that no changes are needed to its construction and operations plan and that "the Federal Permitting Process can be completed" by BOEM. The company said it had not had any detailed discussions with the Biden administration about how its request to resubmit its construction and operations plan would be handled.

The decision to pick up the Vineyard Wind review from where it stood just before the company withdrew its plan appears to have been among the first orders of business for Amanda Lefton, who was announced as the new director of BOEM earlier Wednesday. Before being drafted into the Biden administration, Lefton served as New York Gov. Andrew Cuomo's first assistant secretary for energy and environment and had previously worked for The Nature Conservancy in New York.

"Offshore wind has the potential to help our nation combat climate change, improve resilience through reliable power, and spur economic development to create good-paying jobs," Lefton said in announcing BOEM's intention to resume the Vineyard Wind review. "BOEM is committed to conducting a robust and timely review of the proposed project."

The proposed wind farm was the first offshore wind project selected by Massachusetts utility companies with input from the Baker administration to fulfill part of a 2016 clean energy law. It is projected to generate cleaner electricity for more than 400,000 homes and businesses in Massachusetts, produce at least 3,600 jobs, reduce costs for Massachusetts ratepayers by an estimated $1.4 billion, and eliminate 1.68 million metric tons of carbon dioxide emissions annually.

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"What this means is that we are one step closer to the Vineyard Wind project that really kicked off the rush here for the offshore wind industry to getting built and bringing the promise of clean, affordable energy, jobs and economic development, and climate action to Massachusetts residents and to the region as a whole," Energy and Environmental Affairs Secretary Kathleen Theoharides said. "So we're very grateful to the Biden administration for a swift decision to move this project back into the queue and our understanding is it will be picked up right where it left off."

Theoharides said BOEM's announcement is also good news for the 800-MW Mayflower Wind project that is expected to produce power for Massachusetts and for future offshore wind projects. Since Vineyard Wind's project is the furthest along in the federal permitting process, it inherently sets a precedent for the projects that will come after it.

"I think this is a very good sign that the administration is very interested in pursuing offshore wind for its climate benefits, for its jobs benefits, for the reliable, clean energy it can deliver, and we hope and look forward to a permitting process that is predictable and efficient," the secretary said.

That predictable and efficient permitting process will be key in Massachusetts as the Baker administration attempts to put the state on a path towards net-zero greenhouse gas emissions by 2050.

Theoharides said it would be "very difficult" for the state to hit any emissions reduction goal for 2030 without Vineyard Wind, Mayflower Wind and the Quebec hydropower project in development, and that getting to net-zero by 2050 is projected to require having about 15 gigawatts of offshore wind power on the grid. To get there, she said, Massachusetts will need to hit a pace in the 2030s where it has about 1 GW of new offshore wind power coming online each year.

"So the permitting environment matters a lot," she said.

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Vineyard Wind CEO Lars Pedersen said last week that the company would expect that the federal agency would publish its final environmental impact statement and then issue its record of decision "sometime in the first half of 2021" as long as Biden's BOEM approved its request to resume the project's review.

That would allow the project to hit its financial close milestone sometime in the second half of this year, begin on-shore work quickly thereafter, start offshore construction in 2022, begin installing turbines in 2023 and begin exporting power to the grid in late 2023, Pedersen said.

Related:

- Offshore Wind Backers Hope Vineyard Wind Permitting Woes Will End Under Biden
- How Biden's New Policies On The Pandemic, Education, And Criminal Justice Will Affect Mass.

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Vineyard Wind reawakens in the Biden era

America's first industrial scale offshore wind farm appears back on track.

By **Rich Saltzberg** - January 25, 2021

Vineyard Wind CEO Lars Pederson announced Monday that Vineyard Wind is back in the game. — screenshot

Updated Jan. 26

Vineyard Wind, the wind energy developer that aims to construct America's first industrial scale offshore wind farm some 15 miles south of Aquinnah, has resuscitated its project permit process. The company formally pulled out from the federal permitting process on Dec 1.

The reason given was that more time was needed to execute an internal technical review of the project, notably of new GE turbines that will be employed. The project, known as Vineyard Wind 1, will feature 62 GE Haliade-X turbines, and is anticipated to have an overall cost of just over $2 billion. The 62 turbines are meant to generate 800 megawatts of electricity that will be sent through two export cables buried under the Atlantic seabed. The cables will pass through the Muskeget Channel off Chappaquiddick and stretch across Nantucket Sound to a landfall at Barnstable where they can send electricity into the grid. Edgartown's conservation commission butted heads with Vineyard Wind over the cables but eventually reached a settlement.

Vineyard Wind's project hibernation period coincides with the recent defeat of President Donald Trump at the polls. However Vineyard Wind CEO Lars Pederson gave little indication at a virtual press conference Monday morning that the timeout was related to Trump.

Not known for his love of wind energy, Trump, in his waning days, appeared to be setting as many executive order roadblocks and boobytraps for the Biden administration as he could. In going into sleep mode, Vineyard Wind may have

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effectively removed itself as a target but Pederson did not characterize it that way. He noted his company had been "in detailed contact with the two campaigns prior to the election" and did not indicate there was an ulterior motive for pulling out of the permitting process. He expressed a small measure of optimism with the administration of President Joe Biden based on what's been conveyed to Vineyard Wind thus far.

"Of course we have had sort of initial indications from the Biden team in general that they are favorable to renewable energy," he said, "but I don't think I have seen any specific or particular announcement regarding offshore wind."

