



COMMONWEALTH WIND

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

Prepared for

**The Massachusetts Distribution Companies and
the Massachusetts Department of Energy Resources**

Submitted by



VINEYARD WIND

September 16 , 2021

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



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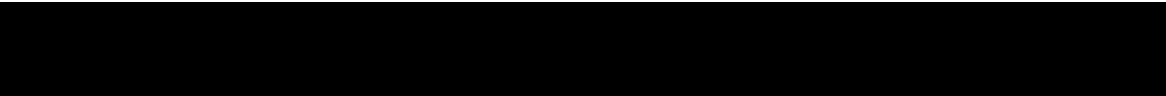
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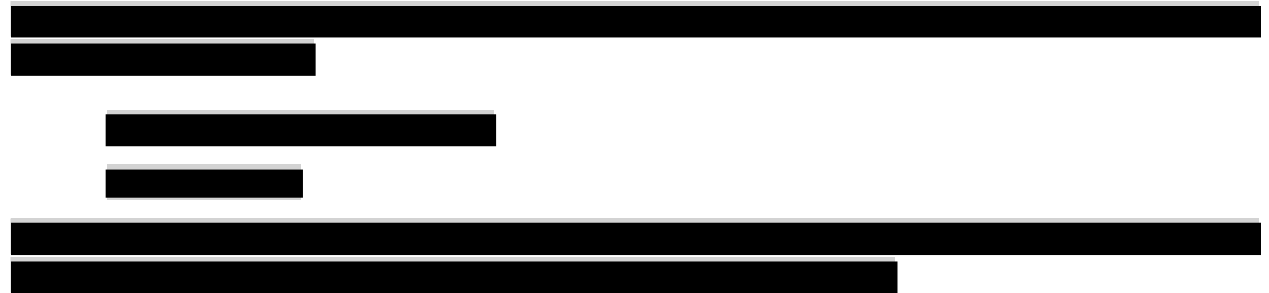
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SECTION 1

THE CERTIFICATION, PROJECT, AND PRICING DATA FORM

1.0 CPPD FORM

The Certification, Project, and Pricing Data ("CPPD") document is a Microsoft Excel workbook that is provided on the website at www.MACleanEnergy.com.



SECTION 2

EXECUTIVE SUMMARY

2.0 COMMONWEALTH WIND

Vineyard Wind is proud to submit our Commonwealth Wind proposals in response to the Request for Proposals for Long-Term Contracts for Offshore Wind Energy Projects issued on May 7, 2021 (the "RFP") by Unitil, National Grid, and Eversource Energy (Distribution Companies) in coordination with the Massachusetts Department of Energy Resources. Commonwealth Wind (the "Project") [REDACTED]

[REDACTED]

Commonwealth Wind will deliver and sustain that promise for decades to come and chart a course towards a more diverse, equitable, and inclusive renewable energy future.

[REDACTED]

The Project's significant economic benefits are secured by comprehensive, mature, and binding economic benefit initiatives and partnerships. They will deliver long-term and sustainable impacts to the Commonwealth's clean energy economy. [REDACTED]



[REDACTED]

[REDACTED]

- **Build a diverse and inclusive offshore wind-ready workforce** [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

- **Integrate local and diverse businesses into the offshore wind supply chain** [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

- **Advance the clean energy innovation ecosystem in the Commonwealth**
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

- **Commit to negotiate a Project Labor Agreement (PLA) and pay prevailing wages** [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

- **Provide direct benefits to low-income Southcoast ratepayers** [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]



[REDACTED]

Vineyard Wind has developed meaningful partnerships and economic benefit initiatives [REDACTED]

[REDACTED]

[REDACTED] In this way, the Project presents a generational opportunity for Massachusetts to realize the economic promise of offshore wind and position itself as a pillar of the nation’s newest industry.

[REDACTED]



[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]



Project Overview

Commonwealth Wind is an offshore wind project that Vineyard Wind is proposing to build in federally designated Lease Area OCS-A 0534 approximately 22 miles south of Martha's Vineyard and to the southwest of Vineyard Wind 1 and Park City Wind. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

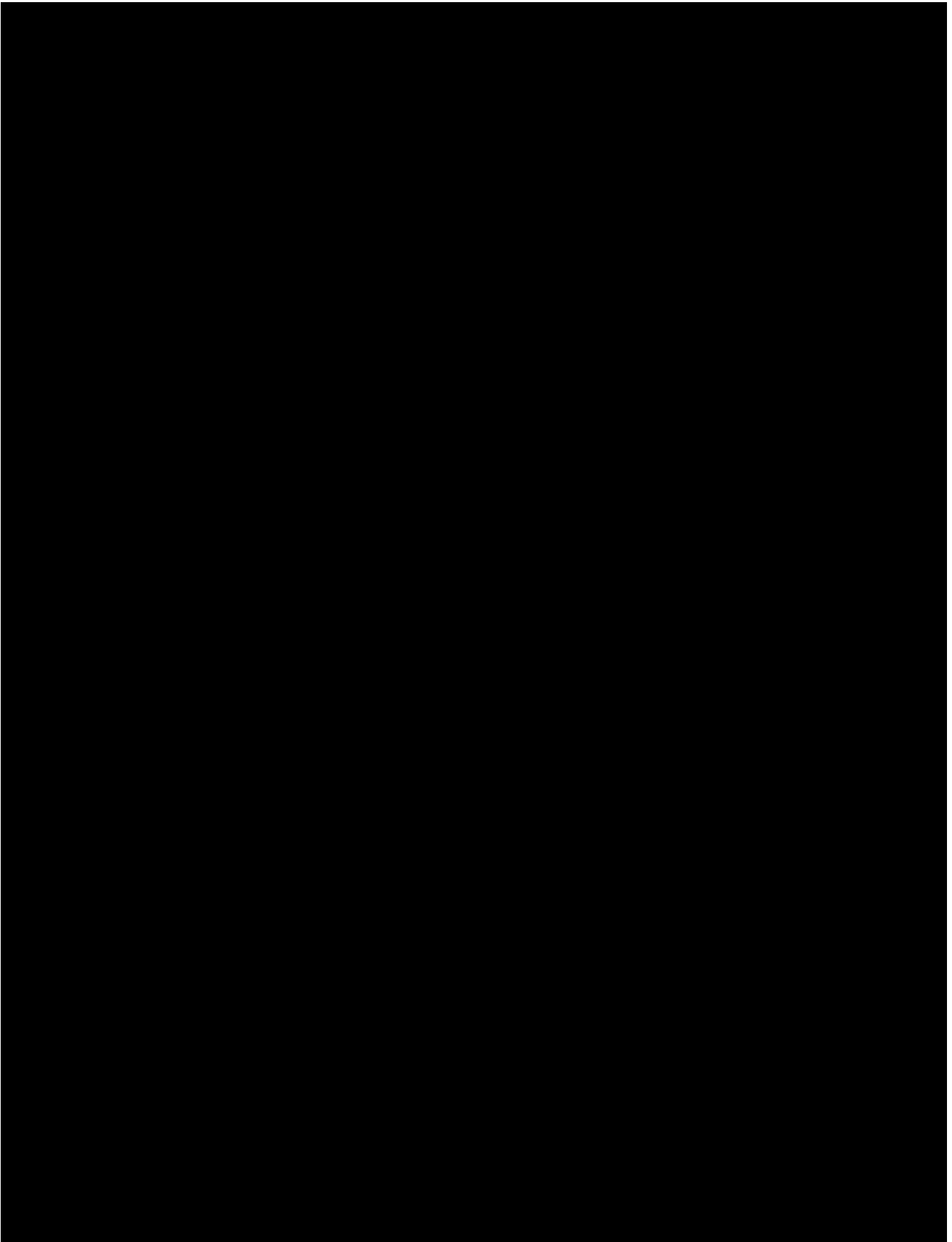
[REDACTED]

The Project is designed with a robust and prudent schedule that ensures delivery with financial close (FC) achieved by [REDACTED] and a commercial operation date (COD) in [REDACTED]. The federal permitting process for Commonwealth Wind is well underway, with the Construction and Operations Plan (COP) for Lease Area OCS-A 0534 advancing through the Bureau of Ocean Energy Management's (BOEM's) review process. Vineyard Wind filed a COP that includes the Project in July 2020. BOEM issued a Notice of Intent to prepare an Environmental Impact Statement on June 30, 2021. Public scoping meetings were held in July 2021. Vineyard Wind expects to receive a Record of Decision in July 2023.

The Project's schedule is based on our extensive experiences and that of Vineyard Wind. We've applied the important lessons learned during the successful permitting process for Vineyard Wind 1—the nation's only fully permitted commercial-scale offshore wind project—in developing the Project's schedule, which has been rigorously assessed. As such, Vineyard Wind is better positioned than any developer to understand what is required to develop, permit, finance, and construct offshore wind projects in the US.

Commonwealth Wind offers a number of critical advantages and benefits compared to other offshore wind projects, which are summarized below.





[REDACTED]

[REDACTED]

- **Robust Wind Resource:** [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

- **Negligible Viewshed Impacts:** [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

- **Site Conditions Well-Understood:** [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

Robust and Technically Viable Project Design Concept

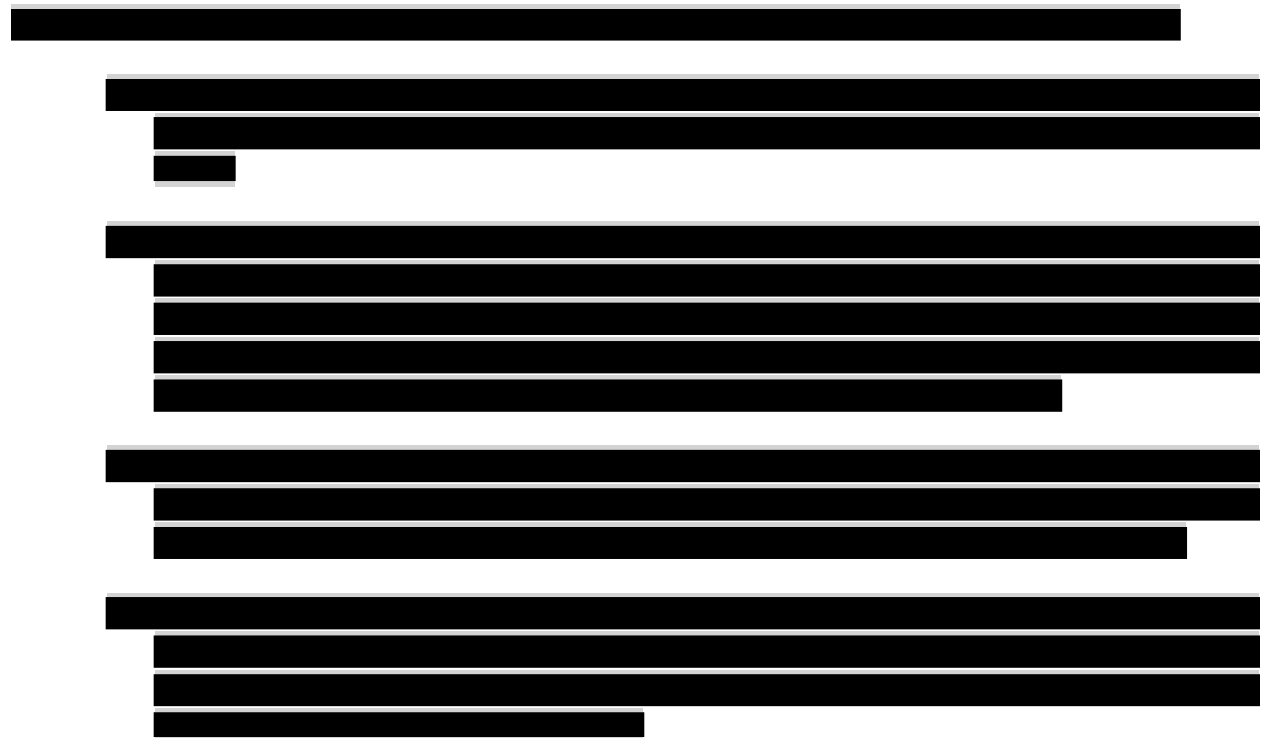
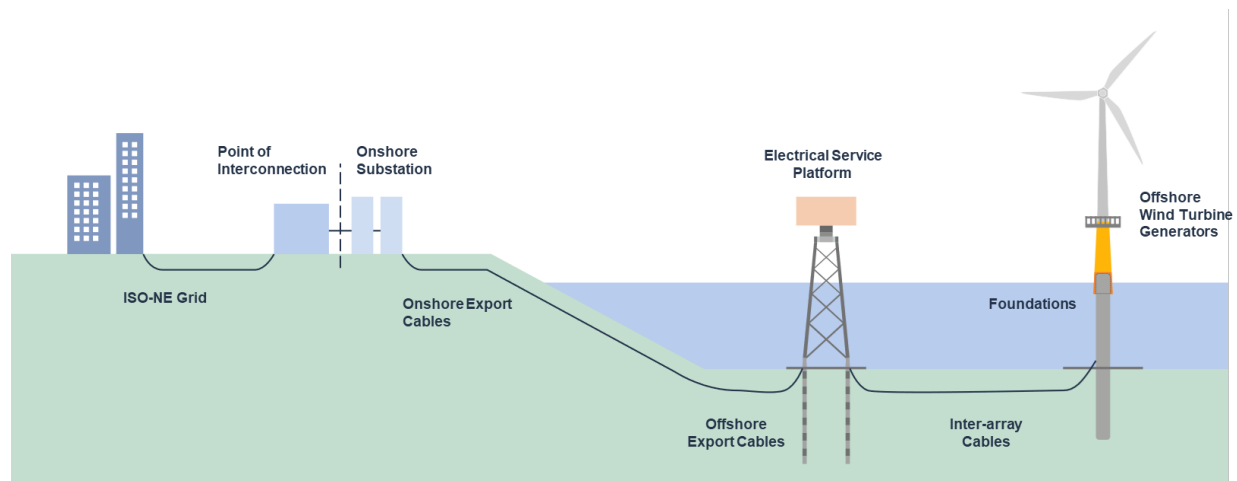
The preliminary Project concept, engineering design, and procurement strategy underlying Commonwealth Wind were developed by Vineyard Wind’s internal engineering team backed by third-party studies and verification and incorporates lessons learned from Vineyard Wind 1.

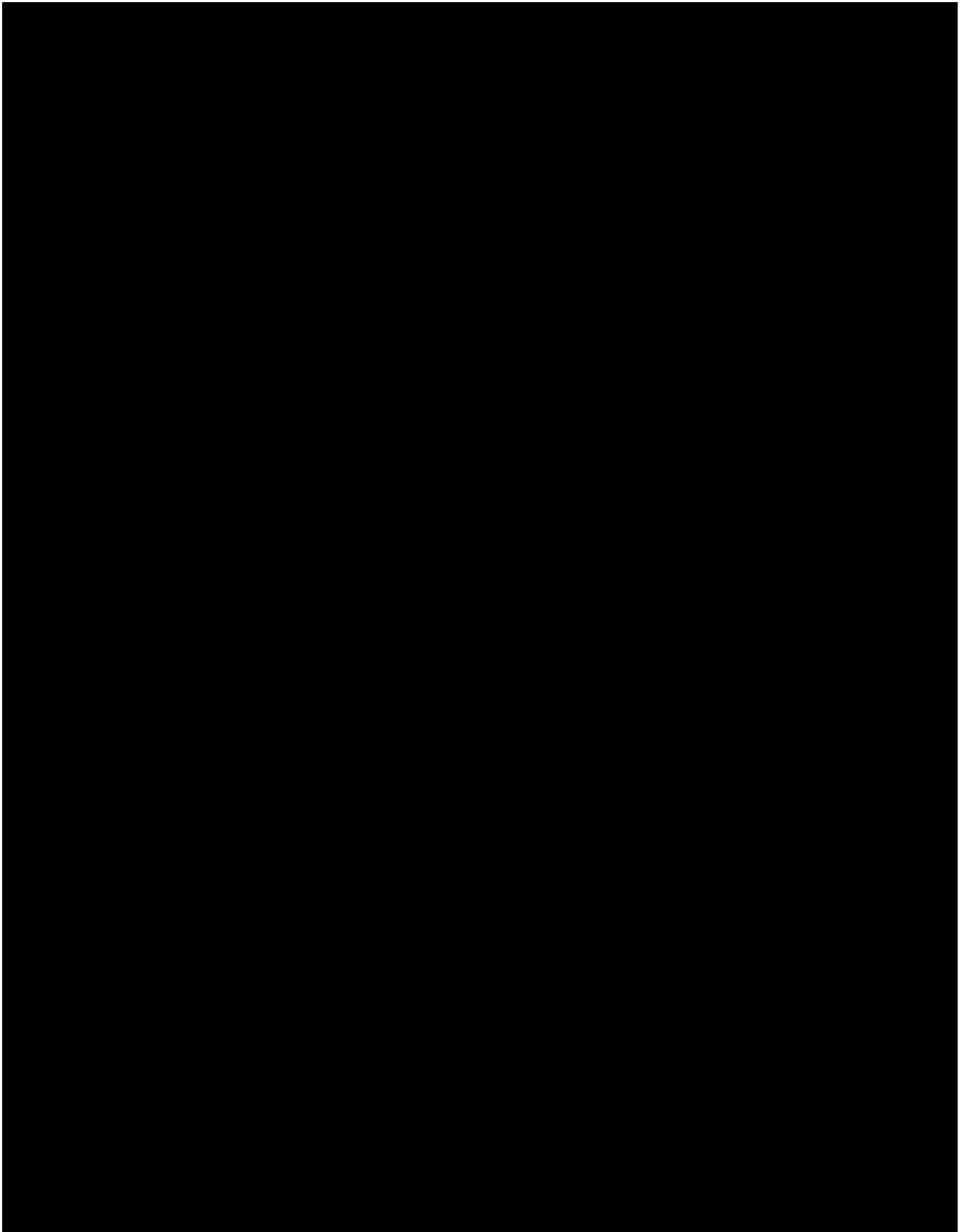


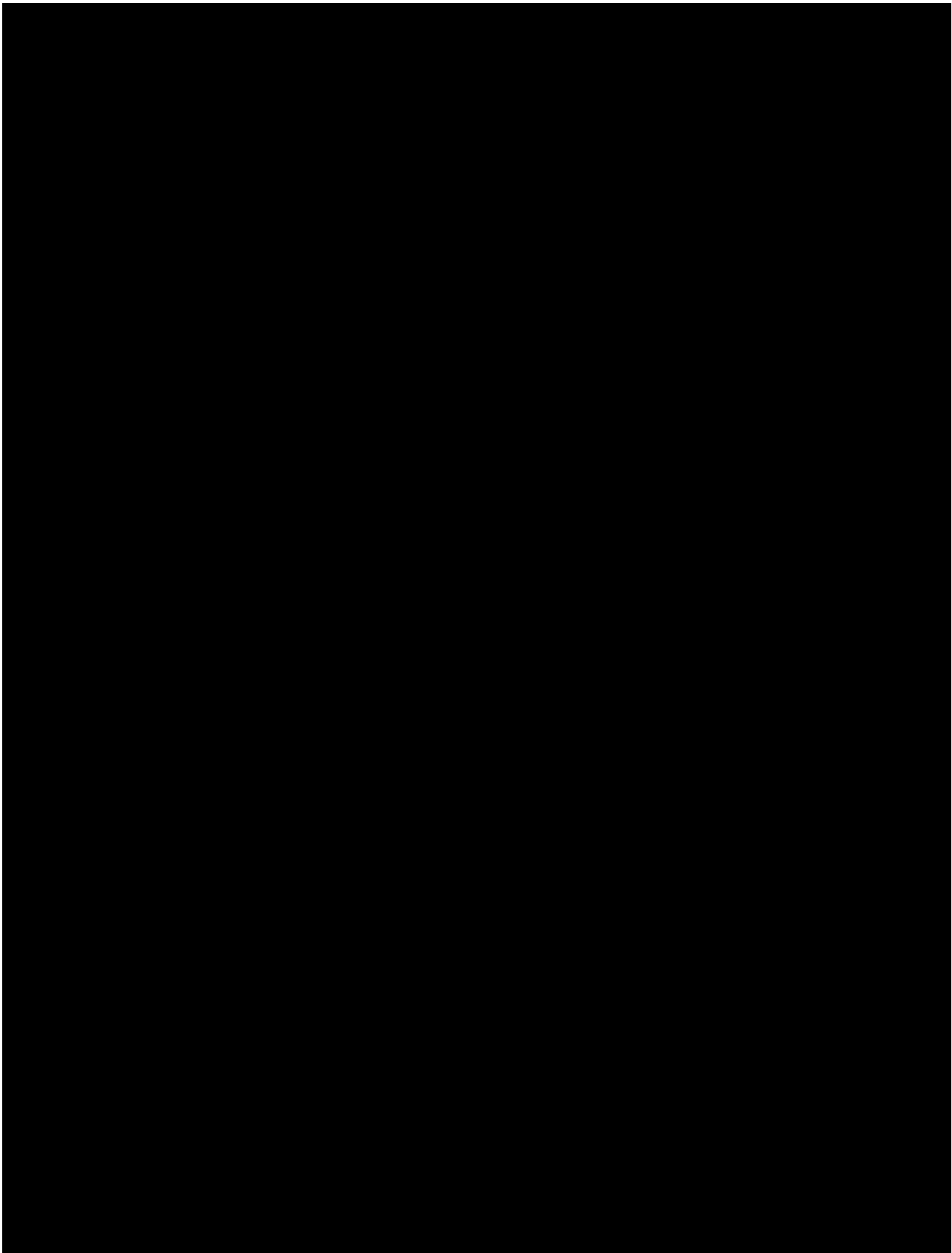
The major technology and equipment groups that comprise the Project are the WTGs, foundations, inter-array cables, electrical service platform (ESP), offshore export cables, onshore export cables, and onshore substation, which are illustrated in Figure 2.0-3.