If the Bureau of Ocean Energy Management (BOEM), the key regulatory body for the approval of Vineyard Wind 1, doesn't throw any curve balls, Pederson anticipates significant movement on the project this year.

Pederson hopes BEOM will publish a final Environmental Impact Statement (EIS) and a record of decision in the first half of 2021.

"And then we are ready for what we call financial close," he said, which is actually a large milestone for us where everything comes together, the permitting, the design, procurement and engineering, and the financing. And then we would break ground pretty quickly on some of the onshore works. So making sure we have cables ready, and then we would start the offshore construction…in '22 and turbine installation in '23 and export power to the grid in late '23."

In Vineyard Haven, Pederson said he hopes to have an operations and maintenance marine terminal "ready for the operational phase in 2023."

That terminal, which is expected to berth two vessels, will be the gateway for homegrown offshore wind technicians to ply their trades on the offshore turbine towers. Students in a cooperative program between ACE MV and Bristol Community College are currently studying to be those offshore wind technicians.

"ACE MV is excited to continue moving forward with training for Vineyard residents," Holly Bellebuono, executive director of ACE MV, emailed. "We are welcoming our second cohort of students this week, and our first cohort returns for their third semester of the four-semester certification program. Also, thanks to additional funding support through [the Massachusetts Clean Energy Center], ACE MV is planning a new Marine Science certificate program to complement our interest in renewable energy and offshore wind. As a nonprofit dedicated to providing training and education of the Martha's Vineyard community and especially its workforce, we support the permitting process and all efforts to create renewable and clean energy."

When asked about friction with commercial fishermen, Pederson said Vineyard Wind has worked to accommodate concerns in that industry.

"I think we are very confident that offshore wind and commercial fisheries can coexist," he said, "especially in the areas that are designated and we have made significant concessions to accommodate commercial fishing…"

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He pointed to a "late 2019" agreement where "all developers in the northeast agreed to align the layout across all their lease areas in what is called a one by one nautiucal mile spacing. I've been working in this industry for more than 15 years, that's the first time I've seen such cooperation. And I think we did that with commercial fisheries in mind but also [with] safety and safe navigation [in mind]. [The] Coast Guard did an very elaborate study on that and they concluded that you could both fish, navigate and do safe search and rescue within such a proposal so I think we have made significant accomodations and I think once we start building these projects I'm quite sure we will see that commercial fisheries and offshore wind can coexist, which is ultimately our goal."

Nevertheless, the spacing falls short of what many commercial fishermen want —f our mile spacing. The Responsible Offshore Development Alliance (RODA), an advocacy group for fishing interests and other fishing organizations, see four-mile-wide lanes through the turbines as a necessity for mobile gear fishing and safe navigation in general.

Pederson pointed out Vineyard Wind 1 will have a reduced nautical footprint because the number of turbines and the towers that support them have shrunk in number. First conceived at over 100 turbine towers, that number was boiled down to 84, and with the new, and more potent GE Haliade-X turbines, 800 megawatts is expected to be generated using only 62 turbine towers.

Updated with more details.

PUBLIC

The Barnstable Patriot

NEWS

Vineyard Wind completes technical review, resumes federal permitting

Company requests BOEM to continue federal permitting process

The Barnstable Patriot

Published 8:22 a.m. ET Jan. 25, 2021

Story Highlights

Vineyard Wind still expects to reach financial close in the second half of 2021 and to begin delivering clean energy to Massachusetts in 2023.

NEW BEDFORD – Vineyard Wind today notified the Bureau of Ocean Energy Management (BOEM) that the company is rescinding its December 2020 request to withdraw the Construction and Operations Plan (COP) for Vineyard Wind 1, allowing the federal permitting process to resume.

"We have completed our final review and determined that no changes to the COP are necessary as a consequence of selecting the GE Haliade-X Turbine for the project." said Lars T. Pedersen, CEO of Vineyard Wind. "Since there are no changes required to the COP, we expect that BOEM can finalize their review based on the extensive analysis and studies of the project over the last three years. We look forward to completing the permitting phase of the project and to finalizing the engineering, contracting and financing of the first utility scale offshore windfarm in the US."

In December, Vineyard Wind announced the selection of GE Renewable Energy's industry leading Haliade-X wind turbine generators, the most powerful turbine currently available to developers. With this selection, GE Renewable Energy is poised to play a pivotal role in the development of offshore wind power in the U.S., which is widely expected to be a major source of investments and job creation up and down the regional supply chain.

As a part of reaching this important milestone, Vineyard Wind decided to temporarily withdraw its COP from further review by BOEM in order to conduct a final technical review

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associated with including the Haliade-X in the final project design, work that has now concluded.

Vineyard Wind still expects to reach financial close in the second half of 2021 and to begin delivering clean energy to Massachusetts in 2023.

Located 15 miles off the coast of Martha's Vineyard, Vineyard Wind 1 is an 800-megawatt (MW) project slated to become the first large-scale offshore wind farm in the United States.

Vinyard Wind officials say the project will generate cost-competitive electricity for more than 400,000 homes and businesses in the Commonwealth of Massachusetts, create 3,600 Full Time Equivalent job hours, and is expected to reduce carbon emissions by more than 1.6 million tons per year.

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APEM and Vineyard Wind Continue Cooperation

WIND FARM UPDATE (HTTPS://WWW.OFFSHOREWIND.BIZ/TOPIC/WIND-FARM-UPDATE/)

January 6, 2021, by Nadja Skopljak

Vineyard Wind has contracted APEM for the second year of surveys at its 800 MW offshore wind project off the coast of Massachusetts.

The monthly surveys provide baseline information on the species that utilize the area to be used in environmental assessment reports, Vineyard Wind said.

"It has been a very challenging period given travel restrictions resulting from CV19, and our primary focus has been to ensure the safety of our staff and subcontractors," said APEM President **Stuart Clough**.

"I am proud that the team has been able to safely and successfully continue to deliver our surveys, and I'm looking forward to continuing our successful working relationship with Vineyard Wind for a second year."

Vineyard Wind will comprise (https://www.offshorewind.biz/2020/12/02/ge-haliade-x-for-first-large-scale-us-offshore-wind-farm/) GE Haliade-x turbines installed some 22.5 kilometers south of Martha's Vineyard and 56 kilometers off the coast of the Massachusetts mainland.

It is being developed by a joint venture company of Avangrid Renewables and Copenhagen Infrastructure Partners (CIP).

The article was updated on 7 January at 8:20 a.m. to state the correct turbine model.

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ATTACHMENT TO SECTION 7

Attachment 7.7-5: Nantucket Good Neighbor Agreement

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VINEYARD WIND AND NANTUCKET ANNOUNCE COMMUNITY PARTNERSHIP

For Immediate Release: September 8, 2020

(NANTUCKET, MA) – Vineyard Wind, the Town of Nantucket, and leading Island nonprofits announced today plans to create The Nantucket Offshore Wind Community Fund, which will support local initiatives to combat the effects of global climate change, enhance coastal resiliency, and protect, restore, and preserve Nantucket's cultural and historic resources.

Vineyard Wind has agreed to provide an initial $4 million when construction financing is obtained for its first project to seed the Fund, which will be administered by the Community Foundation for Nantucket. When its subsequent projects move forward, Vineyard Wind will provide additional funding to further support the Fund, which will also accept contributions from other wind developers and philanthropists. The parties will work closely together to further engage the extensive Nantucket community of stakeholders to ensure that residents and other interested parties are informed of the Vineyard Wind projects and the associated community benefits.

"We're pleased to reach this agreement, and look forward to a long and collaborative relationship with the community of Nantucket in the years ahead," said Vineyard Wind CEO Lars T. Pedersen. "Our goal is to not only set the best industry standards, but to also be good neighbors as we work to launch an industry that will create thousands of jobs and take major steps forward in the fight against climate change."

Vineyard Wind is developing the nation's first utility-scale offshore wind project in the U.S., to be located approximately fifteen miles from from Madaket Beach, its closest point on Nantucket.

"When we first learned of the planned wind project, we were especially concerned about visual impacts because our entire Island is a National Historic Landmark. But Vineyard Wind's top executives worked constructively with Nantucket leadership to resolve these concerns. They agreed to move the first row of turbines farther away from Nantucket, to install a lighting system that will be activated only when planes are nearby that reduces nighttime lighting to

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fewer than four hours per year, and to paint the turbines an off-white color to reduce their visibility," explained Nantucket Town Manager, C. Elizabeth Gibson.

In addition to those design changes, Vineyard Wind worked with the Town, the Maria Mitchell Association (MMA), and the Nantucket Preservation Trust (NPT) to create a fund to support community-led projects. "This creates a model for other offshore wind companies to follow when engaging with Nantucket," explained Dawn Hill Holdgate, Chair of the Town's Select Board.

The Advisory Committee for the Fund will include representatives from the Town, MMA, NPT, and Vineyard Wind. Margaretta Andrews, Executive Director of the Community Foundation, stated, "We are proud to host this Fund and excited to see how it benefits the entire Nantucket community."

"The Fund will further the important work happening across Nantucket to protect, promote, and preserve the island's unique architectural heritage and sense of place," said Mary Bergman, Executive Director of NPT.

"Vineyard Wind's investment in our community will help create more opportunities for all to develop a life-long passion for science through education, research, and first-hand exploration of the sky, land, and sea of Nantucket Island," added Jason Bridges, interim Executive Director of MMA.

"This agreement is a win-win for the community and the company, and protects Nantucket's status as a National Historic Landmark," said Marion Werkheiser of Cultural Heritage Partners, PLLC, the law firm representing the Town in the negotiations.

The Town will announce more details about the Fund in the coming months, with plans for the Fund to issue its first grants in late 2021.

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CONTACTS:

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Greg Werkheiser
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Counsel to Nantucket
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GOOD NEIGHBOR AGREEMENT

This Good Neighbor Agreement ("Agreement") is made and entered into on this 27 day of August, 2020 (the "Effective Date"), by and between **Vineyard Wind, LLC**, a Delaware limited liability company with its principal office located at 700 Pleasant Street, Suite 510, New Bedford, Massachusetts 02740 ("Vineyard Wind"), the **Town and County of Nantucket, Massachusetts** (the "Town"), the **Maria Mitchell Association** ("MMA"), and the **Nantucket Preservation Trust** ("NPT") (collectively the "**Nantucket Parties**").