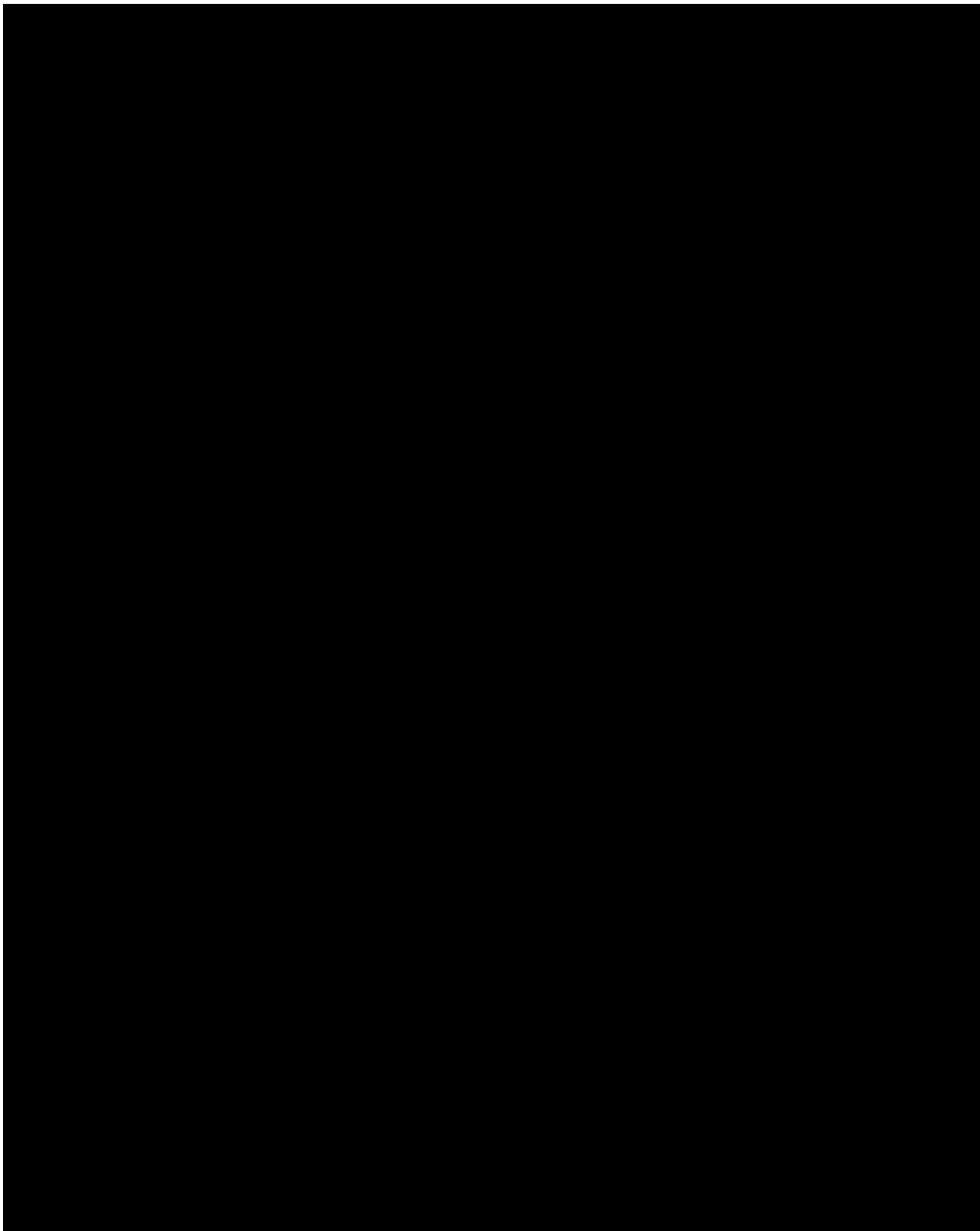


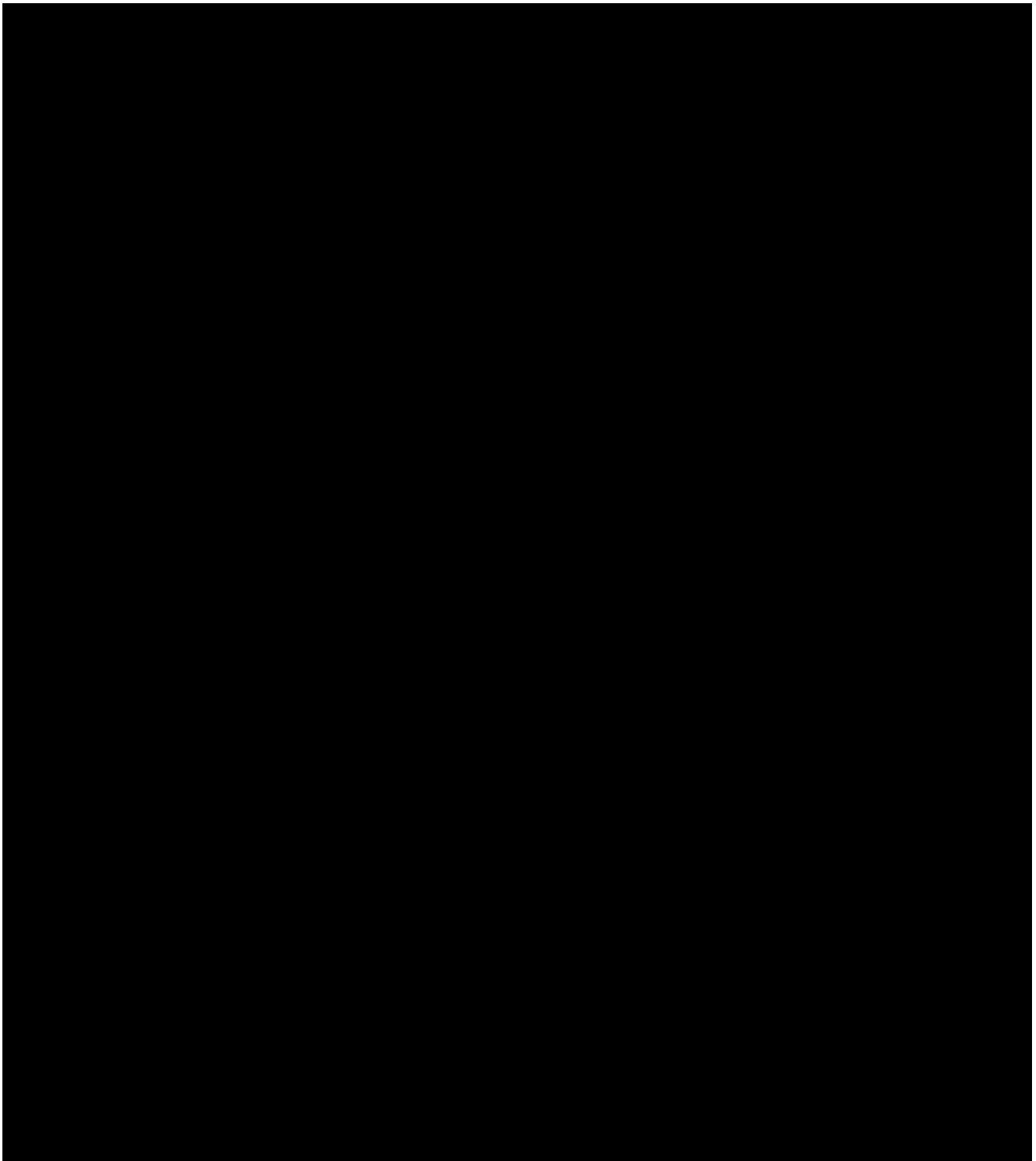
Figure 2.0-3 Offshore Wind Energy Generation Facility and Transmission System