WHEREAS, Vineyard Wind is the leaseholder of two commercial wind energy leases on the Outer Continental Shelf known as OCS-A 0501 and OCS-A 0522 which are located within the Massachusetts Wind Energy Area; and

WHEREAS, Vineyard Wind intends to develop, permit, finance, construct, operate and maintain a total of five (5) offshore wind projects within its OCS-A 0501 and OCS-A 0522 lease areas; and

WHEREAS, Vineyard Wind's first 800 MW offshore wind project is located in the northern portion of the OCS-A 0501 lease area with the northern edge of the project located approximately 15 statute miles from the island of Nantucket; and

WHEREAS, the islands of Nantucket, Tuckernuck, and Muskeget comprise the Nantucket Historical District National Historic Landmark by the National Park Service listed in the National Register of Historic Places; and

WHEREAS, the Nantucket Parties support appropriately designed and sited renewable energy development and Vineyard Wind supports measures that protect, restore, and preserve cultural and historic resources, including those affected by utility-scale energy development, sea level rise, and global climate change; and

WHEREAS, Vineyard Wind and the Nantucket Parties will be neighbors for decades to come, the Parties believe it is in their best interests to have a long-term, productive and mutually beneficial relationship with one another.

NOW, THEREFORE, in consideration of the mutual covenants and mutual consideration hereinafter contained, the sufficiency of which is hereby acknowledged, the Parties agree as follows:

1. Purpose of the Agreement

The purpose of this Agreement is to establish a long-term relationship between Vineyard Wind and the Nantucket Parties and more generally, the Nantucket Community, to support and promote the Parties' mutual interests in renewable energy development, combating the effects of global climate change, enhancing coastal resiliency, and protecting, restoring, and preserving

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cultural and historic resources through the establishment of the Nantucket Offshore Wind Community Fund.

2. Definitions

"Community Foundation for Nantucket" means the tax exempt, nonprofit organization located at 9 Bayberry Court, Nantucket, MA 02554 and established to support broad-based charitable interests on Nantucket.

"Effective Date" means the date as written in the opening paragraph of this Agreement.

"Financial Close" means for each individual project (i.e., the Vineyard Wind 1 Project, and each of the individual subsequent Future Projects), the date on which the financing agreements are executed and designated as effective and disbursement of funds under such agreements are made available for the construction of the applicable project.

"MMA" means the Maria Mitchell Association, a private nonprofit organization located on Nantucket whose mission is to create opportunities to develop a life-long passion for science through education, research, and first-hand exploration of the sky, land, and sea of Nantucket Island.

"Nantucket Community" means the full and part-time residents, landowners, business owners, nonprofit organizations, and other stakeholders on the islands of Nantucket, Tuckernuck, and Muskeget.

"Nantucket Historical District National Historic Landmark" means the islands of Nantucket, Tuckernuck, and Muskeget together, which are listed in the National Register of Historic Places and designated a National Historic Landmark by the National Park Service.

"Nantucket Offshore Wind Community Fund" or "Fund" means the fund established pursuant to this Agreement to support projects and initiatives related to protecting, restoring, and preserving cultural and historic resources, coastal resiliency, climate adaptation, and renewable energy.

"Nantucket Parties" means the Town, MMA, and NPT.

"NPT" means the Nantucket Preservation Trust, a nonprofit, membership-based organization whose mission is to protect, promote and preserve Nantucket's unique architectural heritage and sense of place.

"Party" means Vineyard Wind, the Town, MMA, or NPT as the case may be and "Parties" shall be construed to mean collectively Vineyard Wind, the Town, MMA, and NPT.

"Projects" means the Vineyard Wind 1 Project and the Vineyard Wind Future Projects, collectively.

"Section 106 Process" means the process mandated by Section 106 of the National Historic Preservation Act (54 U.S.C. § 300101 *et seq.*) that requires federal agencies to take into account the effects of their permitting activities on historic properties.

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"Section 110(f)" means Section 110(f) of the National Historic Preservation Act (54 U.S.C. § 306107) that requires federal agencies to require all possible planning to minimize harm to National Historic Landmarks;

"Select Board" means the elected body created by and vested with the powers enumerated in the Charter of the Town of Nantucket.

"Town" means the Town and County of Nantucket, Massachusetts, including its Boards, Commissions, and Committees as established pursuant to the Charters of the Town and County of Nantucket.

"Vineyard Wind" means Vineyard Wind, LLC, a limited liability company organized and authorized to conduct business under the laws of the State of Delaware and authorized under the operating rules of its business to hold and operate leases, right-of-way grants, and right-of-use and easement grants for activities that produce, or support production, transportation, or transmission of energy from sources other than oil and gas, on the Outer Continental Shelf (OCS), and right-of-use and easement grants for the alternate use of OCS facilities for energy or marine-related purposes.

"Vineyard Wind Future Projects" means the four (4) projects Vineyard Wind intends to develop, permit, finance, construct, operate, and maintain within its OCS-A 0501 and OCS-A 0522 lease areas with associated export cables to Massachusetts and potentially other states, the precise timing of regulatory approval, Financial Close, construction, and operation of each project being currently unknown.

"Vineyard Wind 1 Project" means Vineyard Wind's first 800 MW offshore wind project located in the northern portion of its OCS-A 0501 lease area with an export cable through federal and Massachusetts state waters and Nantucket municipal waters connecting to the grid in Barnstable, Massachusetts, which has received all required state permits and is expected to receive all federal permits necessary in early 2021 and reach Financial Close in the second or third quarter of 2021.

3. The Nantucket Offshore Wind Community Fund

3.1. The Nantucket Parties shall establish the Nantucket Offshore Wind Community Fund to support projects and initiatives related to protecting, restoring, and preserving cultural and historic resources, coastal resiliency, climate adaptation, renewable energy, and other such areas related to the Parties' mutual interests.