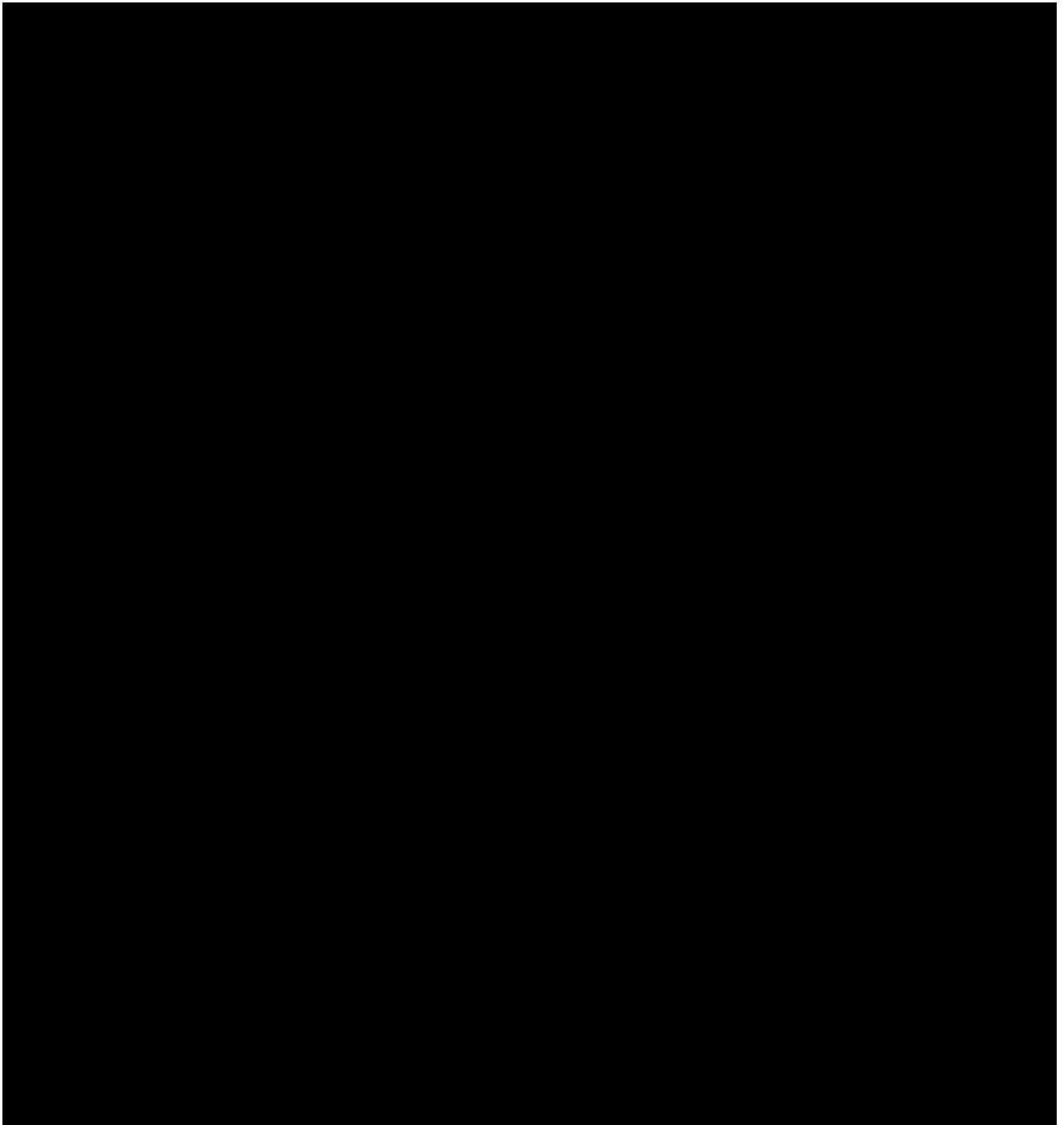


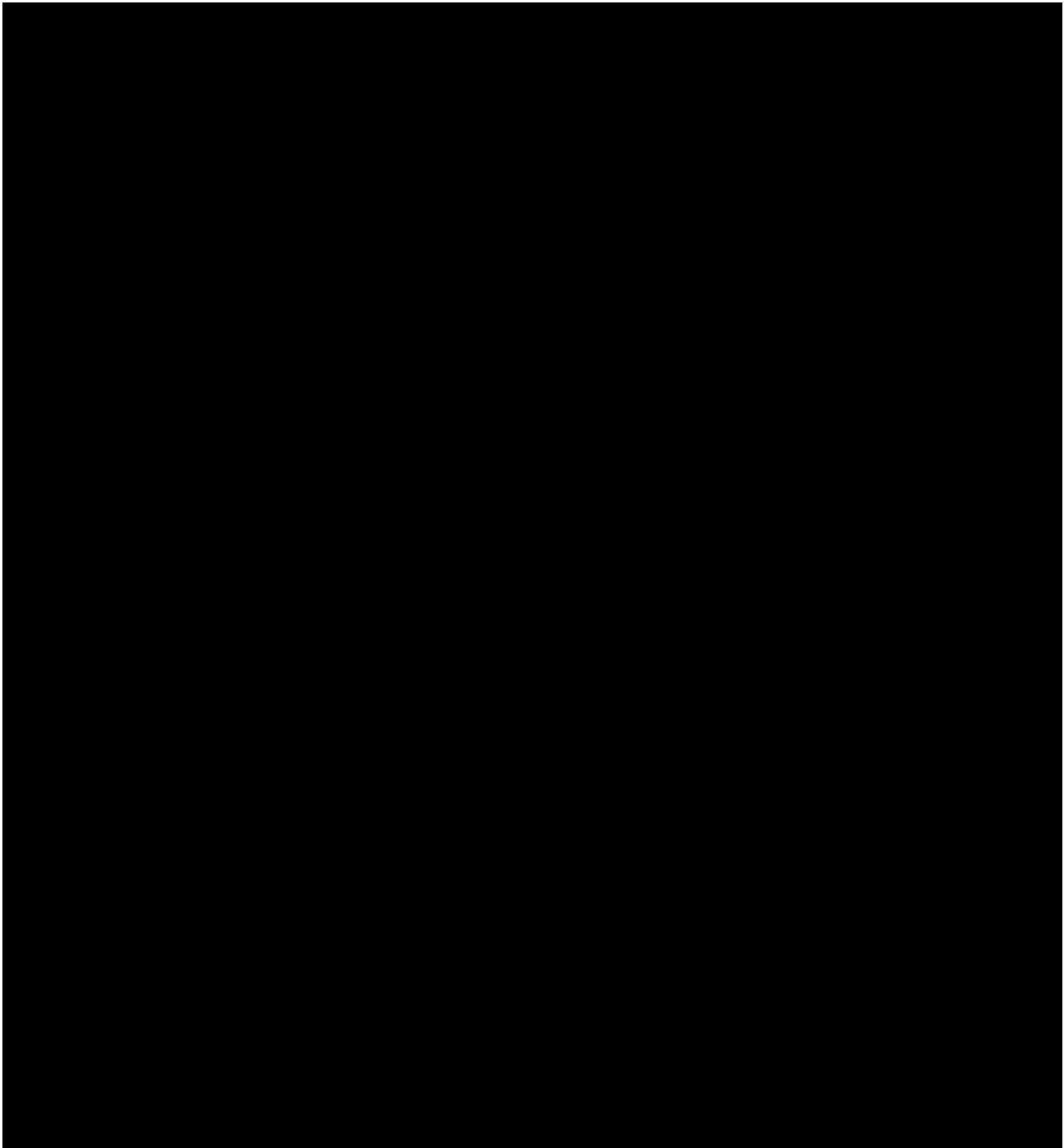


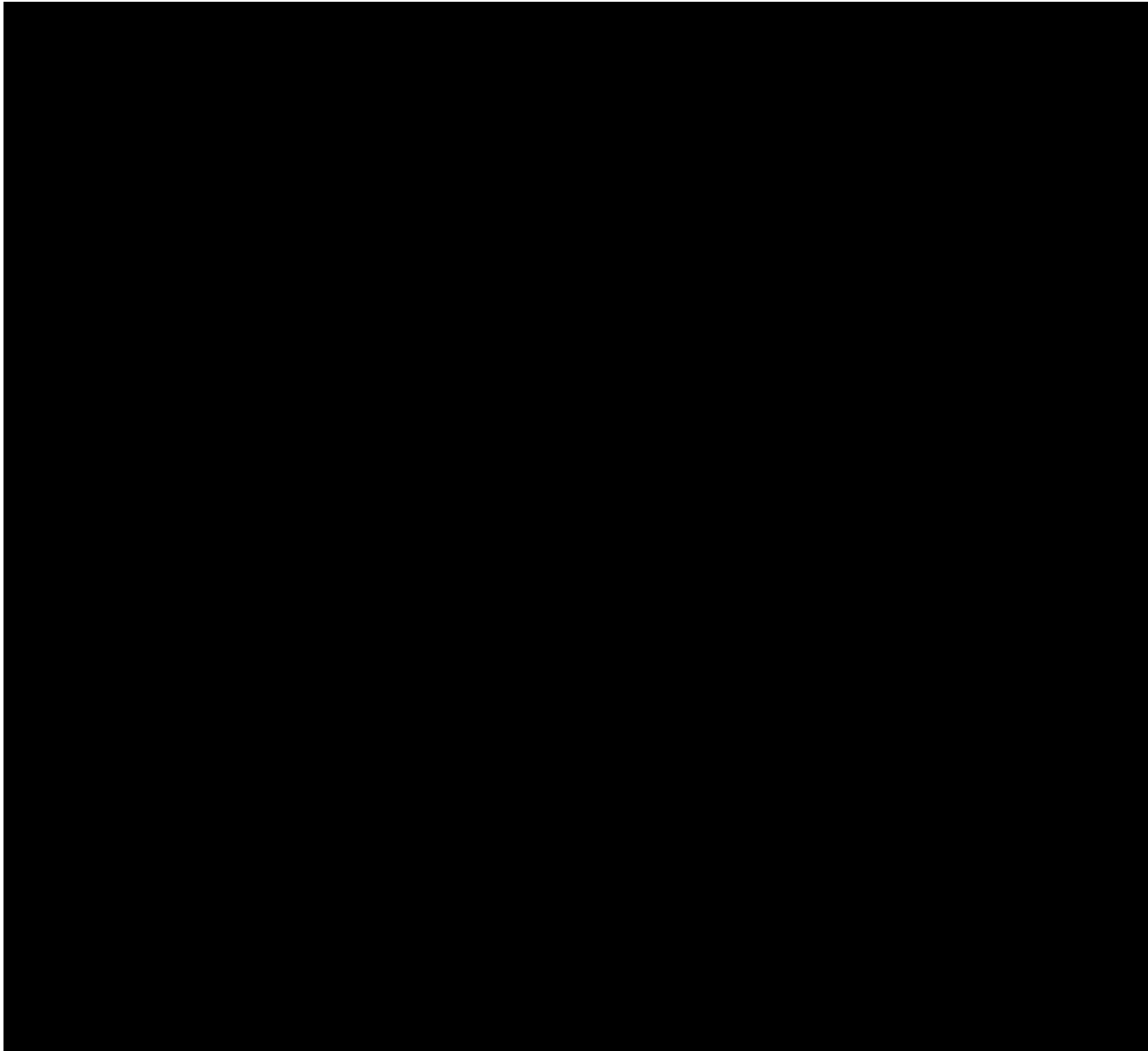


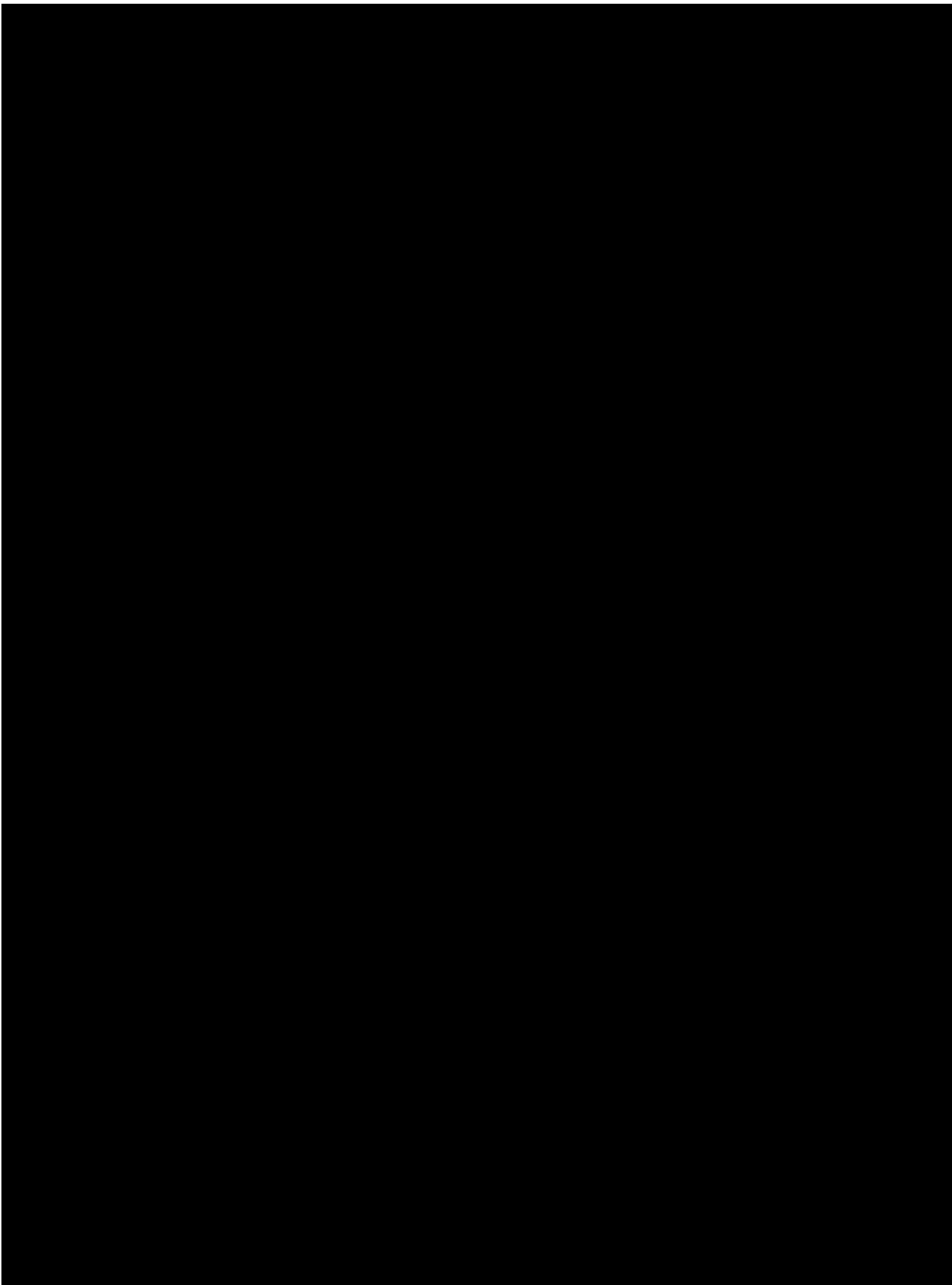


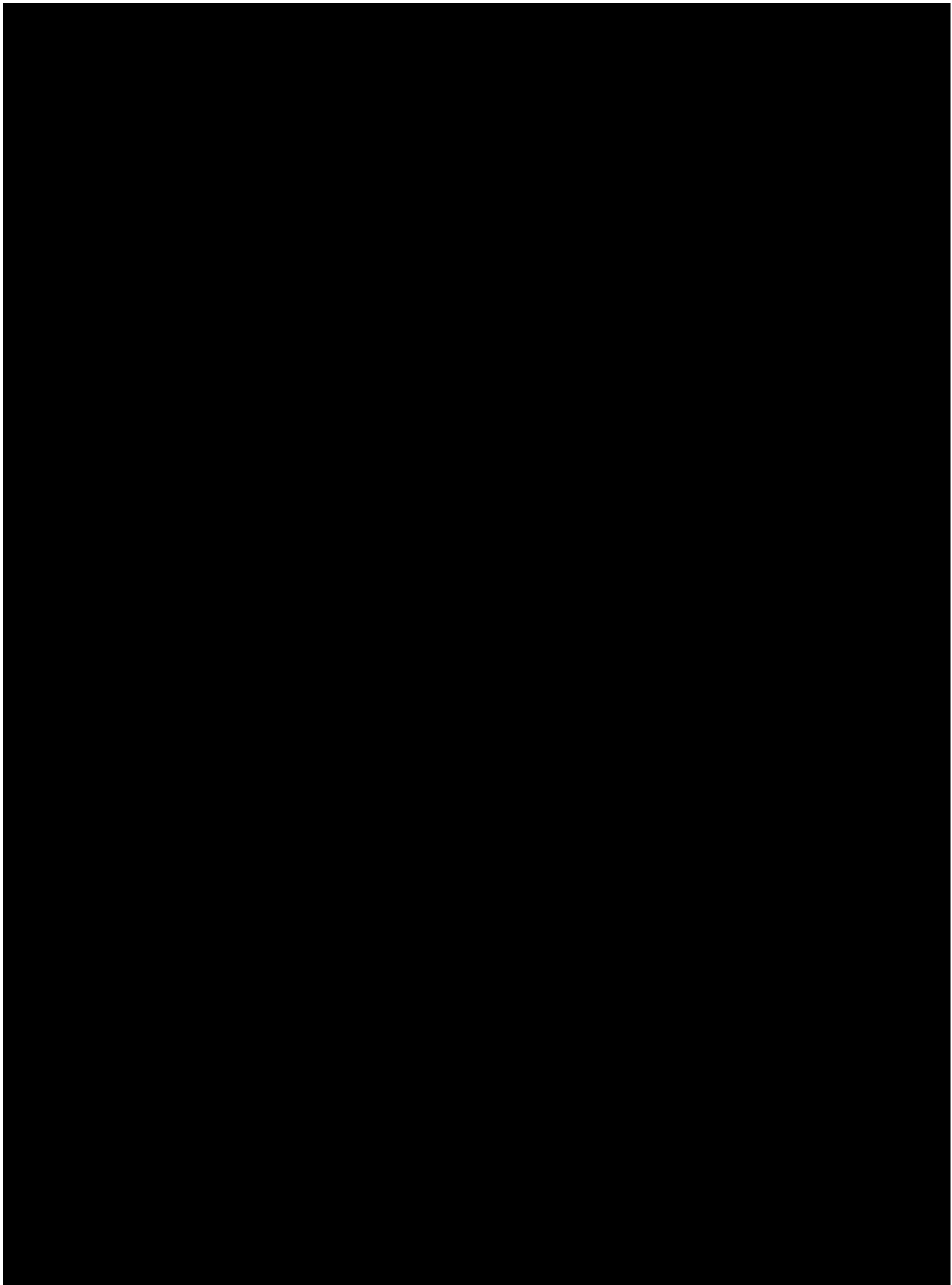


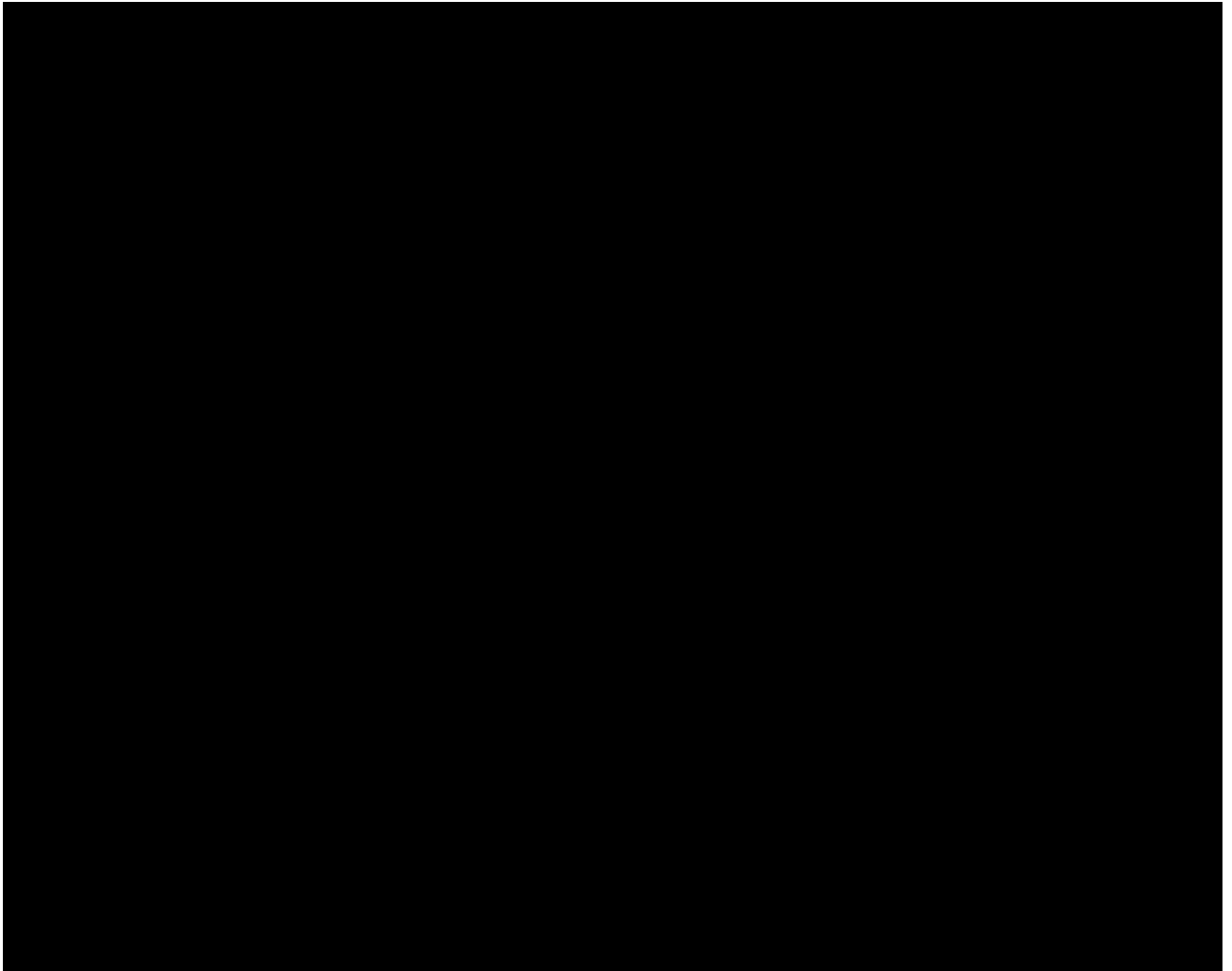


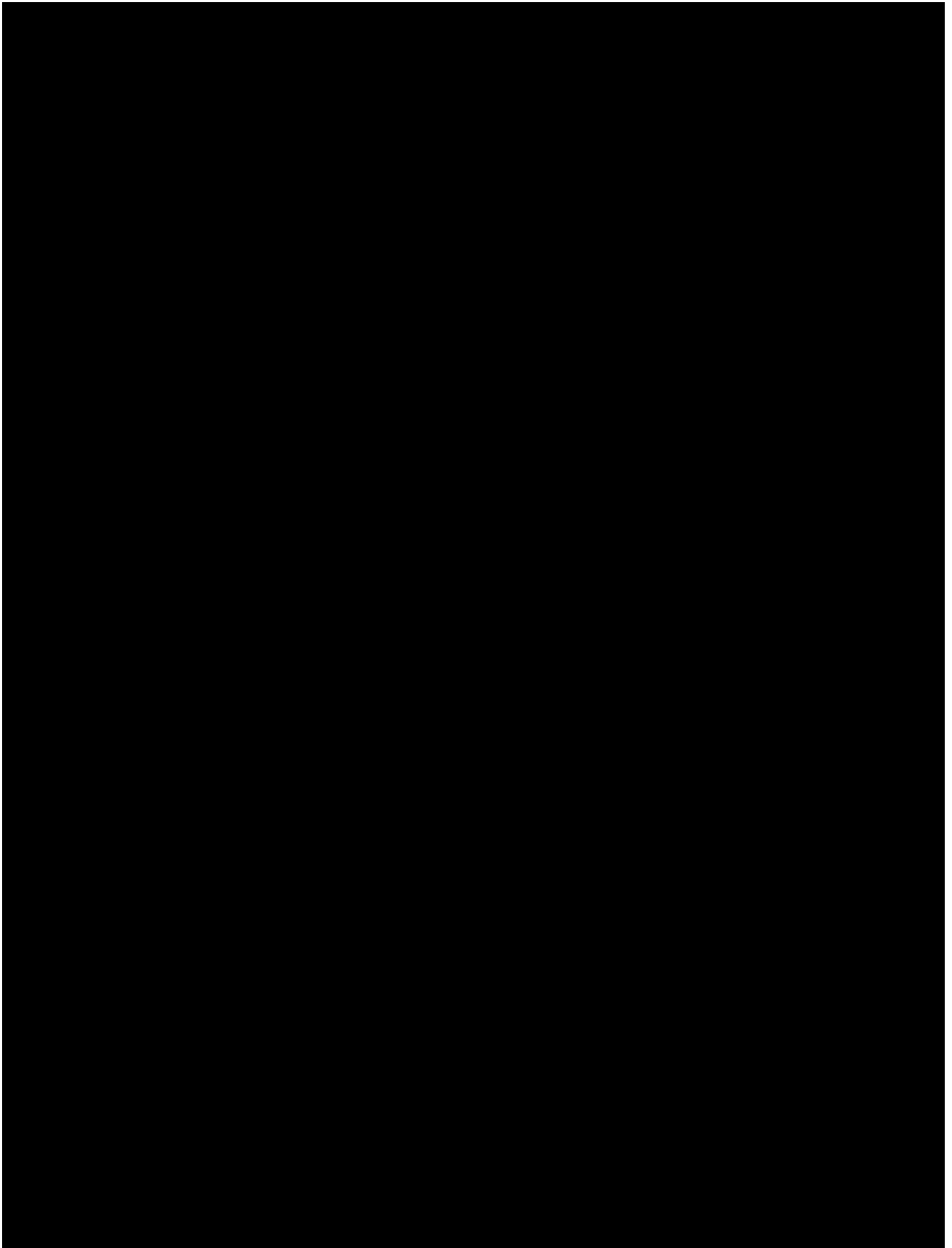












[REDACTED]

Commitment to Negotiate a Project Labor Agreement

[REDACTED]

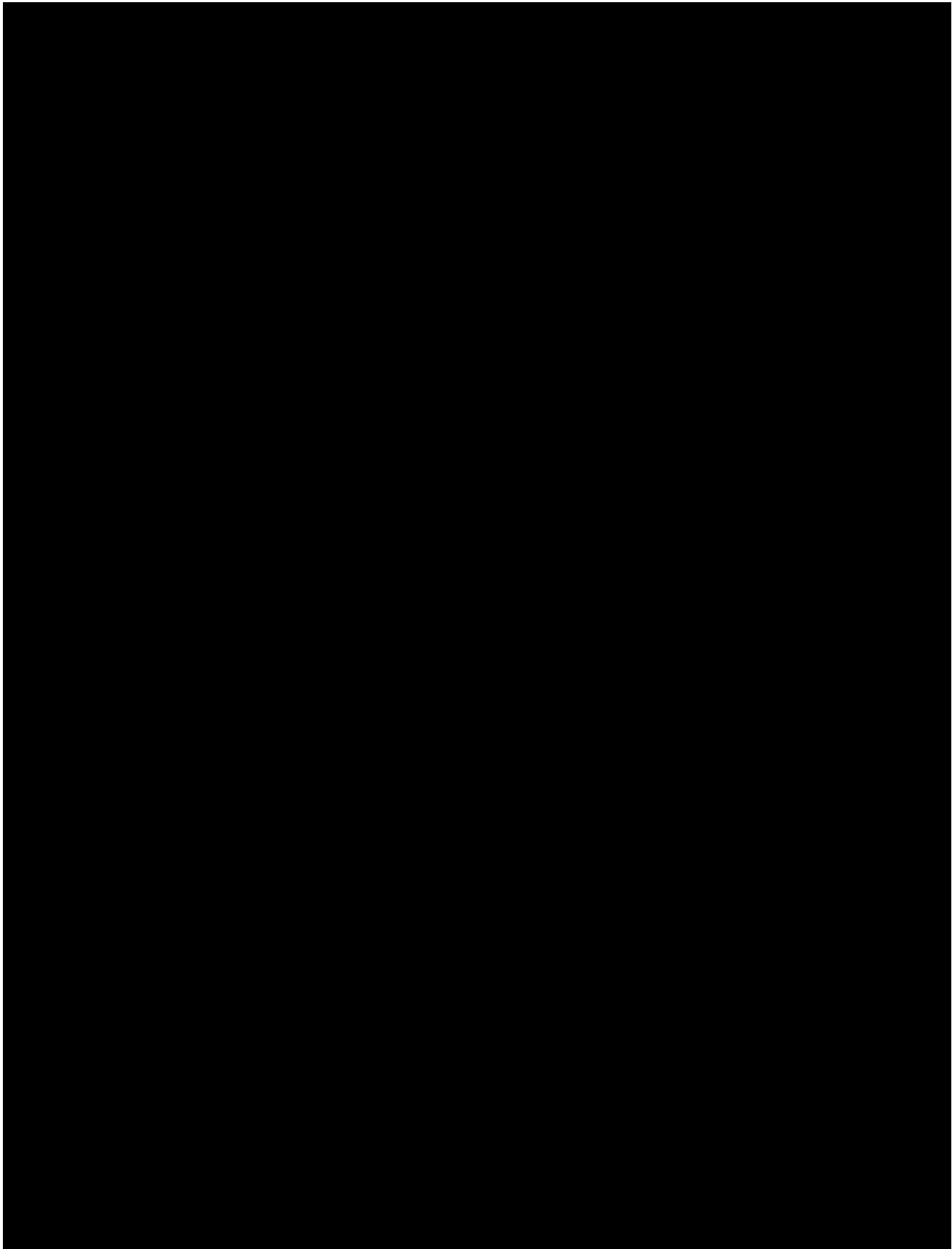
[REDACTED]

[REDACTED]

Diversity, Equity, and Inclusion Plan

Vineyard Wind is committed to building a diverse, equitable, and inclusive offshore wind sector. The DEI Plan developed for the Project reflects this commitment and includes [REDACTED] to fund DEI, workforce, and supply chain initiatives that will support local content, increase diversity in the industry, and provide EJ Population residents and other underrepresented populations real opportunities to join the offshore wind workforce and supply chain (see Table 2.0-6).





As part of the DEI Plan, Vineyard Wind will also leverage its “buying power” through the Project’s procurement process to ensure DEI is advanced by our industry partners and becomes a core value of the offshore wind sector as it is established in the US. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]



2.2 THE VINEYARD WIND ADVANTAGE

With the Vineyard Wind 1 project, we are leading the US offshore wind industry as the first and only developer to obtain permitting approval at the federal and state levels, conclude procurement and contracting for all major contract packages, finalize interconnection agreements, and begin onshore construction activities for a commercial-scale offshore wind project. Our understanding of what is required to develop, permit, finance, and construct offshore wind projects is unparalleled in the US.



The team includes and is supported by a suite of consultants, partners, and personnel who possess the experience, skills, and local knowledge required to deliver the Project. Many of these consultants have supported the development of Vineyard Wind 1 and/or are working on our Park City Wind project, creating continuity and the opportunity to leverage lessons learned from these projects.

The Project's success is further assured based on the global offshore wind expertise and management capabilities of Vineyard Wind's Shareholder Companies—Copenhagen Infrastructure Partners P/S (CIP) and Avangrid Renewables LLC (Avangrid Renewables). Combined, Vineyard Wind, the Shareholder Companies, and their affiliates have experience across 35 offshore wind projects totaling almost 20,000 MW of capacity in Australia, Europe, Southeast Asia, and the US.

2.3 EXCEPTIONAL FINANCIAL STRENGTH AND ACUMEN

Vineyard Wind is the only offshore wind developer to successfully implement a financing plan for a commercial-scale offshore wind project in the US, as Vineyard Wind 1 will achieve FC in the second half of 2021. Vineyard Wind is working with nine international and US-based banks to finance the construction of that project, which will be the largest investment in a single renewable energy project in the US to date. Vineyard Wind is also backed by CIP and Avangrid Renewables, two of the earliest and most experienced investors in US offshore wind. The Shareholder Companies are contributing their experience and financial strength to ensure financing success for the Project.

Copenhagen Infrastructure Partners

CIP is a fund management company focused on energy infrastructure including offshore wind, onshore wind, solar photovoltaics, biomass and energy from waste, transmission and distribution, reserve capacity and storage, and other energy assets like Power-to-X. CIP manages eight funds and has approximately \$19 billion (EUR 16 billion) under management. CIP was founded in 2012 by senior executives from the energy industry in cooperation with PensionDanmark and, as of today, has ~200 employees and offices in Copenhagen, Hamburg,



New York, Tokyo, Utrecht, and London. CIP holds a 50% equity interest in Vineyard Wind through the funds CI II and CI III. CIP recently held final close on its ~\$8.25 billion (EUR 7 billion) global greenfield renewables energy fund, CI IV, one year after the start of fundraising.

Avangrid Renewables

Avangrid Renewables is the third largest developer of onshore wind projects in the US and strives to lead the transformation to a sustainable, competitive, and clean energy future. The company has more than 8,300 MW of owned and controlled wind and solar generation across 24 states. [REDACTED]

[REDACTED] Avangrid Renewables is a subsidiary of Avangrid Inc (Avangrid) and part of the Iberdrola, S.A. Group. Avangrid Renewables and affiliates have concluded more than \$10 billion in project financing over the past 15 years.

2.4 COMMONWEALTH WIND MEETS OR EXCEEDS ALL RFP REQUIREMENTS

Commonwealth Wind is a technically, financially, and commercially viable offshore wind project that meets or exceeds all RFP requirements. The Project offers competitive pricing, substantial job creation and economic development benefits, and meaningful DEI commitments while supporting the Commonwealth's ambitious climate change and offshore wind goals.

The Project includes the following key distinguishing features, advantages, and benefits:

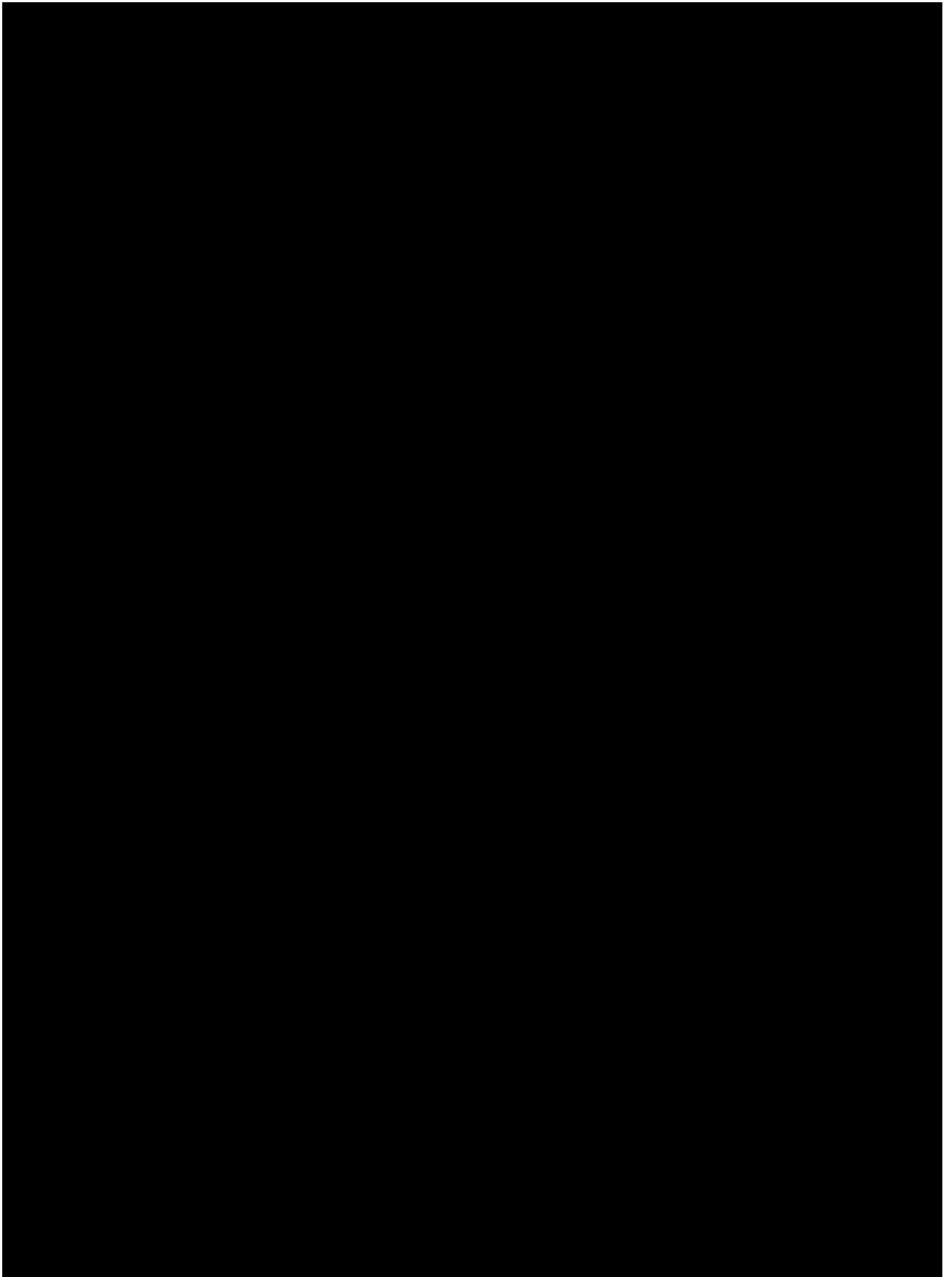
[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]







Vineyard Wind welcomes the opportunity to discuss our proposals with the Evaluation Team, and we thank you for your consideration.



SECTION 3

OPERATIONAL PARAMETERS

3.0 OVERVIEW

[REDACTED]

The Project has been designed to reliably generate and deliver clean energy to Massachusetts while withstanding the rough operating conditions experienced offshore. This has been achieved through the following:

[REDACTED]

Vineyard Wind will also apply lessons learned from operating Vineyard Wind 1 as well as any relevant experience from the Shareholder Companies'¹ and affiliates' more than 5,800 MW of operational offshore wind capacity across 19 projects.

3.1 MAINTENANCE OUTAGE REQUIREMENTS

Specify partial and complete planned outage requirements in weeks or days for all generation facilities and associated facilities required for the delivery of energy from the generation facilities to the delivery point. Also, list the number of months required for the cycle to repeat (e.g., list time interval of minor and major overhauls, and the duration of overhauls).

¹ [REDACTED]

[REDACTED]

[REDACTED]

The preventative maintenance measures described in this section will reduce the need for corrective intervention and support the enhanced operation of the Project.

[REDACTED]

Major Project Components

Wind Turbine Generators

[REDACTED]

[REDACTED]

[REDACTED]

Inter-array Cables and Export Cables

The Project's cables are inactive assets, and as such, do not need maintenance. [REDACTED]

Electrical Service Platform and Onshore Substation

[REDACTED]

[REDACTED]

Preventative Maintenance

Preventative maintenance will be performed to reduce the need for corrective intervention. The Shareholder Companies and affiliates have employed preventative maintenance approaches that have proven successful on other offshore wind projects globally. For example, Iberdrola is leading an industry consortium of 12 recognized and experienced key players on the ROMEO project. This initiative, backed by the European Commission through the Horizon 2020 Program, intends to reduce operating costs and maintain offshore wind farms so they achieve maximum efficiency and drive renewable energy production. The initiative is being

rolled out in three locations: Teesside (UK), East Anglia ONE (UK), and Wikingen (Germany). Vineyard Wind will employ any lessons learned from these approaches as well as experience gained operating Vineyard Wind 1 to support preventative maintenance efforts for the Project.

Remote monitoring is a key element for preventative maintenance as it allows continuous assessment of the technical state of a project without sending technicians offshore for inspection. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

3.2 OPERATING CONSTRAINTS

Specify all the expected operating constraints and operational restrictions for the project (e.g., limits on the number of hours a unit may be operated per year or unit of time).

The Project's operating constraints are largely determined by the technical parameters of the Offshore Wind Energy Generation facility and transmission system components. Importantly, offshore WTGs and related structures are designed to withstand the harsh offshore climate and

ensure a long operational life. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Weather-Related Conditions

Operational constraints for the WTGs are dictated by temperature, wind speed, and sea states. These operational constraints have been accounted for in the WTG availability calculation.