3.2. The Fund shall be managed by the Community Foundation for Nantucket, or another appropriate foundation agreed to by the Parties. Funding decisions shall be made by the Fund's Board of Directors. The Town shall appoint the initial members of the Fund's Board of Directors, which shall include reserved seats for at least one representative from each of the Nantucket Parties and an ex officio member from Vineyard Wind. The Fund's Board of Directors will adopt qualifying criteria for additional board members. The Fund shall be established prior to Financial Close for the Vineyard Wind 1 Project.

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4. **Vineyard Wind's Obligations.** Vineyard Wind hereby covenants and agrees as follows:

4.1. To support the establishment of the Offshore Wind Community Fund and facilitate its viability, at Financial Close for the Vineyard Wind 1 Project Vineyard Wind shall contribute $4 million to the Fund. To provide continued support for the fulfillment of the purposes of the Fund, Vineyard Wind shall contribute $3 million to the Nantucket Offshore Wind Community Fund at Financial Close for each of the Vineyard Wind Future Projects. Vineyard Wind's obligations under this Section 4.1 are contingent on the U.S. Department of Interior, Bureau of Ocean Energy Management (BOEM) completing the Section 106 process and issuing a Record of Decision and Vineyard Wind reaching Financial Close for the Vineyard Wind 1 Project and for each of the Vineyard Wind Future Projects.

4.2. Vineyard Wind shall coordinate with the Nantucket Parties with regard to the development, permitting, construction, and operations and maintenance of the Projects, as well as to identify additional opportunities by which the Nantucket Parties and Vineyard Wind may work together to promote their mutual interests.

4.3. For the Vineyard Wind 1 Project, Vineyard Wind agrees to paint the turbines a non-reflective off- white/light gray color to blend into the horizon and to install an Automatic Detection and Lighting System (ADLS). For each Future Project, Vineyard Wind agrees, subject to available technology and approval by BOEM and/or the Federal Aviation Administration (FAA), to paint the turbines a non-reflective off- white/light gray or similar color that blends into the horizon and to install an ADLS or similar system to reduce nighttime lighting and minimize the potential visual impacts of the Projects on the Nantucket Historical District National Historic Landmark. If Vineyard Wind declines to paint the turbines a color that blends into the horizon and/or install an available system that would reduce nighttime lighting for a Future Project despite receiving approval from BOEM and/or the FAA to do so, the Nantucket Parties reserve their right to oppose that Future Project in any available forum and likewise, in that event, Vineyard Wind reserves its right not to make payment in accordance with section 4.1 for that Future Project. If the turbines are painted a color that blends into the horizon and an ADLS or similar system is installed, the Nantucket Parties are satisfied that all possible planning has been used to minimize adverse effects, as required by Section 110(f) of the National Historic Preservation Act.

4.4. No future turbines will be sited closer to Nantucket Historic District than the front row of turbines currently planned for Vineyard Wind 1 Project.

5. **Nantucket Parties' Obligations.** The Nantucket Parties hereby covenant and agree as follows:

5.1. The Nantucket Parties agree to establish the Nantucket Offshore Wind Community Fund in accordance with the terms of this Agreement.

5.2. From and after the Effective Date through the Term of this Agreement, the Nantucket Parties shall use reasonable good faith efforts to (a) ensure that Nantucket residents and

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visitors are informed of the benefits of the Projects, receive opportunities to learn about and engage in the Projects, and address concerns as they arise, (b) provide Vineyard Wind with advice and guidance as how to best to engage with the Nantucket Community with respect to the Projects, and (c) convey support for the Projects and Vineyard Wind's demonstration of community engagement through the Nantucket Offshore Wind Community Fund. Nothing herein shall preclude the Nantucket Parties from being eligible for other programs and services that may be made available by Vineyard Wind, including, for example, the Affordability & Resiliency Fund, Workforce Training, and future arrangements for discounted electrical supply.

5.3. From and after the Effective Date through the Term of this Agreement, and in consultation with Vineyard Wind, the Nantucket Parties shall use their reasonable best efforts to inform federal, state, and local elected officials of their support for the Projects, as part of BOEM's National Environmental Policy Act and Section 106 and Section 110(f) reviews and applicable Massachusetts state and local permit and approval reviews, including where applicable Nantucket Conservation Commission reviews.

5.4. The Nantucket Parties agree that Vineyard Wind's commitments pursuant to Sections 4.3 and 4.4 herein are sufficient to minimize and/or mitigate the potential visual impacts of the Projects for Section 106 and Section 110(f) purposes and further agree to so inform BOEM, the National Park Service, and the Massachusetts Historical Commission of such agreement.

5.5. If the Nantucket Parties decline to fulfill their obligations under this Section 5 related to one or more Projects, Vineyard Wind shall have no further obligations under Section 4.1 to contribute funding to the Fund with respect to those Projects. Likewise, if Vineyard Wind declines to fulfill its obligations for one or more projects, the Nantucket Parties shall have no further obligations with respect to those Projects.

6. Parties' Mutual Obligations

6.1. The Parties agree to communicate with one another on a regular basis on community relations and potential opportunities to advance the Parties' mutual interests.

6.2. The Parties agree to collaborate on sourcing additional support for the Fund.

7. Term and Termination. The term ("Term") of this Agreement shall commence on the Effective Date and terminate the earlier of 15 years from the Effective Date or the date upon which Vineyard Wind reaches Financial Close for its last and final Future Project to be constructed in its OCS-A 0501 or OCS-A 0522 lease areas.

8. **Representations and Warranties**. Each Party represents and warrants to the other Party that:

(i) the execution, delivery and performance of this Agreement are within its powers, have been duly authorized by all necessary action and do not violate any of the terms and conditions in its governing documents, any contracts to which it is a party or any applicable laws;

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(ii) this Agreement, and each document executed and delivered in accordance with this Agreement, constitutes its legally valid and binding obligation enforceable against it in accordance with its terms; subject to any bankruptcy, insolvency, reorganization and other laws affecting creditors' rights generally, and with regard to equitable remedies, the discretion of the applicable court;

(iii) all such persons as are required to be signatories to or otherwise execute this Agreement on its behalf under all applicable laws have executed and are authorized to execute this Agreement in accordance with such laws;

(iv) it is acting for its own account, and has made its own independent decision to enter into this Agreement, and is not relying upon the advice or recommendations of the other Party in so doing; and

(v) it is capable of assessing the merits of and understanding, and understands and accepts, the terms, conditions, and risks of this Agreement.

9. Confidentiality.

9.1. To the extent permitted by law, the Parties acknowledge that any oral or written information exchanged between the Parties in connection with the preparation of this Agreement is regarded as confidential information, provided that the foregoing shall not apply to any such information that: (a) was generally available to the public at the time of disclosure or subsequently became generally available to the public through no act or omission attributable to the receiving Party; (b) was rightfully in the possession of the receiving Party, without an obligation of confidentiality to the disclosing Party, prior to disclosure or prior to the date of this Agreement; (c) is hereafter received by the receiving Party from a third party which is not and was not bound by confidentiality obligations to the disclosing Party; or (d) is subject to disclosure pursuant to applicable state or federal law, government regulation or order, or by the requirements of any securities exchange, or is requested to be disclosed by a governmental authority or agency or court or any self-regulatory organization (including, without limitation, any stock exchange authority), provided the receiving Party gives the disclosing Party reasonable prior notice of such requirement and affords such Party the opportunity to seek a protective order or other appropriate means to safeguard the confidentiality of such information.

9.2. Notwithstanding the foregoing, the receiving Party may disclose any oral or written information exchanged between the Parties in connection with the preparation of this Agreement to its financial, accounting or legal advisers, and to its and its affiliates' owners, members, directors, officers, employees, independent contractors, counsel, and agents, as well as existing or potential debt or equity financing parties, provided in each case that such entity or individual is under a legally binding contractual or professional ethical obligation to maintain the confidentiality and restrict its use of such information consistent with the obligations of the receiving Party under this Section 9 and provided further that the receiving Party shall be liable for any disclosure or use of such information inconsistent with its obligations hereunder.

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10. **Entire Agreement; Amendments**. This Agreement constitutes the entire agreement between the Parties hereto with respect to the subject matter hereof and supersedes all prior oral or written agreements and understandings between the Parties relating to the subject matter hereof. This Agreement may not be amended or otherwise modified except by a written instrument signed by each of the Parties.

11. **Severability**. Every provision of this Agreement is intended to be severable. If any term or provision hereof is determined by a court of competent jurisdiction to be illegal or invalid for any reason whatsoever, such illegality or invalidity shall not affect the validity or legality of the remainder of this Agreement, and the other provisions hereof shall remain effective and enforceable to the greatest extent permitted by law.

12. **Joint Work Product**. This Agreement shall be considered the joint work product of the Parties hereto and shall not be construed against either Party by reason thereof.

13. **Successors and Assigns**. This Agreement shall be binding upon and inure to the benefit of the Parties and their respective affiliates, successors and permitted transferees and assigns.

14. **Assignment**. No Party may assign, delegate or otherwise transfer or dispose of any of its rights or obligations under this Agreement without the prior written consent of the other Parties.

15. **Governing Law**. This Agreement shall be governed by and construed in accordance with the laws of the Commonwealth of Massachusetts, excluding, to the maximum extent permitted by law, any provisions and principles thereof that would otherwise require the application of the laws of another jurisdiction.

16. **Waivers**. The Parties recognize that the development of offshore wind power projects are subject to many risks and uncertainties, that there is no assurance that the Projects will obtain permits and approvals necessary for development and construction or receive necessary financing, and that Vineyard Wind may abandon a Project at any time, at its sole discretion. In no event will any Party or its affiliates be liable to the other Party or its affiliates for (i) any claim based on a failure to obtain a lease or a failure to receive financing, utility agreements or other approvals, or decision to abandon a Project, (ii) any claim based on a failure of an assignment to be approved or realized, or (iii) special, incidental, consequential or punitive damages, whether or not foreseeable.

17. **WAIVER OF JURY TRIAL**. EACH PARTY IRREVOCABLY WAIVES ALL RIGHT TO TRIAL BY JURY IN ANY ACTION, PROCEEDING OR COUNTERCLAIM (WHETHER BASED ON CONTRACT, TORT OR OTHERWISE) ARISING OUT OF OR RELATING TO THIS AGREEMENT OR THE ACTIONS OF THE PARTIES IN THE NEGOTIATION, ADMINISTRATION, PERFORMANCE AND ENFORCEMENT HEREOF, INCLUDING THE REPUDIATION OF THIS AGREEMENT. EACH PARTY AGREES TO NON-BINDING MEDIATION PRIOR TO LITIGATION.