Temperature

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Wind Speed

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Sea States

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

3.3 RELIABILITY

Describe how the proposal would provide enhanced electricity reliability to Massachusetts, including its impact on transmission constraints.

The Project's injection of emission-free, reliable offshore wind power into the ISO-NE grid will enhance the overall reliability of the New England electricity system by enhancing resource adequacy, diversifying generator fuel mix, and reducing fuel risk. The Project will also support regional system security by adding generation capacity that is resilient to changes in market structures, complementing the generation profiles of distributed solar and onshore wind resource resources, injecting power in the transmission constrained Southeast Massachusetts (SEMA) load zone, and mitigating the risk of total power loss due to export cable failure.

Addressing Resource Adequacy

The retirement of coal, oil, and nuclear power generation facilities has increased the region's reliance on natural gas generating resources and strained the pipeline infrastructure that delivers fuel into the region. Heavy reliance on natural gas puts the reliability of the New England electricity system at risk, particularly in the winter months during extreme weather events. It also increases price volatility in wholesale markets and increases costs to ratepayers. In addition to the recent retirements of Brayton Point Power Station (Somerset, Massachusetts) in 2017 and Pilgrim Nuclear Power Station (Plymouth, Massachusetts) in 2019, ISO-NE estimates that another 5,000 MW of oil- and coal-fired generation capacity may be at risk of retirement in the coming years.²

The expected retirement of existing capacity further exacerbates the twin threats of limited fuel diversity and over-dependency on natural gas. In periods of extremely cold weather, natural gas supply constraints have led to shortages in the electricity sector and resulted in oil-fired generation becoming the price-setting fuel in the wholesale electricity market. Oil-fired generation is significantly more expensive and polluting than natural gas-fired generation.

A key benefit of offshore wind is that it does not require fuel to operate, thus, it is not vulnerable to supply constraints or delivery failures that can interrupt supply or create grid reliability issues. Furthermore, offshore wind produces the most power in the winter months. The Project will therefore deliver fixed price, low-cost energy at a high-capacity factor that directly mitigates the factors that drive power prices and pollution higher during these months. This will bolster the region's resource adequacy, protect ratepayers from electricity price spikes, and avoid emissions that result from oil-fired generation during extreme weather events.

² See: <https://www.iso-ne.com/about/what-we-do/in-depth/power-plant-retirements>

[REDACTED]

Resilient to Changes in Market Structures

[REDACTED]

Reducing the Risk of Power Loss

[REDACTED]

Favorable Generation Profile

The Project's production profile is positively correlated with the region's demand profile and will generate significant power in the winter months when natural gas is in high demand and the region's infrastructure is highly stressed. The Project's generation profile will also differ from that of distributed solar and onshore wind resources on a daily and seasonal basis, complementing these intermittent resources' contribution to a decarbonized electricity system.

Other Benefits to System Security

[REDACTED]

[REDACTED]

3.4 MODERATION OF SYSTEM PEAK LOAD

Describe how the proposal would contribute to moderating system peak load requirements and provide the following information:

- i. Estimated average output for each summer period (June – September) from 3:00 – 7:00 pm
- ii. Estimated average output for each winter period (October – May) from 4:00 – 9:00 pm

[REDACTED]

[REDACTED]

[REDACTED]

Estimated Average Output

[REDACTED]



SECTION 4

ENERGY RESOURCE AND DELIVERY PLAN

4.0 OVERVIEW

The Project's wind resource assessments are based on site-specific offshore wind data measured on location over a two-year period. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

4.1 ENERGY RESOURCE PLAN

For Eligible Facilities, the bidder is required to provide an energy resource plan and a production/delivery profile for its proposed project, including supporting documentation. The energy resource and profile information should be consistent with the type of technology/resource option proposed and the term proposed. Bidders should respond to all information requests which are relevant to the bid in a timely manner.

All Projects

Provide a summary of all collected wind data for the proposed site. Identify when and how (e.g. meteorological mast or LiDAR - for "Light Detection and Ranging") the data was collected and by whom.

Indicate where the data was collected and its proximity to the proposed facility site. Include an identification of the location and height for the anemometers and/or "range gate" heights for sensing by LiDAR that were used to arrive at an assessment of the site generation capability.

Describe any additional wind data collection efforts that are planned or ongoing.


Provide (a) at least one year of hourly wind resource data. Real Data collected from the site is preferred, though projected data is permissible. Methodology must also be included. And (b) a wind resource assessment report for the proposed facility from a qualified unaffiliated third-party wind resource assessment firm. Include an analysis of the available wind data which addresses the relationship between wind conditions and electrical output. Provide a projection of net annual energy production, including projections of average net hourly energy production, based on the wind resource data (hourly 8760 data profile and a 12 x 24 energy projection) at both P50 and P90 levels.

Provide a site-adjusted power curve. Each curve should list the elevation, temperature and air density used.

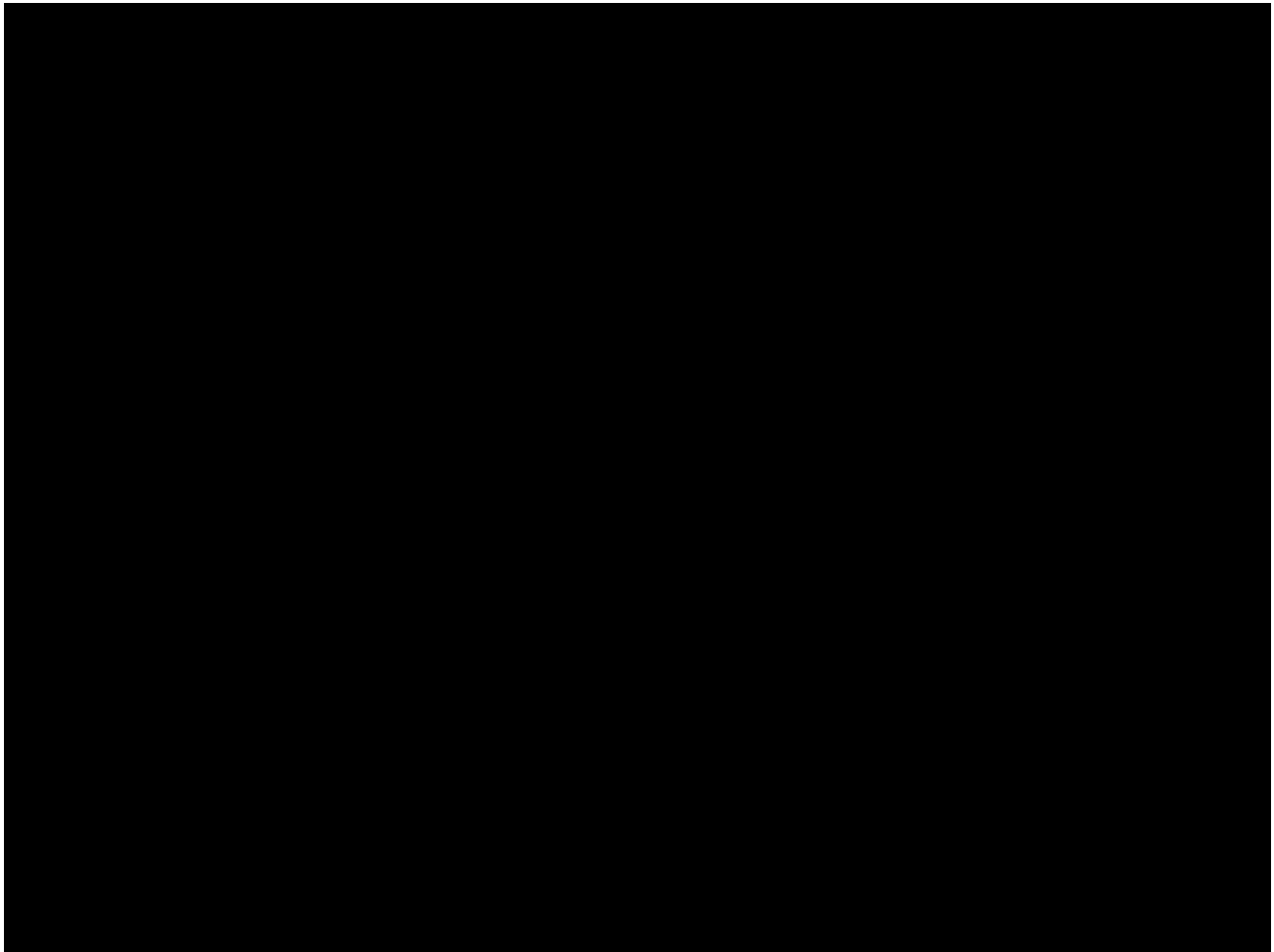
Identify the assumptions for losses in the calculation of projected annual energy production, including each element in the calculation of losses.

Wind Data



Figure 4.1-1 illustrates the measurement locations of the wind datasets used in our analyses as well as the study locations of the extensive wind assessments and production estimates carried for previous site characterization campaigns. The datasets are summarized in Table 4.1-1. 





The primary data sources and methods used in the wind resource and energy production estimates are the following:

[Redacted text block containing three bulleted items, each with multiple lines of redacted content.]

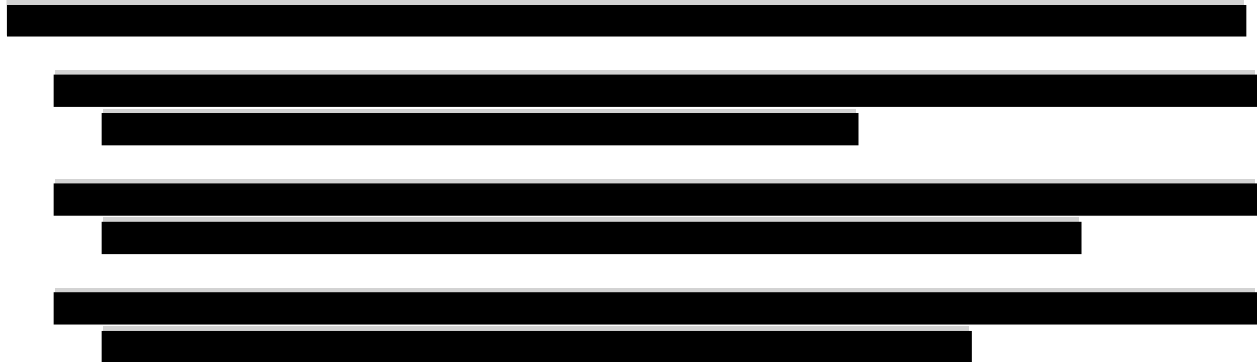
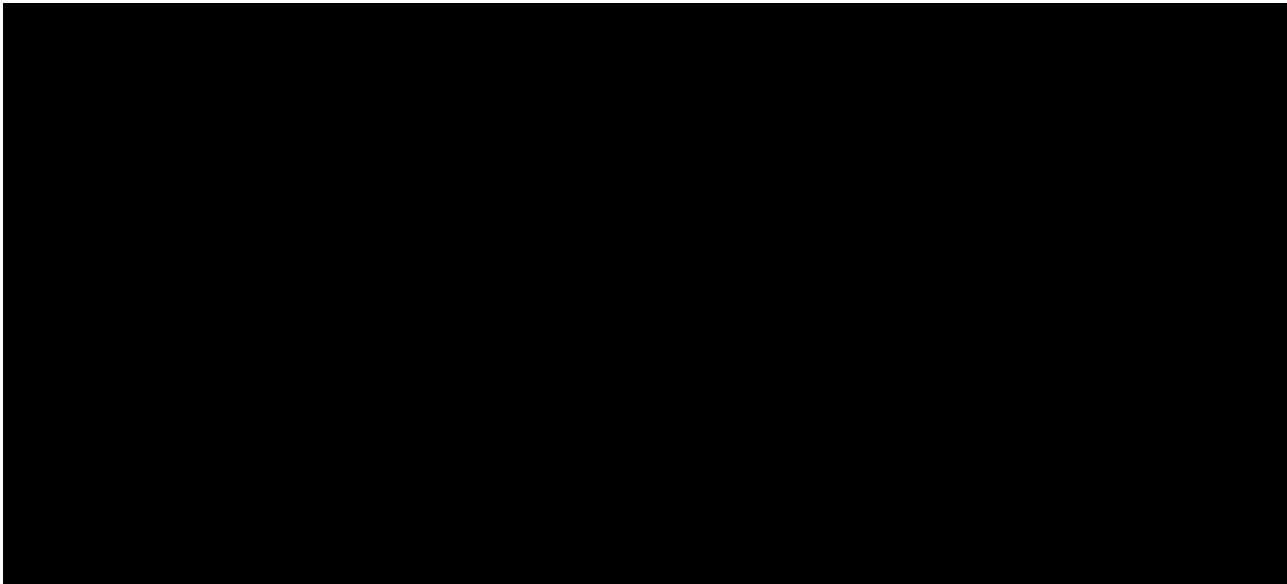
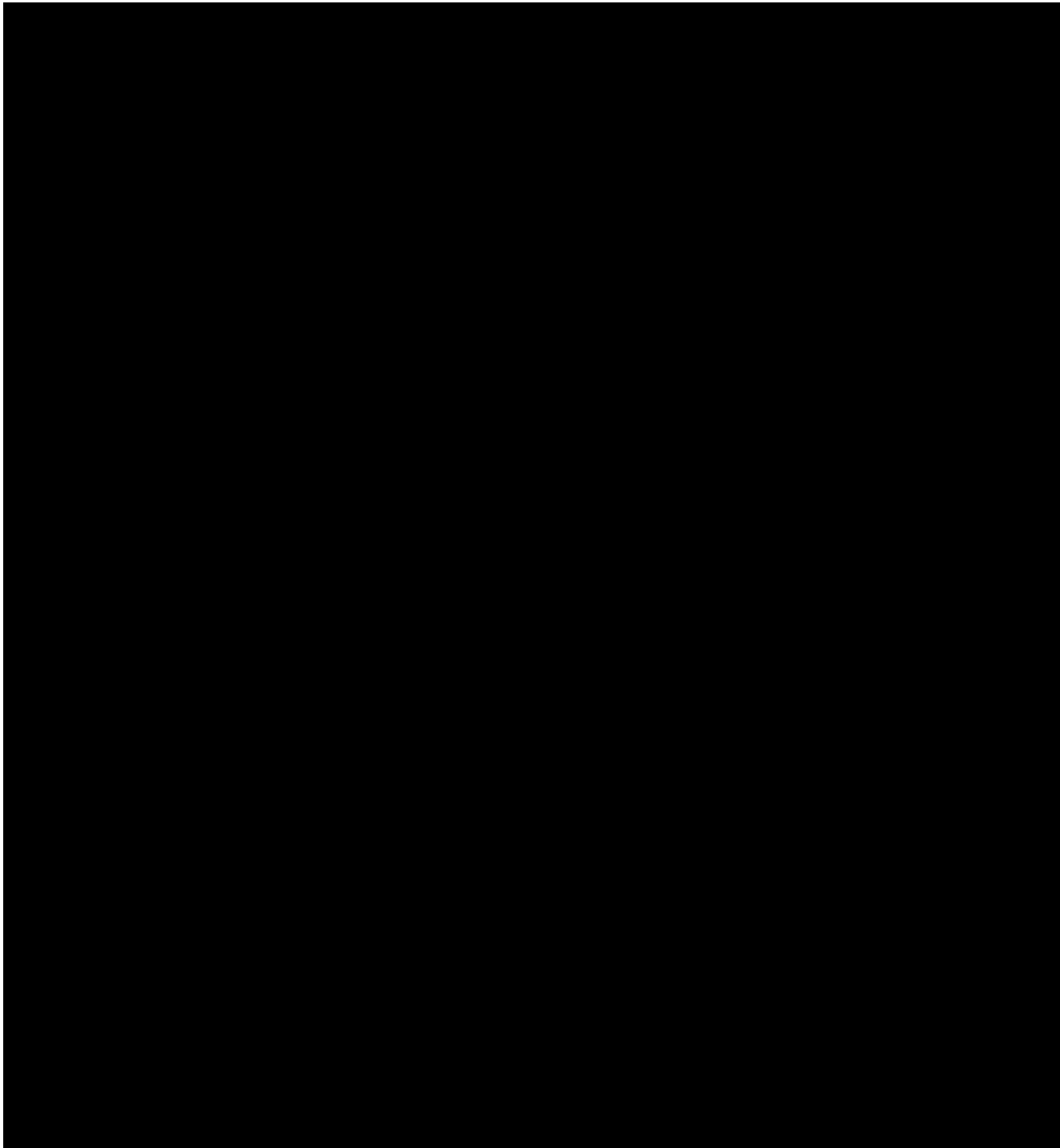


Figure 4.1-2 illustrates the time spans covered by each time series of measurement points from the locations shown in Figure 4.1-2.



Data Collection Summary

Information on the data collection points referenced above, including their proximity to the Offshore Wind Generation site, is provided in Table 4.1-1.



Wind Resource Assessment

[REDACTED]

Methodology

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Summary of Results

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Net Annual Energy Production

[REDACTED]

[REDACTED]

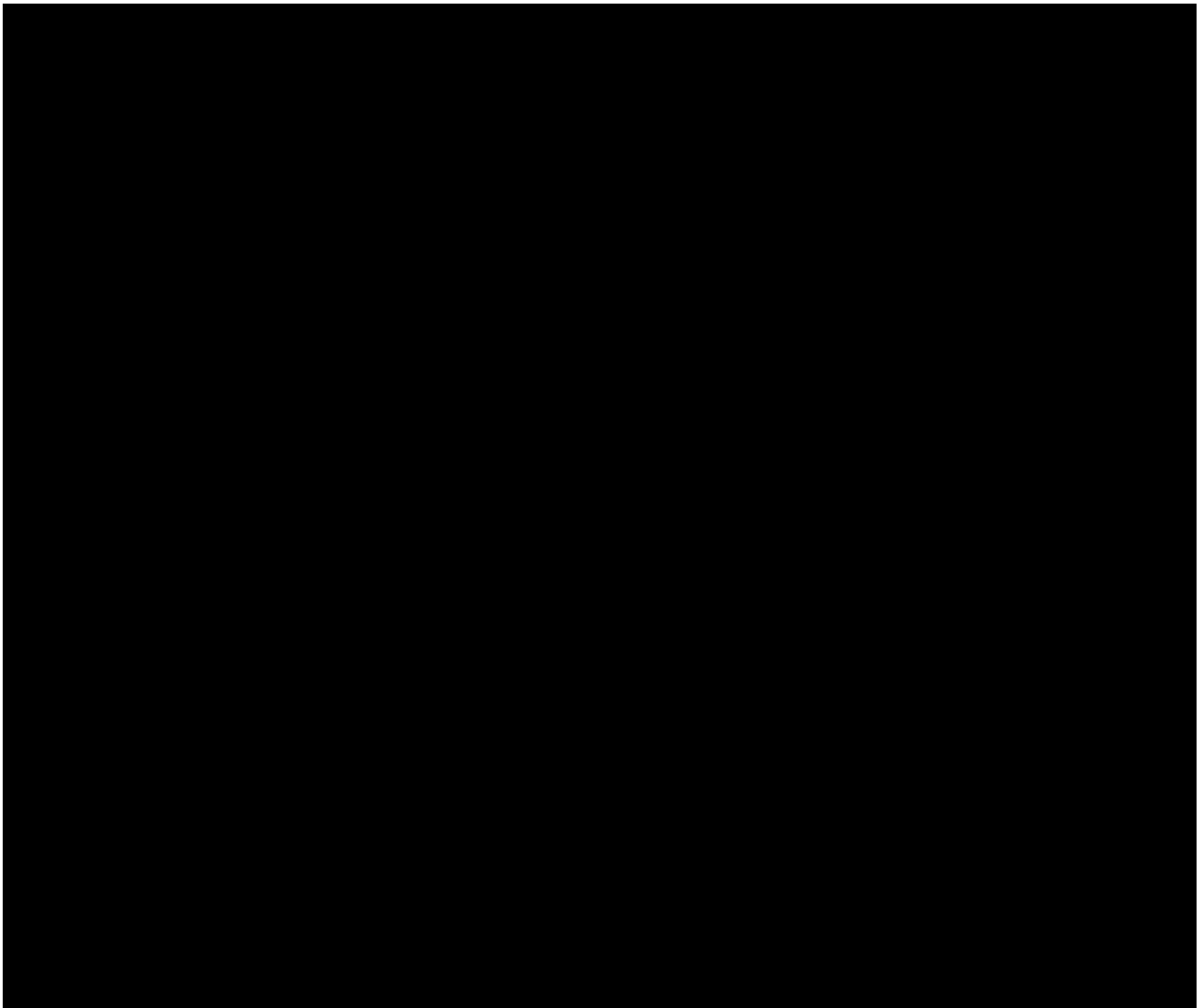
[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

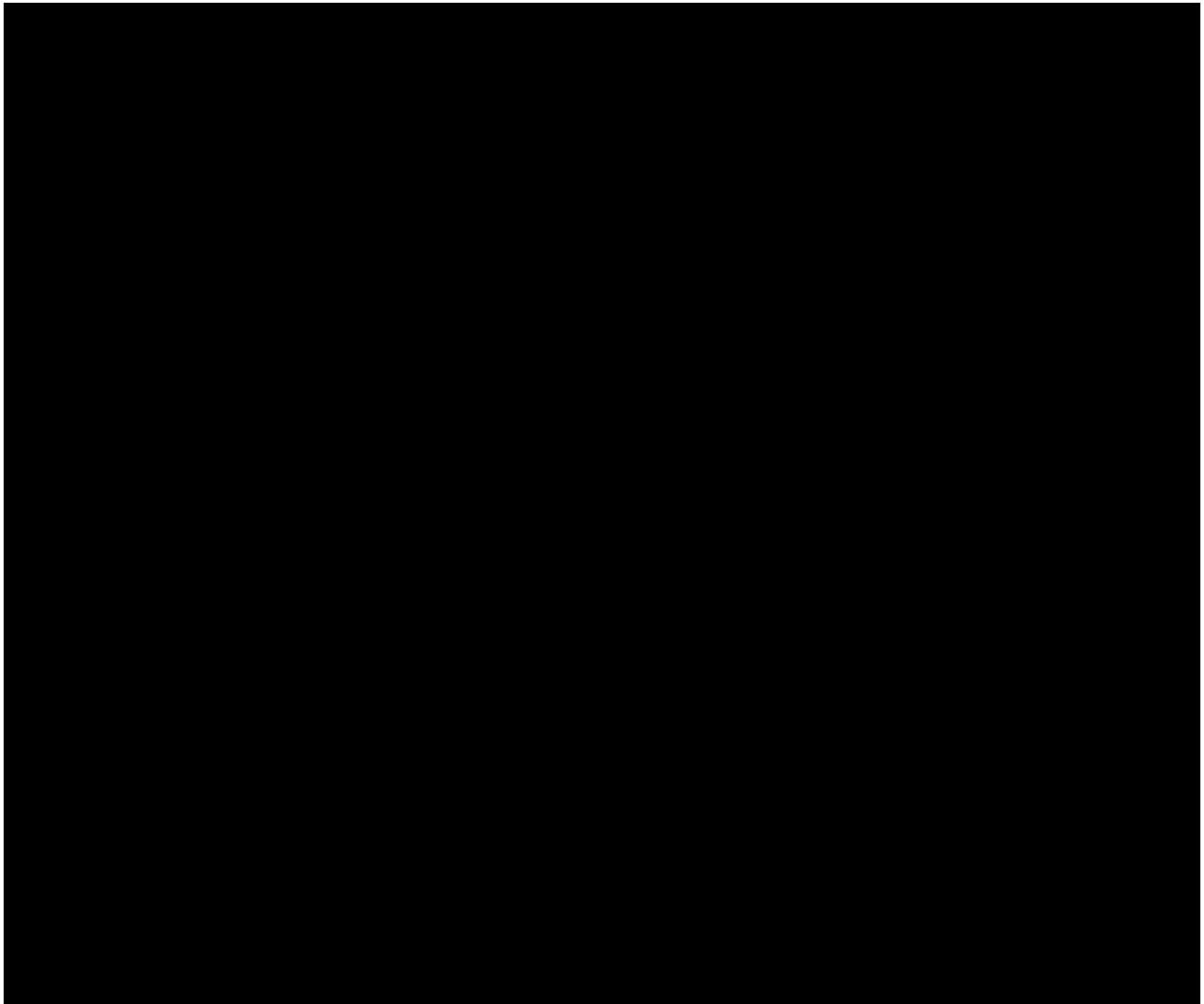
[REDACTED]



[REDACTED]

[REDACTED]

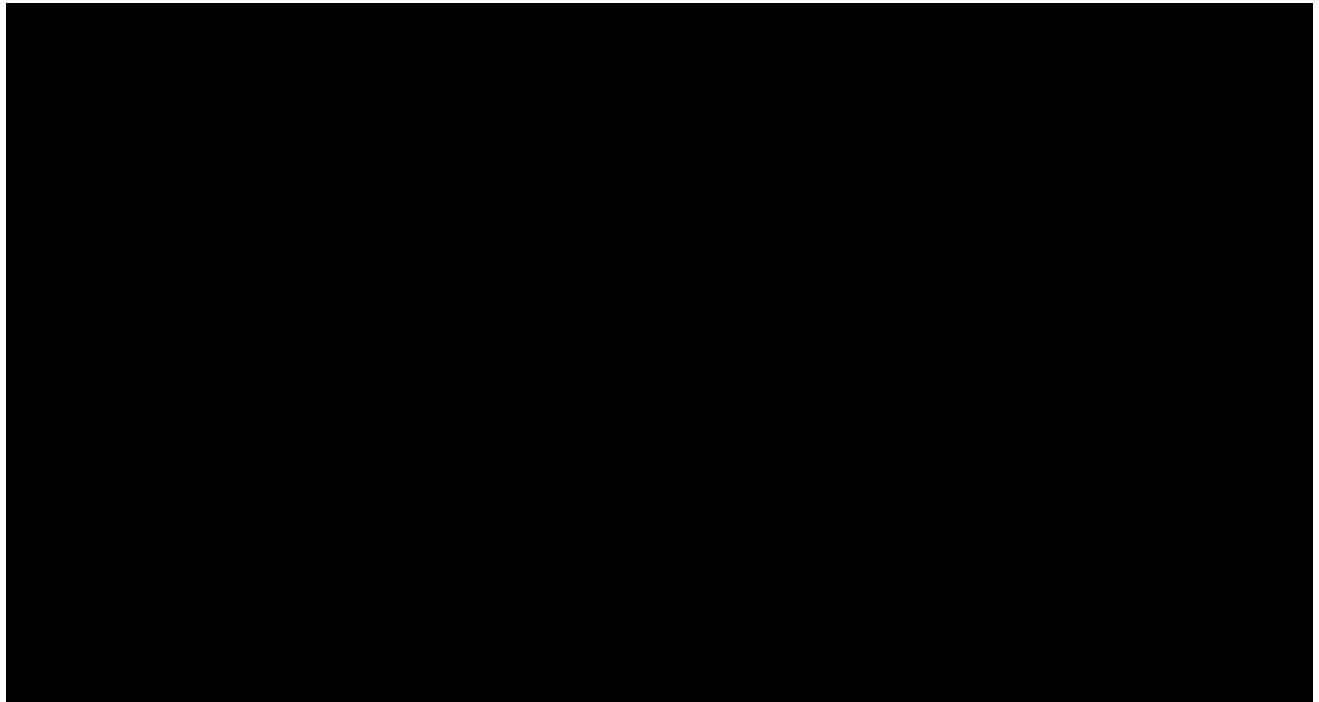
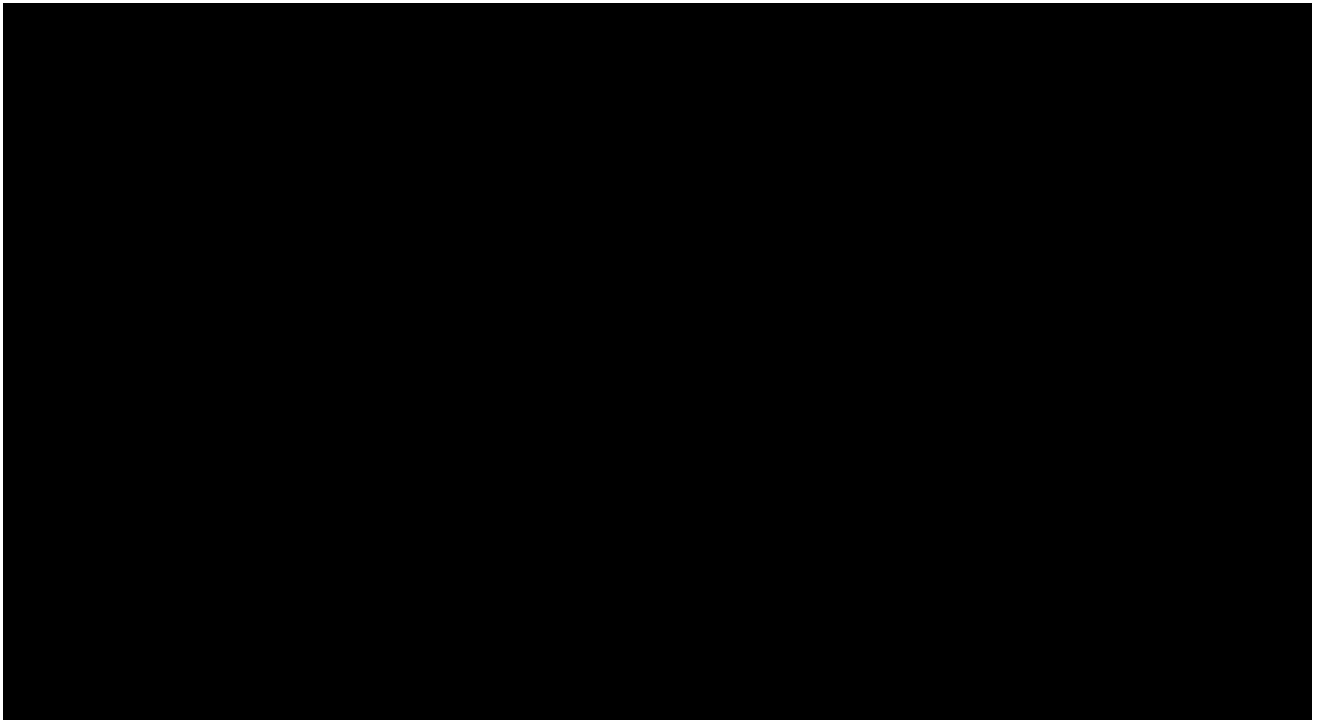
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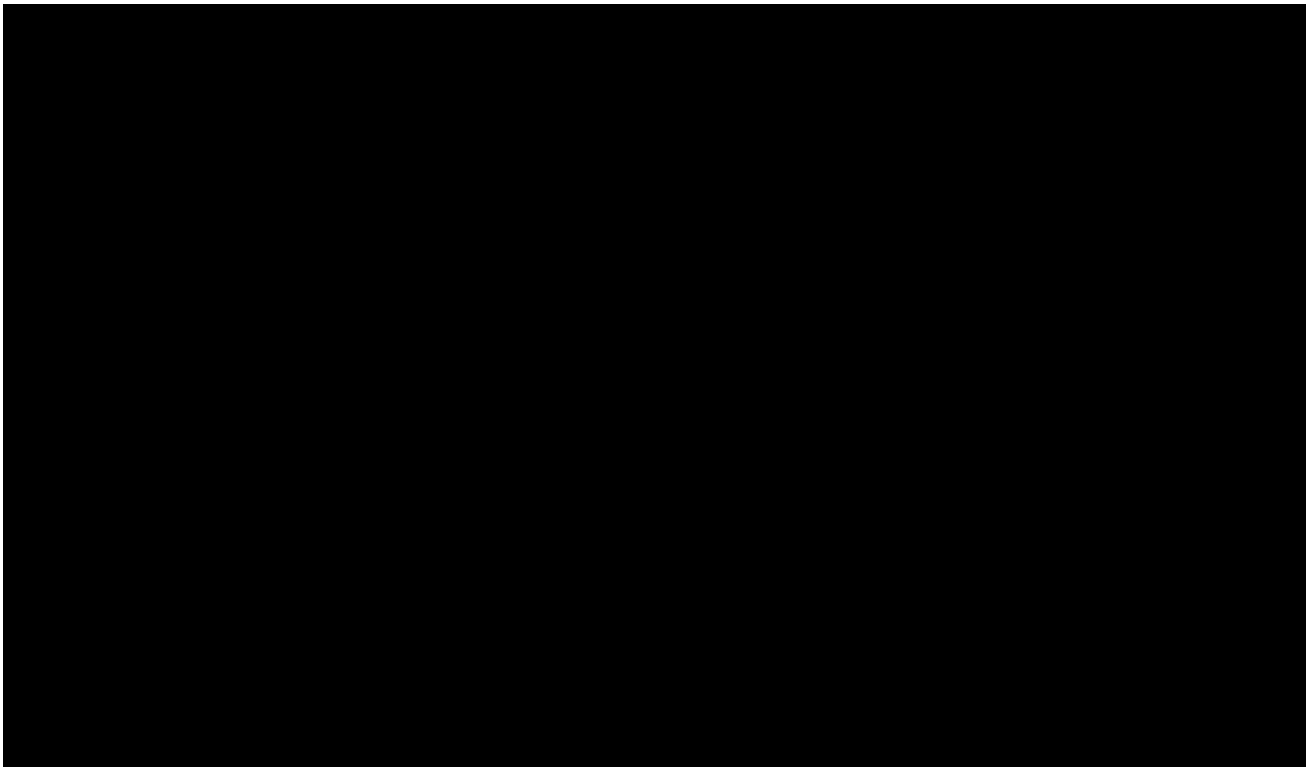
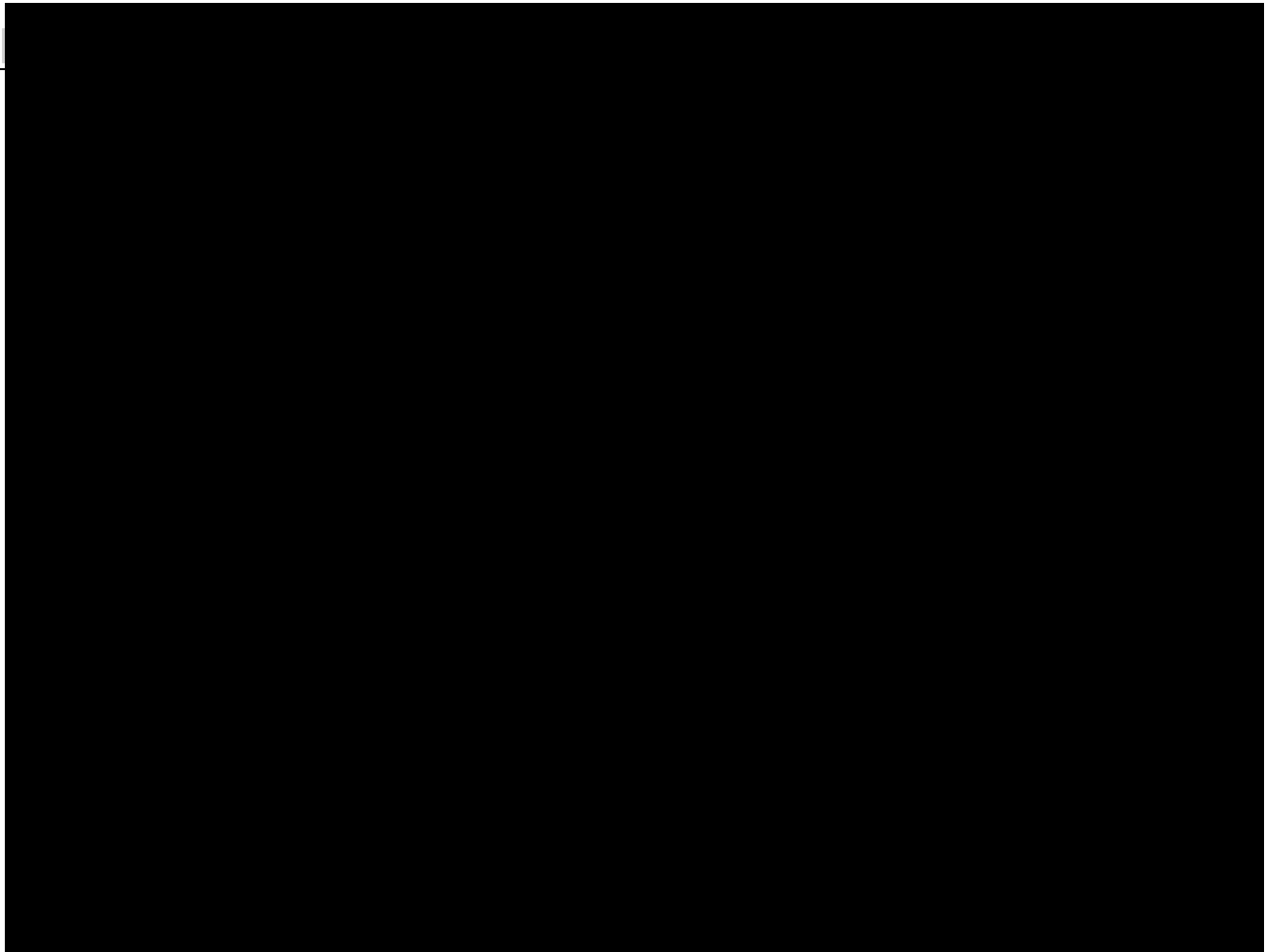


Power Curve

[REDACTED]

[REDACTED] The final power curve for the Project may differ, depending on the final WTG supplier and platform selected.





[REDACTED]

Loss Assumptions

[REDACTED]

These potential future losses for the Project were found to be acceptable, and the energy delivery plan has been shown to be robust via comparison to detailed engineering carried out on the Vineyard Wind 1 and Park City Wind projects. [REDACTED]

[REDACTED]

4.2 OFFSHORE WIND ENERGY GENERATION DELIVERY PLAN

Please provide an energy delivery plan and a production/delivery profile for the proposed project, including supporting documentation. The energy delivery plan and production/delivery profile must provide the expected Offshore Wind Energy Generation to be delivered into the ISO-NE market settlement system and permit the Evaluation Team to determine the reasonableness of the projections for purposes of Sections 2.2.1.3 Eligible Bids and 2.2.1.7 Capacity Requirements, and 2.2.1.8 Interconnection and Delivery Requirements of the RFP. Such information should be consistent with the energy resource plan and production/delivery profile provided above and also considering any and all constraints to delivery into ISO-NE.

[REDACTED]

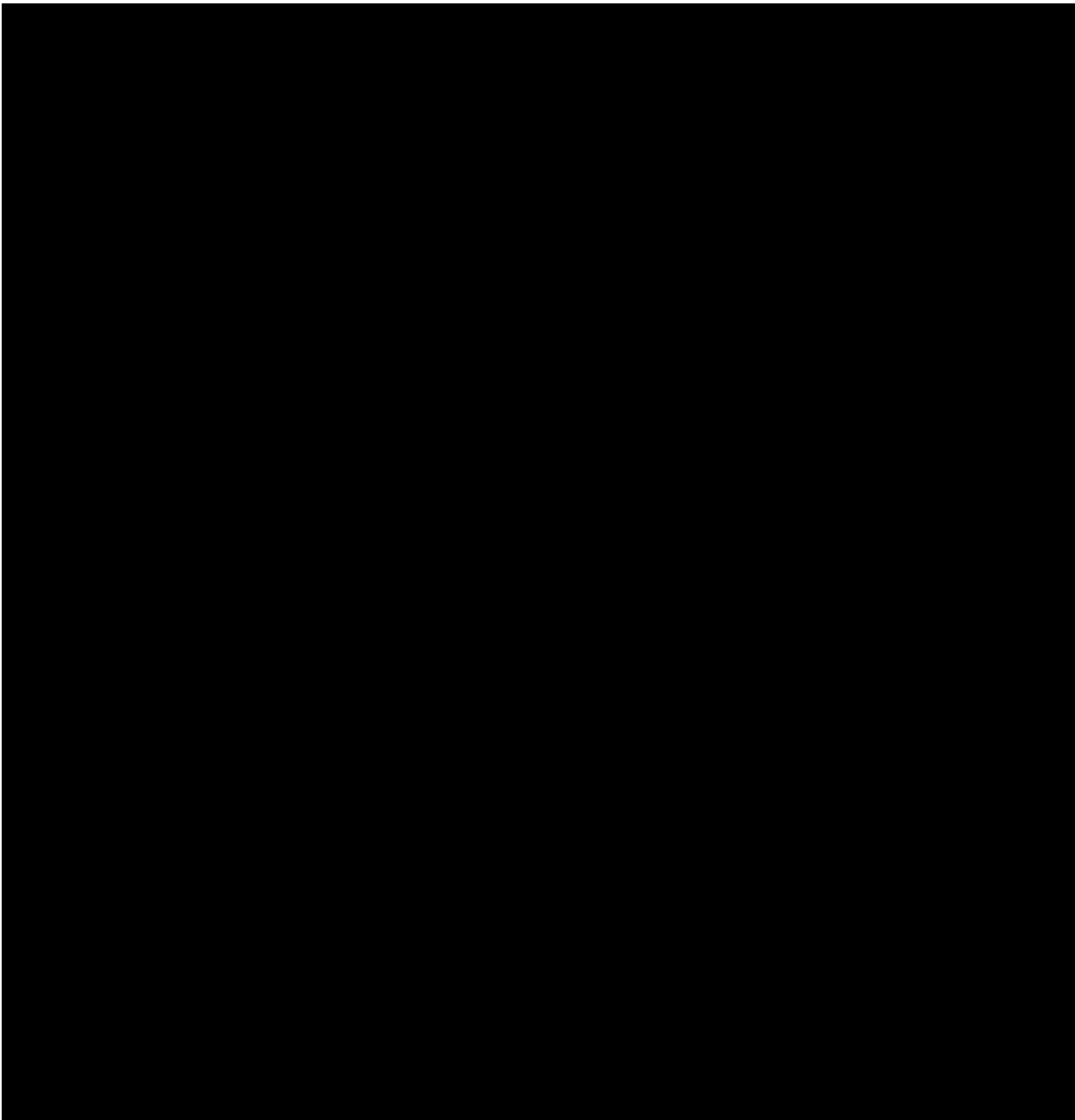
The Project's layout will continue to be refined and optimized throughout the development phase but maintain the overall 1 x 1 nautical mile spacing that Vineyard Wind has committed to for all our projects. [REDACTED]

[REDACTED]

[REDACTED]

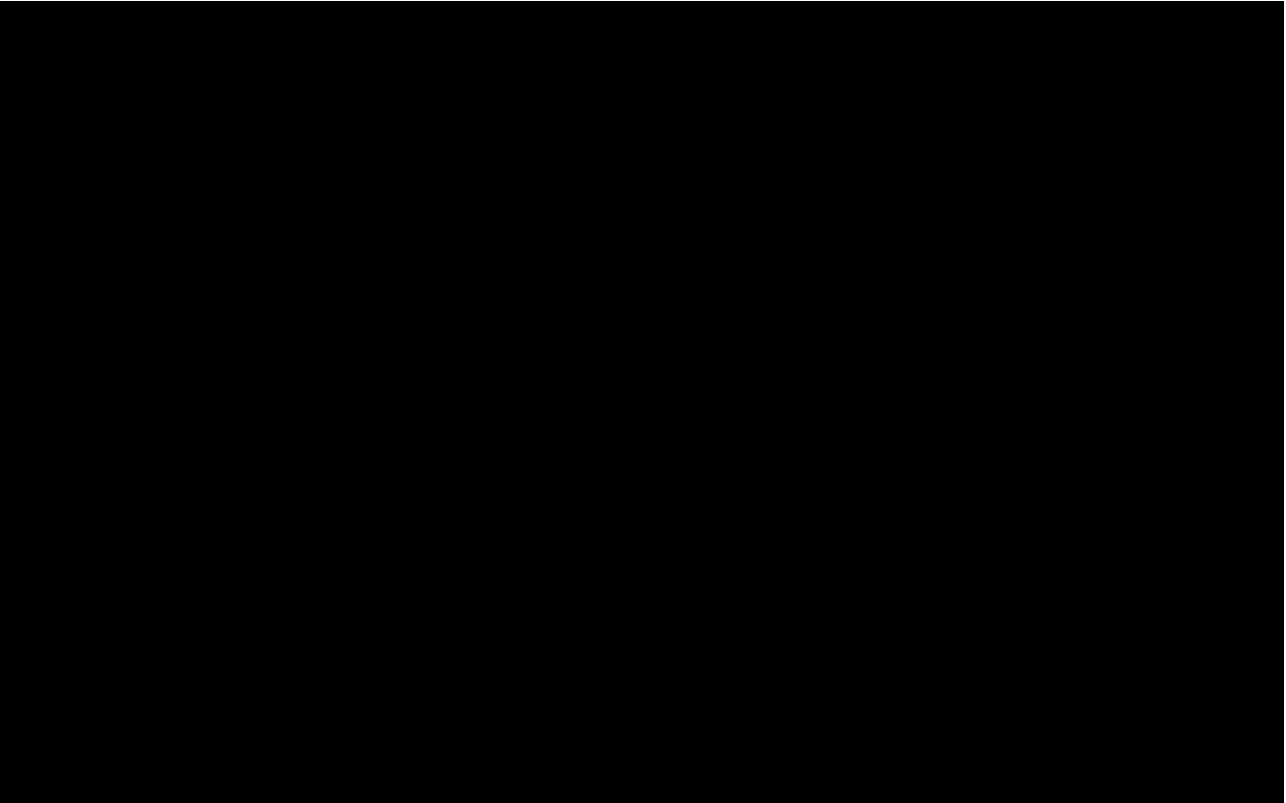
[REDACTED]

[REDACTED]



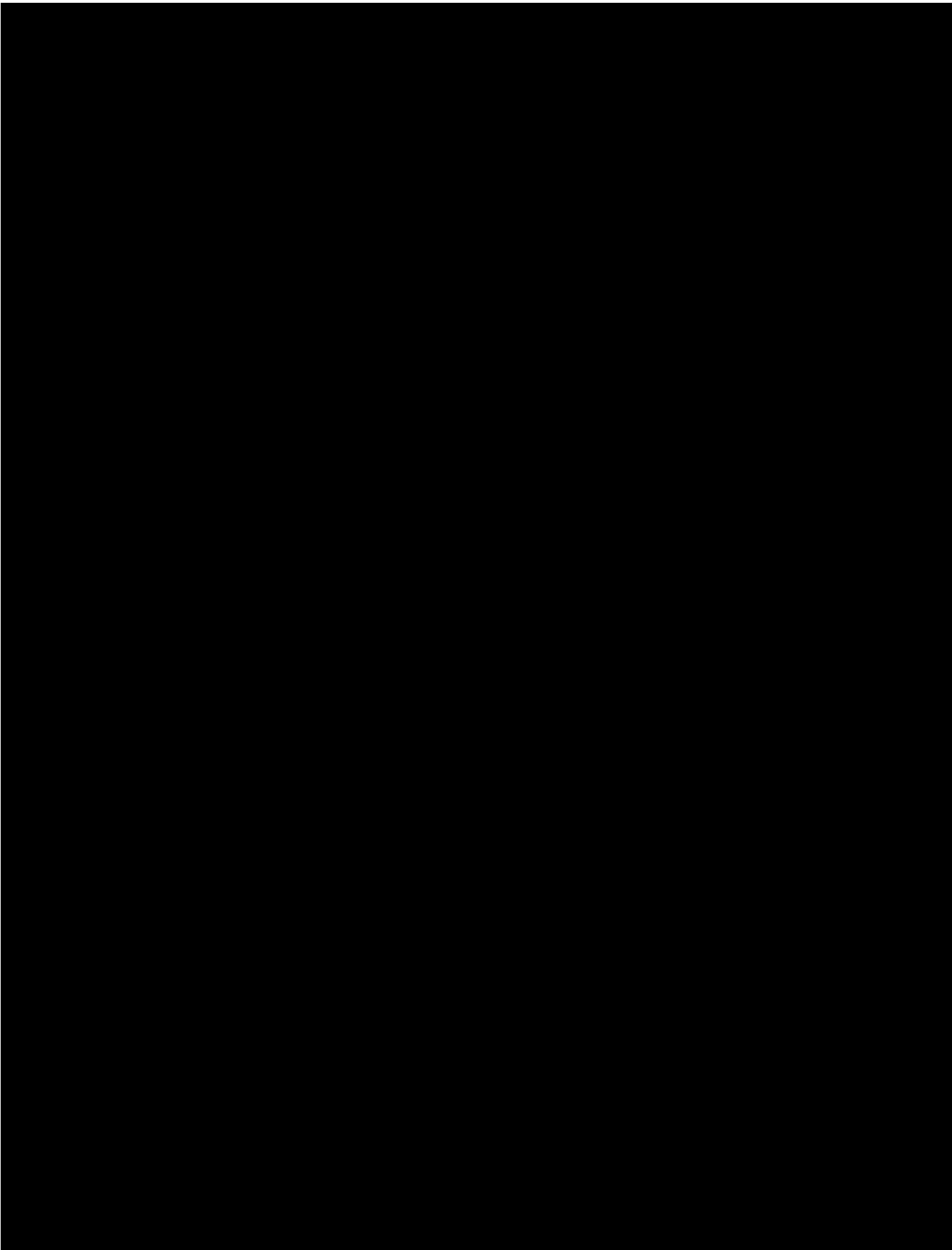
Energy Output and Generation Profile

Power and heating sector demand for natural gas is at its highest during this period, and constrained pipeline capacity often results in volatile and higher electricity prices. As the Project's production is greatest during this period, it has the potential to alleviate power sector demand for natural gas thereby reducing electricity price volatility and dramatic price spikes by delivering reliable, fixed price electricity to the grid.