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18. **Notices**. All notices and other communications given or made pursuant to this Agreement shall be in writing and shall be delivered to the addresses set forth on the signature page to this Agreement. Such notice and other communications shall be deemed properly served (i) if delivered by hand, on the day and at the time on which delivered to the intended recipient at the address set forth in this Agreement; (ii) if sent by mail, on the third business day after the day on which deposited in the United States certified or registered mail, postage prepaid, return receipt requested, addressed to the intended recipient at its address set forth in this Agreement; or (iii) if by overnight Federal Express or other reputable overnight express mail service, on the next business day after delivery to such express mail service, addressed to the intended recipient at its address set forth in this Agreement. In each case, a copy of such notice or other communication shall be sent by email to the intended recipient at the address set forth in this Agreement. Any Party may change its address and contact person for the purposes of this Agreement by giving notice thereof in the manner required herein.

19. **Further Assurances**. Each Party agrees to perform all further acts, and to execute, acknowledge and deliver any documents, which may be reasonably requested by any of the other Parties to carry out the provisions of this Agreement.

20. **Titles and Headings**. The titles and headings used in this Agreement are used for convenience only and are not to be considered in construing or interpreting this Agreement.

21. **Counterparts; Execution**. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, and all of such counterparts together shall constitute one and the same agreement. This Agreement, once executed by each Party, may be delivered by such Party by facsimile or similar electronic means of transmission pursuant to which the signature of or on behalf of such Party can be seen, and such execution and delivery shall be considered valid, binding and effective for all purposes. At the request of a Party, the other Party will confirm facsimile or scanned image signatures by signing an original instrument and submitting it to the requesting Party.

22. **Payments.** All payments made in accordance with this Agreement shall be made in immediately available U.S. Dollars by wire or electronic fund transfer to a dedicated escrow account of legal counsel to the Town, Cultural Heritage Partners, PLLC, from which that firm will convey payments to the Community Foundation for Nantucket or other foundation agreed to by the Parties for the Nantucket Offshore Wind Community Fund.

23. **No Partnership**. The relationship between the Parties shall not be that of partners, agents, or joint ventures, and nothing contained in this Agreement shall be deemed to constitute a partnership or agency agreement between them for any purposes, including tax purposes.

[*Signature Page Follows*]

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IN WITNESS WHEREOF, the Parties have executed this Agreement on the date first set forth above.

VINEYARD WIND LLC

DocuSigned by:
33AC5DF1A2C44C1...

Name: Lars Thanning Pedersen
Title: CEO

Address for Notices:

700 Pleasant Street, Suite 510
New Bedford, MA 02740

E-mail: lpedersen@vineyardwind.com

TOWN AND COUNTY OF NANTUCKET

DocuSigned by:
D6239D4FEBDE4F6...

Name: Dawn Hill Holdgate
Title: Chair, Nantucket Select Board

Address for Notices:

16 Broad Street
Nantucket, MA 02554

E-mail: dhillholdgate@nantucket-ma.gov

NANTUCKET PRESERVATION TRUST

DocuSigned by:
Mary Bergman
7E7592091F82460...

Name: Mary Bergman
Title: Executive Director

Address for Notices:

11 Centre Street
Nantucket, MA 02554

E-mail:
mbergman@nantucketpreservation.org

MARIA MITCHELL ASSOCIATION

DocuSigned by:
Jason Bridges
FC7D030DF2604A3...

Name: Jason Bridges
Title: Executive Director

Address for Notices:

4 Vestal Street
Nantucket, MA 02554

E-mail: jbridges@mariamitchell.org

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Direct all media inquiries to Greg Werkheiser, legal counsel to Nantucket: (703) 408-2002.

Answers to Constituent Questions Regarding the Good Neighbor Agreement Between Vineyard Wind and the Town of Nantucket, Nantucket Preservation Trust, and Maria Mitchell Association

Why did the Town of Nantucket, NPT, and MMA reach an agreement with Vineyard Wind?

- The Bureau of Ocean Energy Management (BOEM) approved the 743,000-acre offshore Massachusetts Wind Area in May 2012, after two years of public comment, determining that this area had the fewest environmental and user conflicts. Vineyard Wind purchased one of the first lease rights. Whether one supports, opposes, or is neutral about Vineyard Wind's proposed offshore wind project, it will almost certainly be built.
- Vineyard Wind agreed the project will have impacts on Nantucket's historic viewshed. The Town negotiated for concessions from Vineyard Wind to reduce and mitigate harms:
    - Moving the first row of turbines further away from Nantucket
    - Guaranteeing that no future projects will site turbines any closer
    - Installing Automatic Lighting Detection and Lighting System (ADLS) to reduce nighttime lighting to only 4 hours per year.
    - Painting all turbines a non-reflective white/grey color.
- Nantucket had no guarantee that BOEM would have made ordered any of these concessions, so Nantucket and leading nonprofit organizations negotiated directly with the company.
- Vineyard Wind also acknowledges that visual impacts of the project could lead to economic impacts to Nantucket, and so agreed to seed the Nantucket Offshore Wind Community Fund.

How will the Fund work?