[Redacted text block]

[Redacted text block]



As detailed in Section 6, Vineyard Wind has conducted extensive assessments of the interconnection requirements for the New England transmission system based on all the applicable standards established by the North American Electric Reliability Council, Northeast Power Coordinating Council, and ISO-NE. The results of Vineyard Wind's preliminary investigation indicate that upon completion of the requisite studies by ISO-NE, the Project will meet both the Network Capability Interconnect Standards (NCIS) and the Capacity Capability Interconnection Standards (CCIS) as established by ISO-NE.

At the start of commercial operation, the Project will deliver energy within the terms of any approved power purchase agreements (PPAs) and consistent with ISO-NE rules and procedures.

Forward Capacity Market

[REDACTED]

[REDACTED]

These projections are based on the detailed analyses of the long-term wind resource in Lease Area OCS-A 0534, as already described in Section 4.1, and the operating characteristics of the WTGs under consideration for the Project. [REDACTED]

[REDACTED]

[REDACTED] Finally, as described in Section 4.1, Vineyard Wind has documented the estimated annual energy production in yield assessment reports (see Attachments 4.1-5 and 4.1-6).

4.3 REC/ENVIRONMENTAL ATTRIBUTE DELIVERY PLAN

Please provide documentation and information demonstrating that the project will Deliver GIS Certificates representing those RECs and any other Environmental Attributes, as applicable. Please describe whether transfer of all GIS Certificates is authorized under the current ISO-NE GIS rules and protocols, or if a rule or protocol change is required. To the extent such change is required, please provide details regarding the proposal and the process for implementing the change.

The Project is a new offshore wind generation resource located within the ISO-NE Control Area that will begin operating after December 31, 1997 and generate electricity using wind energy as its fuel source. The Project will therefore qualify as a "New Class I Renewable Portfolio Standard Eligible Resource" as defined under M.G.L. c. 25A § 11F and 225 C.M.R. 14.00. Vineyard Wind will provide documentation demonstrating such qualification at the appropriate time as per the regulations.

Confirmation of Vineyard Wind's NEPOOL membership is provided as Attachment 4.3-1. Additional documentation can be provided upon request following Vineyard Wind's inclusion in the SMS.

Vineyard Wind hereby certifies that it will utilize the NEPOOL GIS as the appropriate tracking system to ensure a unit-specific accounting of the delivery of unit-specific and unit contingent energy and RECs. Vineyard Wind is prepared to take commercially reasonable measures to ensure that no other load-serving entity, province, state, or commonwealth will claim or count the environmental attributes of energy generated by the Project, except only to the extent those entities have a legitimate claim to title and take delivery of NEPOOL GIS RECs associated with the energy generated by the Project.

4.4 ENERGY STORAGE SYSTEM OPERATIONS

PROJECT SUMMARY: Please provide the following:

Identify if New or Existing Facility, or an upgrade to Existing Facility: ____

Technology Type

Point of Interconnection

Deliverability Restrictions (if any)

Nameplate MW AC (at 100% project completion)

Net Contract MW AC (at 100% project completion)

Storage Energy (MWh)

Discharge Duration (hours)

Full Duty Cycle Efficiency (%)

Required Cycles per year/per day

Expected annual capacity degradation (%)

Specific Battery Chemistry (if applicable)

Describe the operation of the proposed Energy Storage System: (i.e. run hour limitations, ramp rates, spinning reserves, regulation up, regulation down). Please provide proposed operational management terms that memorialize the operational commitments of the facility.

Describe the location of the Energy Storage System, the anticipated interconnection point, and the value of the relative proximity of the system to the Offshore Wind Energy Generation facility, including any decreased risk of curtailment and/or deferred investment for the Offshore Wind Energy Generation Facility

Describe the proposed technology and equipment manufacturer by name and model (include inverter characteristics if applicable).

Describe the viability and operational reliability of the proposed technology and track record of the manufacturer. Provide examples of similar applications of the same size and scope.

Please provide an energy delivery plan and production/delivery profile for the proposed project, including supporting documentation. This documentation may be either an hourly storage use schedule separately from the hourly wind production/delivery schedule, or the following parameters of the storage technology that will be used in conjunction with the bid: Charge rate (MW), Discharge rate (MW), Storage capacity (MWh), Round-trip efficiency (%). The energy production/delivery profile must provide the expected Offshore Wind Energy Generation to be delivered into the ISO-NE market settlement system by the Energy Storage System and permit the Evaluation Team to determine the reasonableness of your projections. Such information should be consistent with the energy resource plan provided above and also considering any and all constraints to physical delivery into ISO-NE.

Describe the operation of the Energy Storage System as it relates to ISO-NE's implementation of FERC Order No. 841, including whether the proposed Energy Storage System will be

classified as a Binary Storage Facility or Continuous Storage Facility, the designation of the ISO-NE Markets that the Energy Storage System would participate in, and the plan to operate in multiple ISO-NE Markets.

Please list all anticipated revenue streams associated with the Energy Storage System

For existing facilities,

- describe existing operations, revenues, and participation in ISO-NE Markets
- describe any planned changes in operation, participation in ISO-NE Markets, and revenue streams

Please describe (a) (i) the specific services and/or products that will be provided to the Distribution Companies due to the proposed operation of the Energy Storage System under your proposal and (ii) the specific costs to be paid by the Distribution Companies through the power purchase agreement for such services and/or products and (b) a statement of how the proposal complies with RFP requirements.

Please describe any additional benefits the Energy Storage System may provide not captured in the benefits provided through the operational commitments, including but not limited to,

- any non-monetizable benefits including but not limited to price changes in capacity and ancillary services markets, reduction in future market needs such as reserves or ramping, and increased capacity rating for Offshore Wind Energy Generation facility
- emission reductions associated with the operation of the Energy Storage System and providing emission-free resources to the ancillary service markets including reserves and frequency regulation
- value of procuring the Energy Storage System at the same time and as paired with the Offshore Wind Energy Generation facility

SECTION 5

FINANCIAL/LEGAL

5.0 OVERVIEW

The financing plan provided herein demonstrates the financial viability of the Project, which is being developed by Vineyard Wind LLC (Vineyard Wind). The plan is supported by our unrivaled experience as the only offshore wind developer to successfully implement a financing plan for a commercial-scale offshore wind project in the US [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Vineyard Wind is owned by two funds managed by Copenhagen Infrastructure Partners P/S (CIP) and Avangrid Renewables LLC (Avangrid Renewables)—together referred to as the “Shareholder Companies.” The Shareholder Companies are contributing their financial strength and acumen to ensure financing success for the Project. CIP, for example, recently held final close on its ~\$8.25 billion (EUR 7 billion) global greenfield renewables energy fund, CI IV, one year after the start of fundraising. Additionally, Avangrid Renewables and affiliates have concluded more than \$10 billion in project financing over the past 15 years. Along with their affiliates, the Shareholder Companies have a successful track record developing, financing, constructing, or operating almost 20,000 megawatts (MW) of capacity in Australia, Europe, Southeast Asia, and the US. This includes experience with projects of similar magnitude, complexity, and scale as the Project. Each Shareholder Company independently has the experience and financial capability necessary to develop, construct, and operate offshore wind projects of this scale.

The Shareholder Companies are supporting the Project’s pre-construction phase through equity investments, which either Shareholder Company could sustain independently. Similar to the financing process for Vineyard Wind 1, Vineyard Wind and the Shareholder Companies will leverage their experience and strong financial resources to secure a financing package for the Project that provides a low cost of capital.

[REDACTED]

[REDACTED]

5.1 LONG-TERM CONTRACTS FOR FINANCING

Please submit information and documentation that demonstrates that long term contracts resulting from this RFP Process would either permit the bidder to finance its proposal that would otherwise not be financeable, or assist the bidder in obtaining financing of its proposal.

[REDACTED]

[REDACTED]

Pursuant to Section 83C of the Green Communities Act as amended by Chapter 188 of the Acts of 2016, *An Act to Promote Energy Diversity*, and pursuant to Section 21(a) of chapter 227 of the acts of 2018, the long-term funding provided by the PPAs would be sufficient for the Project to be a creditworthy counterparty, which is a necessary pre-condition to pursue financing for the Project.

5.2 BUSINESS ENTITY STRUCTURE

Please provide a description of the business entity structure of the bidder's organization from a financial and legal perspective, including all general and limited partners, officers, directors, managers, members and shareholders, involvement of any subsidiaries supporting the project, and the providers of equity and debt during project development. Provide an organization chart showing the relationship between the equity and debt participants and an explanation of the relationships. For jointly owned facilities, identify all owners and their respective interests, and document the Bidder's right to submit a binding proposal.

Vineyard Wind LLC, a Delaware limited liability company registered in Massachusetts, was established in 2009 and is a 50/50 joint venture of CIP (through two investment funds: CI II and CI III) and Avangrid Renewables, a subsidiary of Avangrid Inc. (Avangrid; see Figure 5.2-1). Avangrid is 81.5% owned by Iberdrola S.A. (Iberdrola), a corporation organized under the laws of the Kingdom of Spain. The remaining outstanding shares of Avangrid are publicly traded on the New York Stock Exchange (NYSE).



[REDACTED]

[REDACTED]

Vineyard Wind LLC

Vineyard Wind's team of US and European industry experts has a long track record of developing offshore and onshore wind projects across the globe. This is complemented by experienced personnel provided by the Shareholder Companies; local staff with expertise in US offshore wind, permitting, and local infrastructure; and expert consultants that ensure a well-rounded team with the skillset required to develop and operate offshore wind projects.

Vineyard Wind's corporate structure allows the company to draw heavily on the Shareholder Companies' and affiliates' resources and experience developing, permitting, financing, constructing, and/or operating almost 20,000 MW of offshore wind capacity across 35 projects in the US, Europe, Australia, and Southeast Asia. The Shareholder Companies and/or affiliates also have global experience with offshore wind projects of similar size, distance from shore, and/or water depth as the Project. Furthermore, the technology that will be used for the Project is similar to that of Vineyard Wind 1 and Park City Wind and follows a similar design as offshore wind projects developed, constructed, and operated by the Shareholder Companies globally.

Vineyard Wind Key Personnel

[REDACTED]
[REDACTED] Our senior management team is based in the US and the full resources of the Shareholder Companies are available to support them in successfully executing the Project. [REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]

¹ One full-time equivalent job is the equivalent of one person working full time for one year (2,080 hours). Thus, two half-time employees would equal one full-time equivalent.



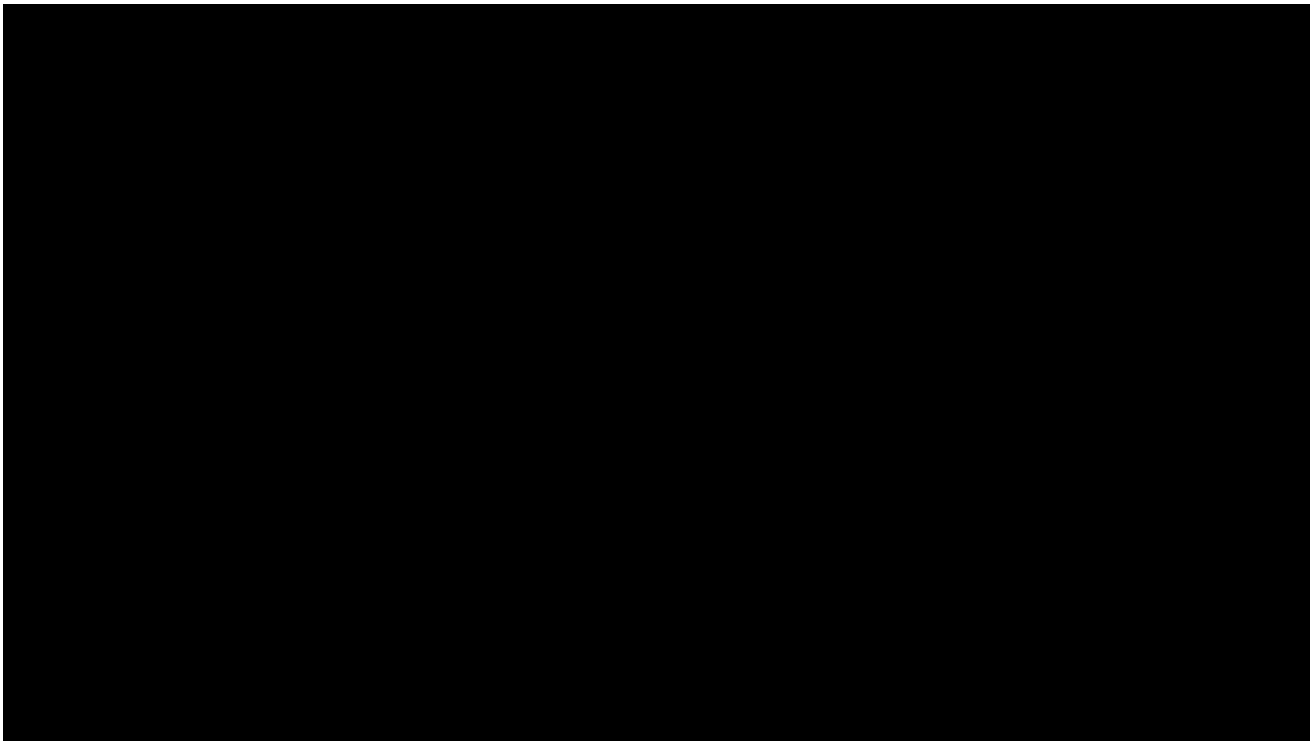
Shareholder Companies

Copenhagen Infrastructure Partners

CIP is a fund management company focused on energy infrastructure including offshore wind, onshore wind, solar photovoltaics (PV), biomass and energy from waste, transmission and distribution, reserve capacity and storage, and other energy assets like Power-to-X. CIP manages eight funds and has approximately \$19 billion (EUR 16 billion) under management. CIP was founded in 2012 by senior executives from the energy industry in cooperation with PensionDanmark and, as of today, has ~200 employees and offices in Copenhagen, Hamburg, New York, Tokyo, Utrecht, and London. CIP holds a 50% equity interest in Vineyard Wind through the funds CI II and CI III. Figure 5.2-3 illustrates CIP's business entity structure and respective interests in Vineyard Wind.

CI II has established a specific investment structure for Vineyard Wind in the form of alternative investment vehicles (AIVs) consisting of Alice CIV II Inc., CI Alice II Inc., and Offshore Wind LLC. This structure has been implemented to accommodate requirements of the limited partners (i.e., the investors) in Copenhagen Infrastructure II K/S. The interests of the three entities are bundled in the holding company CI II Alice Holding LLC, which has a 25% ownership interest in Vineyard Wind.

CI III has established a similar structure in the form of AIVs consisting of CI III CIV Inc., CI III Alice Non-QFPF Inc., and CI III Alice QFPF LLC. This structure has also been implemented to accommodate requirements of the limited partners in Copenhagen Infrastructure III K/S. The interest of the three entities is bundled in the holding company CI III Alice Holding LLC, which has a 25% ownership interest in Vineyard Wind.



Avangrid Renewables

Avangrid Renewables is the third largest developer of onshore wind projects in the US and strives to lead the transformation to a sustainable, competitive, and clean energy future. The company has more than 8,300 MW of owned and controlled wind and solar generation across 24 states. [REDACTED]

[REDACTED] Avangrid Renewables is a subsidiary of Avangrid Inc (Avangrid) and part of Iberdrola. Figure 5.2-4 illustrates Avangrid Renewables' corporate structure, in addition to the affiliates who will support Avangrid Renewables in the development and construction of the Project.

Avangrid is a leading sustainable energy company with approximately \$38 billion in assets and operations across the US concentrated in two primary lines of business: Avangrid Renewables and Avangrid Networks. 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 US public companies.

5.3 FINANCING PLAN

Please provide a description of the financing plan for the project, including construction and term financing. The financing plan should address the following:

- i. Who will finance the project (or are being considered to finance the project) and the related financing mechanisms or mechanisms that will be used (i.e. convertible debenture, equity or other) including repayment schedules and conversion features.
- ii. The project's existing initial financial structure and projected financial structure
- iii. Expected sources of debt and equity financing
- iv. Estimated construction costs
- v. The projected capital structure
- vi. Describe any agreements, both pre and post commercial operation date, entered into with respect to equity ownership in the proposed project and any other financing arrangement.

In addition, the financing plan should address the status of the above activities as well as the financing of development and permitting costs. All bidders are required to provide this information.

[REDACTED]

Project Financing

[REDACTED]

Financial Structure

[REDACTED]

Debt and Equity Financing

Vineyard Wind and the Shareholder Companies will work together to apply their substantial financing experience and knowledge to organize a financing package that provides a low cost of capital. [REDACTED]

[REDACTED]

Estimated Construction Costs

Projected Capital Structure

In project finance, capital structure is typically expressed in terms of a coverage ratio called debt-service coverage ratio (DSCR) rather than in terms of leverage ratio (i.e., debt-to-capital). DSCR is defined as cash flow available for debt service divided by interest plus principal payments. The amortizing loans are sculpted based on a forecast of project cash flows to provide a stable DSCR over the life of the loans. A project typically targets a DSCR that corresponds to a particular credit rating. The Shareholder Companies intend to target a DSCR that corresponds to an investment grade (BBB- or better) rating.

Agreements

5.4 FINANCING EXPERIENCE

Provide documentation illustrating the experience of the bidder in securing financing for projects of similar size and technology. For each project previously financed provide the following information:

- i. Project name and location
- ii. Project type and size
- iii. Date of construction and permanent financing
- iv. Form of debt and equity financing
- v. Current status of the project

Vineyard Wind

Vineyard Wind 1

[REDACTED]

[REDACTED]

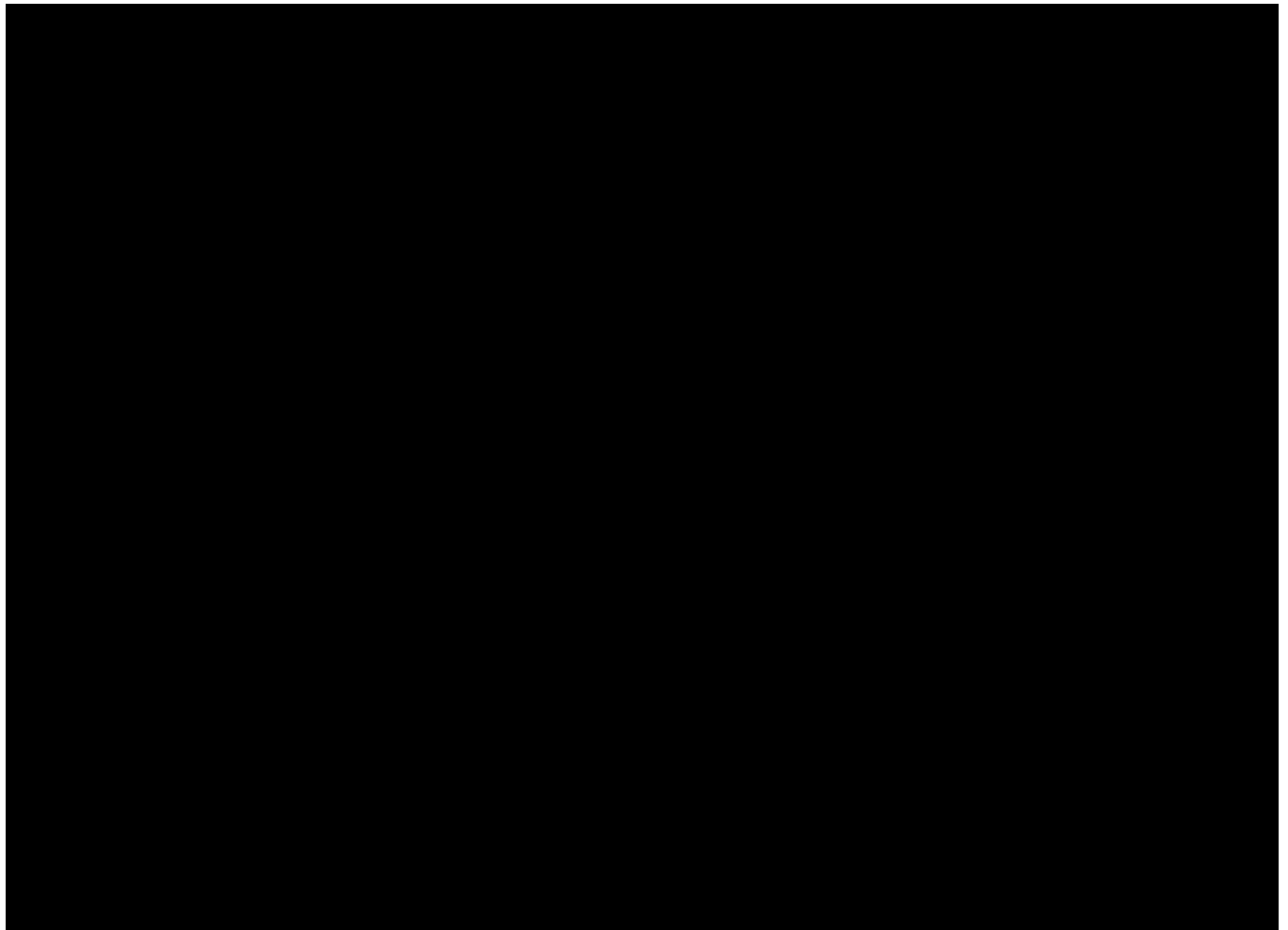
[REDACTED]

Park City Wind

[REDACTED]

Copenhagen Infrastructure Partners

CIP has a unique combination of hands-on experience and execution skills covering all aspects of energy infrastructure investments from sourcing, structuring, financing, and negotiations to project development, construction, and operations management, as well as general management. CIP has extensive financing experience, having financed over a dozen offshore and onshore wind, solar, and biomass projects, as well as other energy investments. Figure 5.4-1 provides a list of selected projects financed by way of CIP-managed funds that are either operating or under construction.



Avangrid Renewables

Avangrid Renewables' wind and solar PV projects are unencumbered by external debt, having been funded by a combination of equity contributions and intercompany debt from Avangrid. A selection of onshore wind projects successfully financed by Avangrid Renewables in Massachusetts, New York, New Hampshire, and Vermont are provided in Table 5.4-1. A full description of Avangrid Renewables' current onshore wind, offshore wind, and onshore transmission projects is provided in Section 12.

Table 5.4-1 Avangrid Renewables' Onshore Wind Projects in the Northeast

Project	Capacity (MW)	Date of Construction and Permanent Financing	Form of Debt and Equity Financing
Hoosac Massachusetts	29		
Maple Ridge I & Ia¹ New York	231		
Maple Ridge II¹ New York	90.8		
Hardscrabble New York	74		
Roaring Brook New York	62		
Lempster New Hampshire	24		
Groton New Hampshire	48		
Deerfield Vermont	30		

Note:

1. This is a 50/50 joint venture between Avangrid Renewables and EDP Renewables North America.

Avangrid Renewables' Affiliates

Iberdrola

Avangrid Renewables' ultimate shareholder company, Iberdrola, has committed more than \$8 billion for the construction of offshore wind projects in Europe. Table 5.4-2 lists selected Iberdrola offshore wind projects that are either operating or under construction.

Table 5.4-2 Iberdrola Offshore Wind Projects

Project	Capacity (MW)	Date of Construction and Permanent Financing	Form of Debt and Equity Financing
West of Duddon Sands¹ United Kingdom	389	[REDACTED]	[REDACTED]
Wikinger Germany	350	[REDACTED]	[REDACTED]
East Anglia ONE² United Kingdom	714	[REDACTED]	[REDACTED]

Notes:

1. Developed and constructed in a 50/50 joint venture equal to 389 MW and full ownership of 194 MW.
2. Minority stake (40%) sold to Green Investment Group (GIG, Macquarie Group) in August 2019.

5.5 FINANCIAL RESOURCES AND STRENGTH

Please provide evidence that the bidder has the financial resources and financial strength to complete and operate the project as planned.

[REDACTED]

Copenhagen Infrastructure Partners

As already noted, CIP is a fund management company focused on energy infrastructure including offshore wind, onshore wind, solar PV, biomass and energy-from-waste, transmission and distribution, reserve capacity and storage, and other energy assets like Power-to-X. CIP manages eight funds and has approximately \$19 billion (EUR 16 billion) under management. PensionDanmark was the founding and sole investor in CI I and CI A I.

[REDACTED]

Avangrid Renewables

Avangrid Renewables is supported by Avangrid, a public company with an equity market capitalization of approximately \$15 billion. Avangrid can raise equity capital from its majority owner, Iberdrola, or US public equity markets. Avangrid also has access to investment-grade debt capital markets and, in April 2020, raised \$750 million through the issuance of a 10-year green bond. In addition, Avangrid's utilities access the debt capital markets directly and have approximately \$5.7 billion of long-term debt outstanding. The company also has a committed \$2.5 billion revolving AVANGRID Credit Facility, a \$500 million revolving credit agreement with several lenders in the 2020 Credit Facility, and a credit facility up to \$500 million through Iberdrola.

As of May 2021, Iberdrola has a market cap of \$84.9 billion. At the end of 2019, Iberdrola had 55,111 MW of installed generation capacity. Of this capacity, 34,923 MW is renewable resources. More than half of Iberdrola's renewable energy capacity portfolio is onshore and offshore wind at 19,832 MW; the remainder is hydropower and other renewable technologies.

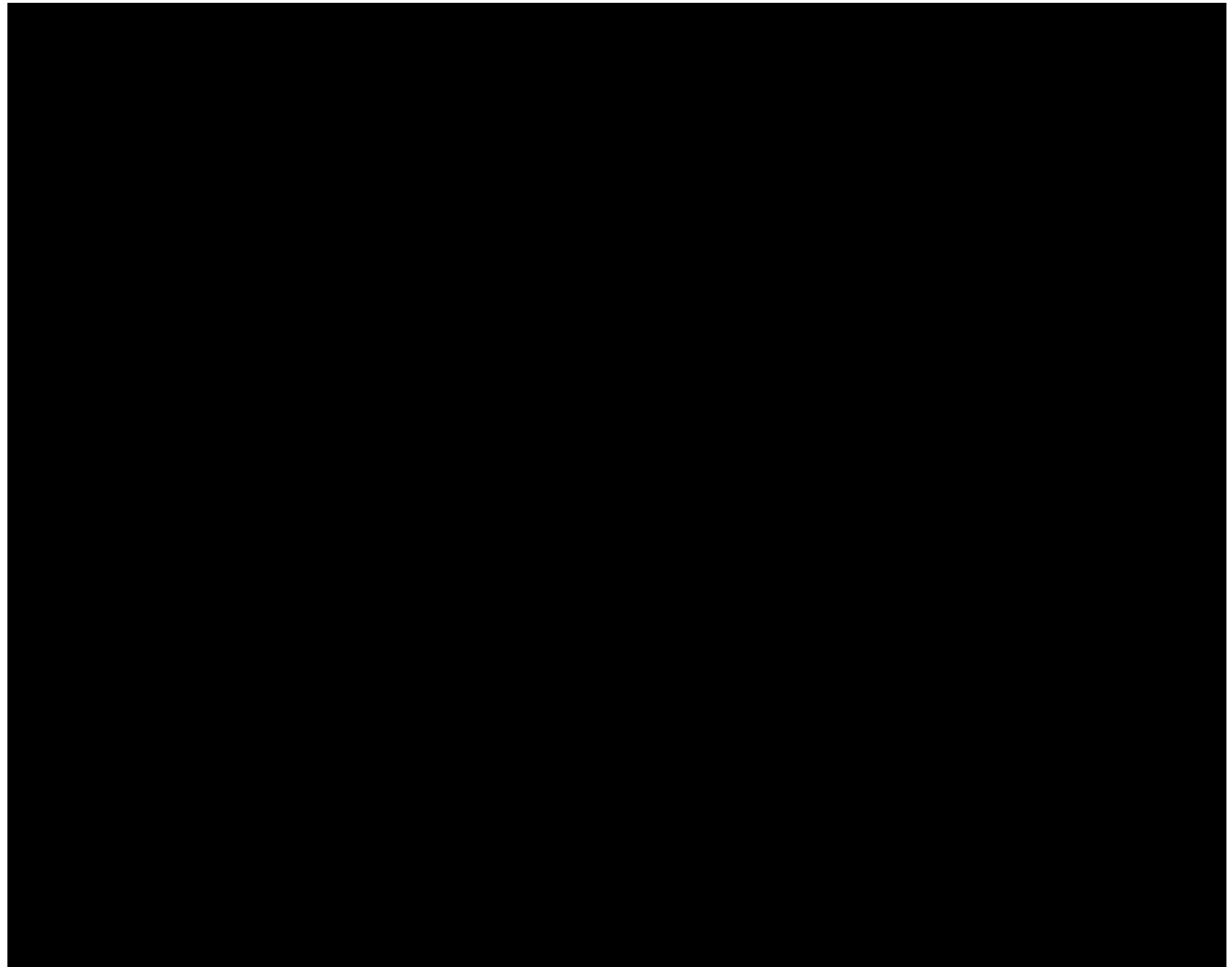
5.6 FINANCIAL STATEMENTS AND ANNUAL REPORTS

Provide complete copies of the most recent audited financial statement and annual report for each bidder for each of the past three years; including affiliates of the bidder (if audited statements are not available, reviewed or compiled statements are to be provided). Also, provide the credit ratings from Standard & Poor's and Moody's (the senior unsecured long term debt rating or if not available, the corporate rating) of the bidder and any affiliates and partners.

Vineyard Wind

Copenhagen Infrastructure Partners

Credit ratings are not provided for infrastructure funds and are therefore not available for CIP-managed funds. Annual reports for CIP's affiliates are found in Table 5.6-1.



Avangrid Renewables

Avangrid Renewables' shareholder company, Avangrid, is an NYSE-traded entity. Avangrid's audited annual accounts and its credit ratings, as of July 2021, are provided in Table 5.6-2 and Table 5.6-3 below and SEC filings.² Avangrid has a strong financial performance based on its financial statements and credit ratings that is reflective of the financial obligations and potential liabilities understood in support of the Project.

² See: <https://www.avangrid.com/wps/portal/avangrid/Investors/investors/secfilings>

Table 5.6-2 Avangrid and Iberdrola Annual Reports Attachments

Attachment	Financial Report
Attachment 5.6-18	Avangrid Annual Report 2018
Attachment 5.6-19	Avangrid Annual Report 2019
Attachment 5.6-20	Avangrid Annual Report 2020
Attachment 5.6-21	Iberdrola Annual Report 2018
Attachment 5.6-22	Iberdrola Annual Report 2019
Attachment 5.6-23	Iberdrola Annual Report 2020

Avangrid Renewables' ultimate shareholder company, Iberdrola, is listed on the stock exchanges in Madrid (Ibex-35), Barcelona, Bilbao, and Valencia. In New York, the company is listed in the form of an ADR. Annual reports for Iberdrola can be found in Table 5.6-2.

Table 5.6-3 Credit Ratings for Avangrid (as of July 2021)

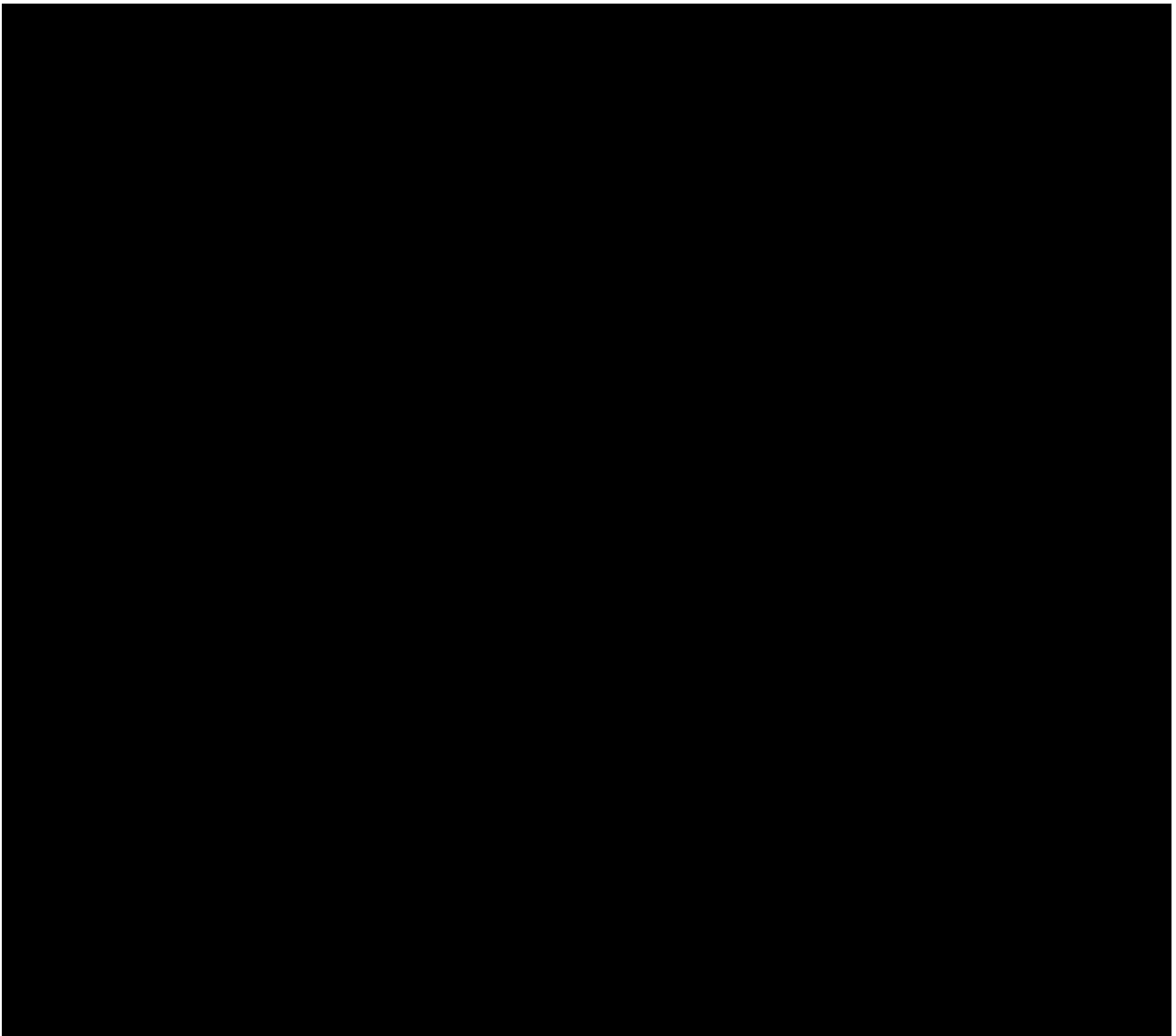
Sponsor	Standard & Poor	Moody's	Fitch Ibca
Avangrid Inc.	BBB+ (Stable)	Baa2 (Stable)	BBB+ (Stable)

5.7 OFFICERS, BOARD MEMBERS, AND TRUSTEES

Please also include a list of the board of directors, officers and trustees for the past three years and any persons who the bidder knows will become officers, board members or trustees.

[REDACTED]

[REDACTED]



Vineyard Wind has the ability to draw upon the considerable management resources of the Shareholder Companies in making any future board or officer appointments, however, no such appointments are planned at this time.

5.8 REQUIRED SECURITY

The bidder should demonstrate its ability (and/or the ability of its credit support provider) to provide the required security, including its plan for doing so.



5.9 CREDIT ISSUES AND RATINGS

Provide a description of any current or recent credit issues/ credit rating downgrade events regarding the bidder or affiliate entities raised by rating agencies, banks, or accounting firms.

5.10 FEDERAL TAX CREDITS

Describe the role of the Federal Production Tax Credit ("PTC") or Investment Tax Credit (ITC"), and any other incentives, on the financing of the project In your response, please describe (a) your plan to qualify for the ITC/PTC and the level of the ITC/PTC for which you plan to qualify, (b) the facilities, investment in which, the ITC is expected to apply, (c) your plan to utilize the tax credits and the relationship to your financing plan, and (d) how qualification for the ITC/PTC is reflected in your proposed pricing.

Qualification Plan

In December 2020, Congress passed extensions of the Production Tax Credit (PTC) and ITC for one year. Additionally, Congress established a 30% ITC for any offshore wind project that begins construction by December 31, 2025 or began construction before January 1, 2017.

Applicable Facilities

Relationship to Financing Plan

Reflection in Pricing

[REDACTED]

5.11 LITIGATION

Bidders must disclose any litigation or disputes in the last three year period related to projects developed, owned or managed by Bidder or any of its affiliates in the United States, or related to any energy product sale agreement.

Vineyard Wind

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Affiliate Vineyard Wind 1 LLC

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Copenhagen Infrastructure Partners

[REDACTED]

Avangrid Renewables

[REDACTED]

5.12 OPERATING LIFE

What is the expected operating life of the proposed project? What is the depreciation period for all substantial physical aspects of the bid, including generation facilities, delivery facilities to move power to the grid, and mandatory and voluntary transmission system upgrades?

[REDACTED]

5.13 PROJECT FINANCING

Has the bidder already obtained financing, or a commitment of financing, for the project? If financing has not been obtained, explain how obtaining a long-term agreement as proposed will help you in obtaining financing for the proposed project, in obtaining more favorable terms for the financing of the proposed project, or in supporting the future capital investment.

[REDACTED]

[REDACTED]

[REDACTED]

5.14 EXISTING AGREEMENTS

State whether the bidder or its affiliates have executed agreements with respect to energy, RECs and/or capacity for the proposed project (including any agreements that have been terminated) and provide information regarding the associated term and quantities, and whether bidder has been alleged to have defaulted under or breached any such agreement. State whether the bidder or its affiliates have submitted proposals to other buyers, the status of consideration of such proposals, and the impact of such proposal(s), if they result in an executed contract or contracts, on the proposal(s) submitted in response to this RFP.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Neither Vineyard Wind nor the Shareholder Companies have been alleged to have defaulted under or breached any such agreement.

5.15 AFFILIATED ENTITIES AND JOINT VENTURES

List all of the Bidder’s affiliated entities and joint ventures transacting business in the energy sector.

The Shareholder Companies and their affiliates regularly conduct business in the energy sector. [REDACTED]

Table 5.15-1 Vineyard Wind Affiliate Attachments

Attachment	Companies
Attachment 5.15-1	Avangrid Renewables Affiliate Companies 2021
Attachment 5.15-2	Iberdrola Affiliate Companies 2021
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]

5.16 BANKRUPTCY

Has Bidder, or any affiliate of Bidder, in the last five years, (a) consented to the appointment of, or been taken in possession by, a receiver, trustee, custodian or liquidator of a substantial part of its assets, (b) filed a bankruptcy petition in any bankruptcy court proceeding, (c) answered, consented or sought relief under any bankruptcy or similar law or failed to obtain a dismissal of an involuntary petition, (d) admitted in writing of its inability to pay its debts when due, (e) made a general assignment for the benefit of creditors, (f) been the subject of an involuntary proceeding seeking to adjudicate that Party bankrupt or insolvent, (g) sought reorganization, arrangement, adjustment, or composition of it or its debt under any law relating to bankruptcy, insolvency or reorganization or relief of debtors?

In the last five years, neither Vineyard Wind nor any affiliate has:

- a) consented to the appointment of, or was taken in possession by, a receiver, trustee, custodian, or liquidator of a substantial part of its assets;
- b) filed a bankruptcy petition in any bankruptcy court proceeding;
- c) answered, consented, or sought relief under any bankruptcy or similar law, or failed to obtain a dismissal of an involuntary petition;
- d) admitted in writing of its inability to pay its debts when due;
- e) made a general assignment for the benefit of creditors;
- f) been the subject of an involuntary proceeding seeking to adjudicate that party bankrupt or insolvent; or
- g) sought reorganization, arrangement, adjustment, or composition of it or its debt under any law relating to bankruptcy, insolvency, or reorganization or relief of debtors.

5.17 CONFLICTS OF INTEREST

Briefly describe any known conflicts of interest between Bidder or an affiliate of Bidder and any Distribution Company, or any affiliates of the foregoing.

Vineyard Wind, the Shareholder Companies, and their affiliates do not have any known conflicts of interest with Fitchburg Gas and Electric Light Company d/b/a Unitil; Massachusetts Electric Company and Nantucket Electric Company, each d/b/a National Grid; or NSTAR Electric Company d/b/a Eversource Energy (collectively, the "Distribution Companies"), or any affiliates of the foregoing.

5.18 DISTRIBUTION COMPANY LITIGATION, DISPUTES, OR COMPLAINTS

Describe any litigation, disputes, claims or complaints involving the Bidder or an affiliate of Bidder, against any Distribution Company or any affiliate of any Distribution Company.

Neither Vineyard Wind, CIP, CIP affiliates, Avangrid, and Avangrid affiliates are currently involved in any litigation, disputes, claims, or complaints against the Distribution Companies or any affiliate thereof.

5.19 ENERGY PURCHASE OR SALE LITIGATION, DISPUTES, OR COMPLAINTS

Describe any litigation, disputes, claims or complaints, or events of default or other failure to satisfy contract obligations, or failure to deliver products, involving Bidder or an affiliate of Bidder, and relating to the purchase or sale of energy, capacity or renewable energy certificates or products.

Vineyard Wind, the Shareholder Companies, and affiliates have not been implicated in any material litigation, disputes, claims, complaints, events of default, or other material failures to satisfy contract obligations, or material failure to deliver products involving and relating to the purchase or sale of energy, RECs, capacity, or other electricity products that would prohibit Vineyard Wind from fulfilling its contractual obligations under this RFP.

5.20 GOVERNMENTAL AGENCY INVESTIGATION

Confirm that neither Bidder nor any directors, employees or agents of Bidder, nor any affiliate of Bidder are currently under investigation by any governmental agency, and that none of the above have in the last four years been convicted or found liable for any act prohibited by State or Federal law in any jurisdiction involving conspiracy, collusion or other impropriety with respect to bidding on any contract, or have been the subject of any debarment action (detail any exceptions).

Vineyard Wind

Neither Vineyard Wind, nor any of its directors, employees, agents, or affiliates have been investigated by any governmental agency, and have not in the last four years been convicted or found liable for any act prohibited by state or federal law in any jurisdiction involving conspiracy, collusion, or other impropriety with respect to offering on any contract and have not been the subject of any debarment action.

Copenhagen Infrastructure Partners

Neither CIP, its directors, and employees, nor funds managed by CIP, have been investigated by any governmental agency and have not in the last four years been convicted or found liable for any act prohibited by state or federal law in any jurisdiction involving conspiracy, collusion or other impropriety with respect to offering on any contract, or have been the subject of any debarment action.

Avangrid Renewables

Avangrid Renewables is part of a large corporate entity and, consequently, the Shareholder Company and their directors, employees, agents, and respective affiliates have been involved in regulatory investigations by governmental authorities from time to time in the ordinary course of business. Any such regulatory investigations will not have a material effect on that Shareholder Company's ability to perform on the contracts described in this Submission.

Neither Avangrid Renewables, nor any of their directors, employees, agents, or affiliates have been convicted or found liable for any act prohibited by state or federal law in any jurisdiction involving conspiracy, collusion, or other impropriety with respect to offering on any contract or been the subject of any debarment action in the last three years.

5.21 REGULATORY AND OTHER APPROVALS

Identify all regulatory and other approvals needed by Bidder to execute a binding sale agreement.