- The Fund will support local initiatives to combat the effects of global climate change, enhance coastal resiliency, and protect and preserve Nantucket's cultural and historic resources.
- The Community Foundation for Nantucket will host the Fund, the first of its kind in the nation. A Board comprised of representatives from the Town, NPT, and MMA will consider grant applications. All Nantucket community organizations may apply.
- Funds will be leveraged to secure philanthropic matches.
- Future Wind developers may also contribute to the Fund.
- VW will contribute $4M when its first project is implemented and substantial additional funds thereafter as future projects are implemented. The value of such funds if distributed over the lifetime of the wind farm would be $34.4M, but Nantucket negotiated to have the total paid within 8-10 years at the earlier present value of $16M.

How does Nantucket benefit?

- The agreement provides important guarantees that protect Nantucket's status as a National Historic Landmark in balance with the advancement of clean energy goals.
- The process Nantucket and Vineyard Wind have established creates a clearer path for facilitating dialogue about future projects with Vineyard Wind and other wind developers, providing the Town with greater information and certainty about outcomes.
- Nantucket has preserved its ability to seek redress from Vineyard Wind if its project results in unanticipated environmental harm.

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VINEYARD WIND

ATTACHMENT TO SECTION 8

Attachment 8.1-1: WTG Product Specifications

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VINEYARD WIND

ATTACHMENT TO SECTION 8

Attachment 8.1-2: Foundation Design Study

REDACTED

PUBLIC

VINEYARD WIND

ATTACHMENT TO SECTION 9

Attachment 9.1-1: [redacted]

REDACTED

PUBLIC

VINEYARD WIND

ATTACHMENT TO SECTION 10

Attachment 10.2-1: [redacted]

REDACTED

PUBLIC

VINEYARD WIND

ATTACHMENT TO SECTION 10

Attachment 10.2-2: [redacted]

REDACTED

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VINEYARD WIND

ATTACHMENT TO SECTION 10

Attachment 10.2-3: [redacted]

REDACTED

PUBLIC

VINEYARD WIND

ATTACHMENT TO SECTION 11

Attachment 11.2-1: [redacted]

REDACTED

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VINEYARD WIND

ATTACHMENT TO SECTION 11

Attachment 11.2-2: [redacted]

REDACTED

PUBLIC

VINEYARD WIND

ATTACHMENT TO SECTION 11

Attachment 11.2-3: [redacted]

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VINEYARD WIND

ATTACHMENT TO SECTION 12

Attachment 12.2-1: Avangrid Renewables Onshore Project Experience

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VINEYARD WIND

ATTACHMENT TO SECTION 12

Attachment 12.3-1: Vineyard Wind Board of Manager, Executive Committee, and Officer Resumes

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VINEYARD WIND

ATTACHMENT TO SECTION 12

Attachment 12.4-1: Copenhagen Infrastructure Partners' Project Experience

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VINEYARD WIND

ATTACHMENT TO SECTION 12

Attachment 12.4-2: Avangrid Renewables' Project Experience

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VINEYARD WIND

ATTACHMENT TO SECTION 13

Attachment 13.0-1: [redacted]

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VINEYARD WIND

ATTACHMENT TO SECTION 13

Attachment 13.0-2: [redacted]

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VINEYARD WIND

ATTACHMENT TO SECTION 13

Attachment 13.0-3: [redacted]

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VINEYARD WIND

ATTACHMENT TO SECTION 13

Attachment 13.0-4: [redacted]

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VINEYARD WIND

ATTACHMENT TO SECTION 13

Attachment 13.0-5: [redacted]

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VINEYARD WIND

ATTACHMENT TO SECTION 13

Attachment 13.1-1: [redacted]

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VINEYARD WIND

ATTACHMENT TO SECTION 13

Attachment 13.2-1: [redacted]

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VINEYARD WIND

ATTACHMENT TO SECTION 13

Attachment 13.2-2: [redacted]

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VINEYARD WIND

ATTACHMENT TO SECTION 13

Attachment 13.2-3: [redacted]

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VINEYARD WIND

ATTACHMENT TO SECTION 13

Attachment 13.3-1: [redacted]

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VINEYARD WIND

ATTACHMENT TO SECTION 13

Attachment 13.3-2: [redacted]

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VINEYARD WIND

ATTACHMENT TO SECTION 13

Attachment 13.3-3: [redacted]

REDACTED

PUBLIC

VINEYARD WIND

ATTACHMENT TO SECTION 13

Attachment 13.3-4: [redacted]

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PUBLIC

VINEYARD WIND

ATTACHMENT TO SECTION 13

Attachment 13.3-5: [redacted]

REDACTED

PUBLIC

VINEYARD WIND

ATTACHMENT TO SECTION 13

Attachment 13.5-1: [redacted]

REDACTED

PUBLIC

VINEYARD WIND

ATTACHMENT TO SECTION 13

Attachment 13.6-1: [redacted]

REDACTED

PUBLIC

VINEYARD WIND

ATTACHMENT TO SECTION 13

Attachment 13.7-1: [redacted]

REDACTED

PUBLIC

VINEYARD WIND

ATTACHMENT TO SECTION 13

Attachment 13.7-2: [redacted]

REDACTED

PUBLIC

VINEYARD WIND

ATTACHMENT TO SECTION 13

Attachment 13.8-1: [redacted]

REDACTED

PUBLIC

VINEYARD WIND

ATTACHMENT TO SECTION 13

Attachment 13.8-2: [redacted]

REDACTED

PUBLIC

VINEYARD WIND

ATTACHMENT TO SECTION 14

Attachment 14.0-1: [redacted]

REDACTED

PUBLIC

VINEYARD WIND

ATTACHMENT TO SECTION 14

Attachment 14.0-2: [redacted]

REDACTED