The Form PPAs contain conditions that must be met, including regulatory approvals and transmission approvals, prior to the agreements taking effect. Such approvals consist of the Regulatory Approval and any Related Transmission Approvals, as each term is defined in the Form PPAs. Vineyard Wind does not condition its execution of a binding sale agreement on any other regulatory or approval other than that of its Board of Managers in accordance with the provisions of Vineyard Wind's limited liability company agreement, which Vineyard Wind will seek prior to its execution of any such sale agreement.

5.22 FERC COMPLIANCE

Describe how the project will conform to FERC's applicable regulatory requirements, including, but not limited to, FERC requirements relating to allocation of transmission capacity and open access, the justness and reasonableness of rates, the potential for undue preference or discrimination, and affiliate dealings, if any. Describe how your proposed approach is consistent with FERC precedent and ratemaking principles.

Generation

Vineyard Wind will ensure it has all the necessary Federal Energy Regulatory Commission (FERC) authorizations to supply power at wholesale in connection with this proposal. Vineyard Wind will obtain market-based rate authority from FERC under Section 205 of the Federal Power Act (FPA) as necessary to sell power at wholesale pursuant to its PPAs with the Distribution Companies. Along with its market-based rate authorization, Vineyard Wind will also obtain the blanket authorizations and waivers from FERC that are customarily granted to entities with market-based rate authority. Vineyard Wind will also obtain self-certification with FERC as an exempt wholesale generator (EWG) under FERC's regulations under the Public Utility Holding Company Act of 2005. Vineyard Wind's co-owner, Avangrid Renewables, has obtained market-based rate authority and EWG status for more than 66 affiliated generation



project companies with a combined generating capacity of over 8,500 MW in its ordinary course of business and expects no complications in obtaining market-based rate authority and EWG status for Vineyard Wind well before its generation project is initially energized.

[REDACTED]

[REDACTED]

Transmission

[REDACTED]

5.23 DIRECT AND INDIRECT AFFILIATIONS

Describe and document any and all direct and indirect affiliations and affiliate relationships, contractual, financial or otherwise in the past three years between the bidder and one or more of the Distribution Companies and their affiliates, including all relationships in which one of the Distribution Companies or their affiliates has a financial or voting interest (direct or indirect) in the bidder or the bidder's proposed project. These relationships include:

- Corporate or other joint arrangements, joint ventures, joint operations whether control exists or not;
- Minority ownership (50% or less investee);
- Joint development agreements;

- Project agreements;
- Operating segments that are consolidated as part of the financial reporting process;
- Related parties with common ownership;
- Credit, debenture, and financing arrangements, whether a convertible equity feature is present or not;
- Wholly owned subsidiaries; and
- Commercial (including real property) relationships with any Distribution Company

Vineyard Wind

In 2018, Vineyard Wind executed arms-length PPAs with the Distribution Companies to purchase the energy and RECs generated by Vineyard Wind 1. The PPAs are active and Vineyard Wind is performing its obligations under the PPAs. The onshore facilities to which Vineyard Wind 1 will interconnect are owned, operated, and maintained by, among others, New England Electric Transmission Corporation, New England Hydro-Transmission Electric Company, Inc., and New England Hydro-Transmission Corporation, which are affiliates of Massachusetts Electric Company and Nantucket Electric Company. Additionally, New England Power Company (an affiliate of Massachusetts Electric Company and Nantucket Electric Company) is an asset owner of certain transmission network facilities that will require upgrades for Vineyard Wind 1 to interconnect to its POI.

In the view of Vineyard Wind, the existence of and performance by the parties under the PPAs and in connection with the related interconnection/transmission arrangements are unrelated to the Project that is the subject of the Proposal and creates no conflict of interest for Vineyard Wind or the Distribution Companies.

Copenhagen Infrastructure Partners and Affiliates

Over the past three years, CIP and its affiliates have not had any indirect affiliations or affiliate relationships, financial or otherwise, with the Distribution Companies or any affiliate thereof.

Avangrid Renewables and Affiliates

Avangrid Networks, through its subsidiary Central Maine Power Company, submitted five bid responses to the Massachusetts Section 83D RFP issued on March 31, 2017, by the Distribution Companies. One of the bids, a joint bid with Hydro-Québec involving a new transmission project (New England Clean Energy Connect) to be built by Central Maine Power Company, was selected through the RFP. In the view of Vineyard Wind, Central Maine Power Company's continued development and continued construction in 2021 of New England Clean Energy



Connect as predicated by its winning bid with Hydro-Québec is unrelated to the Project that is the subject of this proposal and creates no conflict of interest for Vineyard Wind or National Grid.

Avangrid Networks has an indirect interest of approximately 19.97% in New York TransCo, LLC. Grid NY LLC, an affiliate of Massachusetts Electric Company and Nantucket Electric Company (subsidiaries of National Grid), also owns an interest in New York TransCo, LLC. In the view of Vineyard Wind, the indirect interest owned by Avangrid Networks is unrelated to the Project that is the subject of this proposal and creates no conflict of interest for Vineyard Wind or National Grid.

Finally, project company subsidiaries of Avangrid Renewables for its wind farms listed in Table 5.4-2 and located throughout Massachusetts, New York, New Hampshire, and Vermont, are party to various interconnection, service, facilities, lease, easement, and similar agreements entered into on an arms-length or tariff basis as part of the ordinary course of siting, constructing, and interconnecting onshore wind farms within the service territories of National Grid subsidiaries, including New England Power, Massachusetts Electric Company, and Niagara Mohawk. In the view of Vineyard Wind, the existence of, and performance by, the parties under these agreements are unrelated to the Project that is the subject of this proposal and create no conflict of interest for Vineyard Wind or National Grid.



SECTION 6

SITING, INTERCONNECTION, AND DELIVERABILITY

6.0 OVERVIEW

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Plan included? Yes ☒ No ☐ If not, please explain: N/A

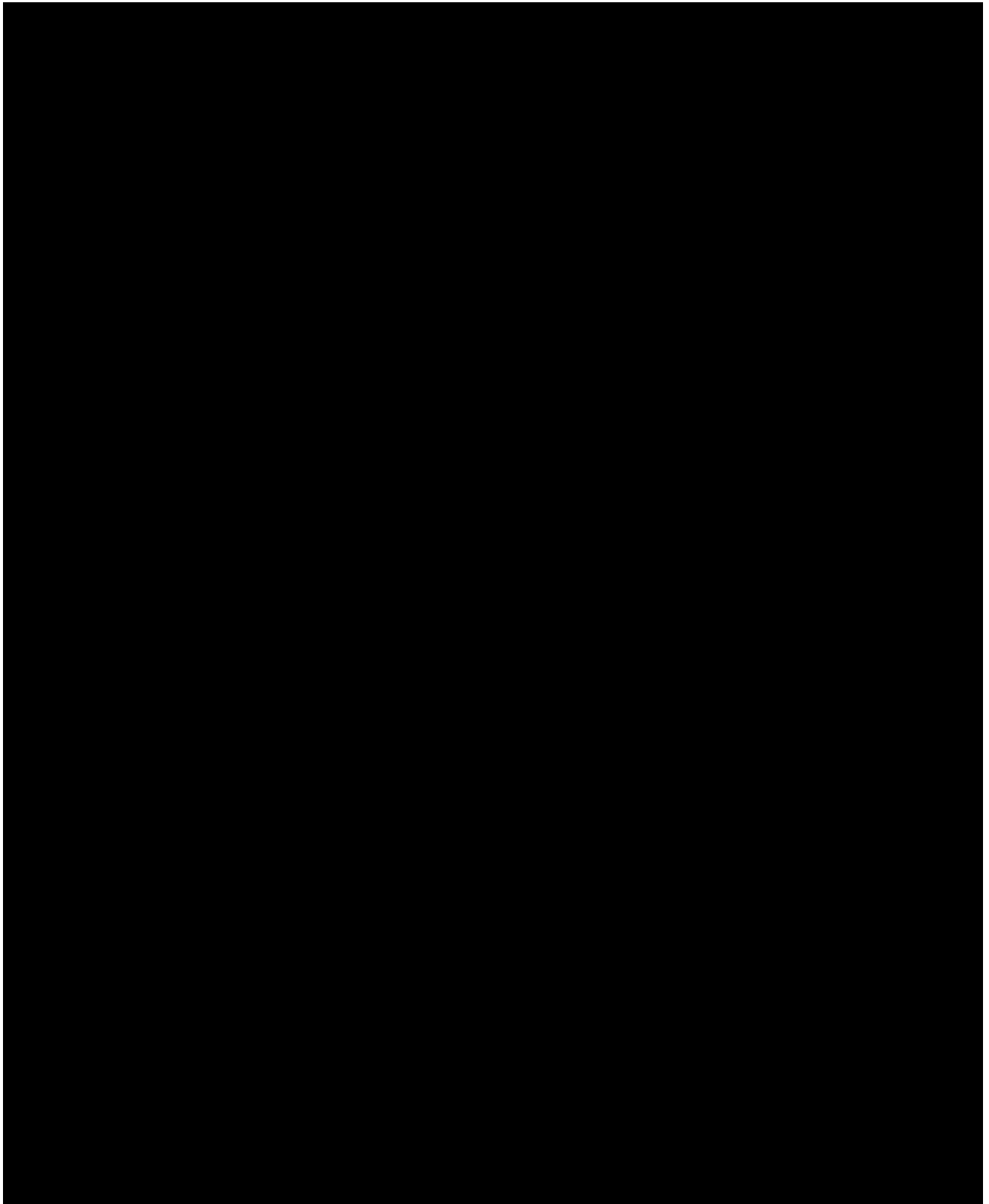
Describe how the proposed project is sized and designed to efficiently and cost-effectively use available lease area(s), interconnection point(s), transmission cabling, and other infrastructure required for the production and delivery of the Offshore Wind Energy Generation.

[REDACTED]

[REDACTED] Site plans identifying each element of the Project and their location are included below and provided as Attachment 6.1-1. While these site plans are preliminary and pending final design, permitting, and stakeholder consultation, which is typical at this stage of development, Vineyard Wind has undertaken significant due diligence to de-risk project delivery and to ensure the Project's substantial benefits are realized by the Commonwealth and its ratepayers.

[REDACTED]

¹ For the purposes of Section 6, the Eligible Facility site refers to the portion of Lease Area OCS-A 0534 where the Project's Offshore Wind Energy Generation site is located.

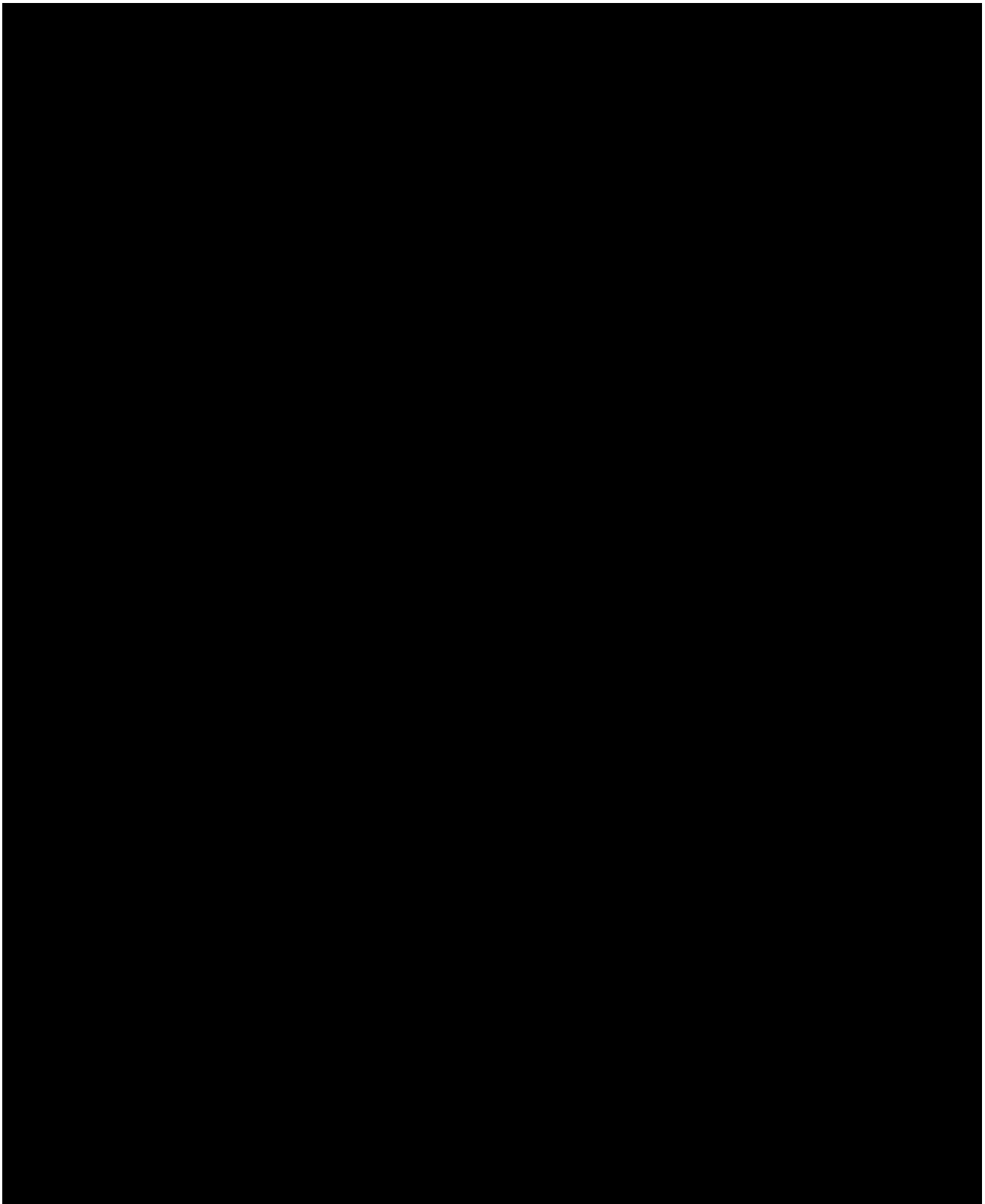


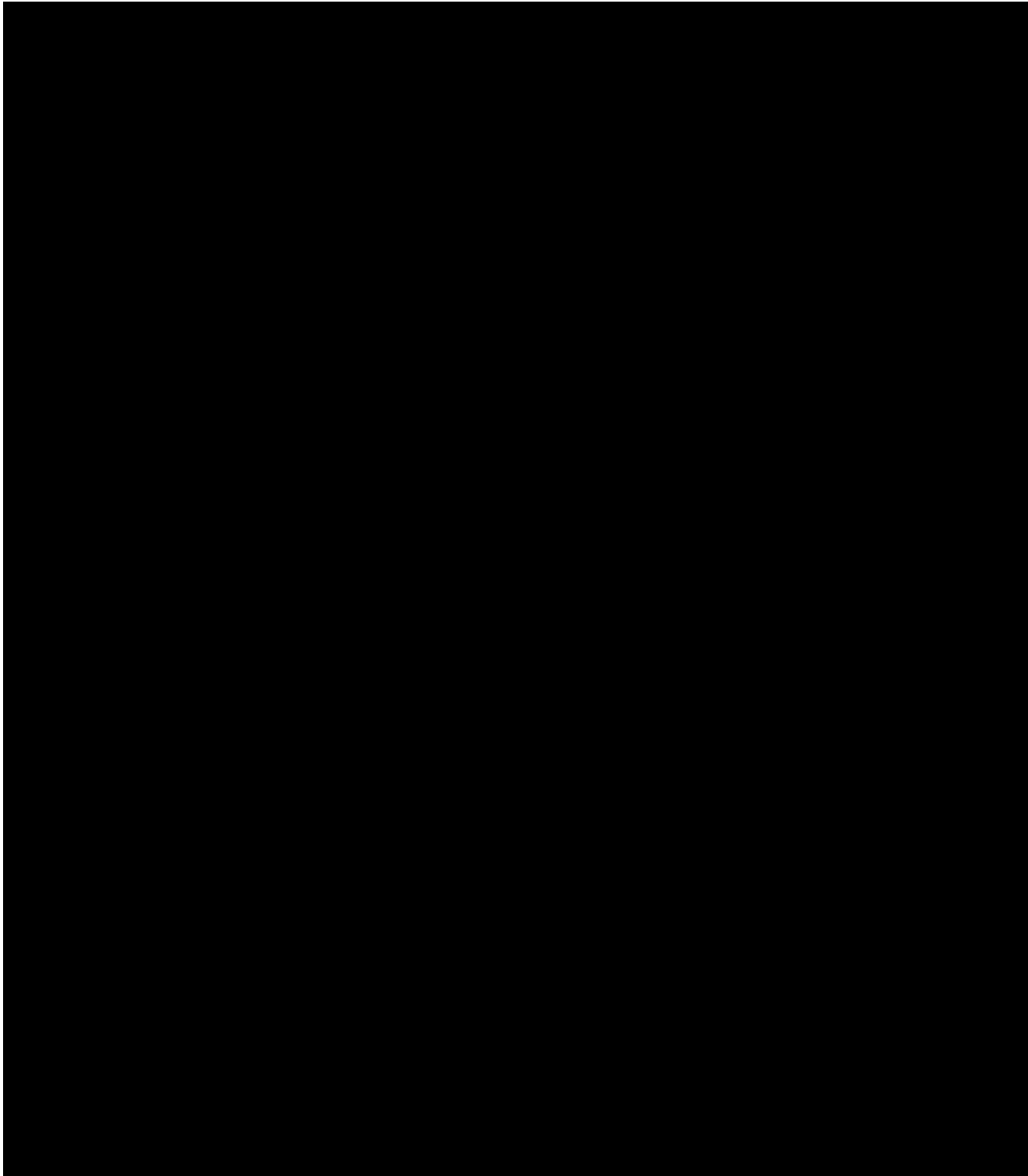
[REDACTED] The Project includes 1 x 1 nautical mile (NM) spacing between the WTGs and ESP.

[REDACTED]

[REDACTED]

[REDACTED]





[REDACTED]

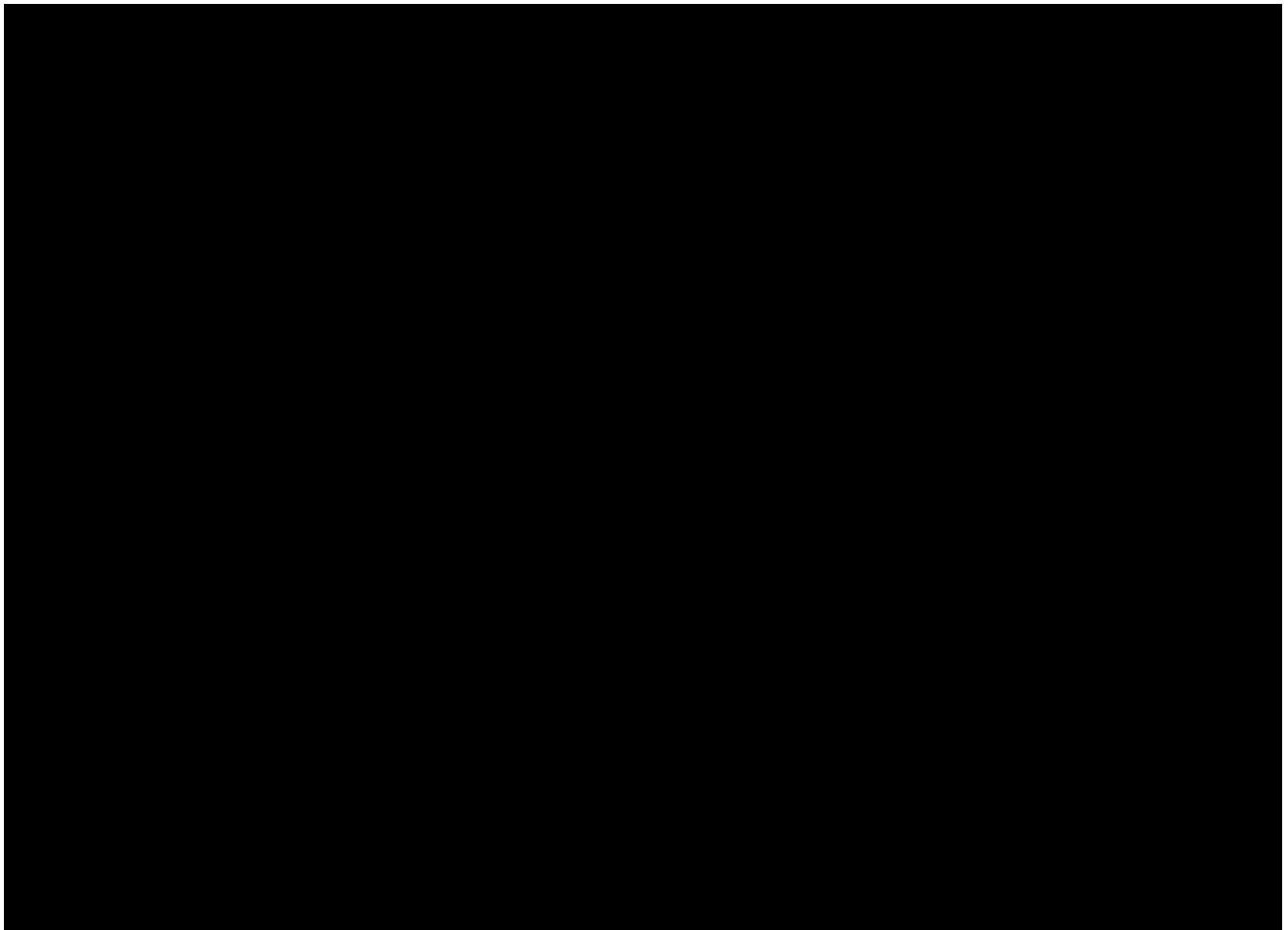
[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]



[Redacted text block]

6.2 REAL PROPERTY RIGHTS

Identify any real property rights (e.g., fee-owned parcels, rights-of-way, development rights or easements or leases, or options to purchase or lease) that provide the right to use the Eligible Facility site and Offshore Delivery Facilities locations including for Eligible Facilities and any rights of way needed for interconnection.

i. Does the project have a right to use the Eligible Facility site and/or Offshore Delivery Facilities locations for the entire proposed term of the PPA (e.g., by virtue of ownership or land development rights obtained from the owner)?

Yes ☒ No ☐ If not, please explain:

- ii. If so, please detail the Bidder's rights to control the Eligible Facility site and/or Offshore Delivery Facilities and interconnection locations.
- iii. Describe the status of acquisition of real property rights, any options in place for the exercise of these rights and describe the plan for securing the necessary real property rights, including the proposed timeline. Include these plans and the timeline in the overall project timeline.
- iv. Identify any joint use of existing or proposed real property rights
- v. Provide a copy of each of the leases, agreements, including option agreements, easements, rights of way and related documents granting the right to use the Offshore Wind Energy Generation site, Offshore Delivery Facilities, and transmission and interconnection locations (and applicable letters of intent if formal agreements have not been executed)

Identification

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Lease Agreement

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

The lease agreement provides Vineyard Wind the mechanism to build and operate offshore wind projects within the Eligible Facility site and to install the related necessary grid connection system within federal waters. It also allows for commercial operation of the Project for a period of at least 25 years.

[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
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[REDACTED]
[REDACTED]

Rights to Control

Eligible Facility Site

[REDACTED]
[REDACTED] To exercise this right, Vineyard Wind is required to obtain approval for the Project through the federal permitting process, which is further described in Section 7. This process includes submission of a COP to

BOEM,³ along with submission of a Facilities Design Report (FDR) and Fabrication & Installation Report (FIR). [REDACTED]

Offshore Delivery Facilities

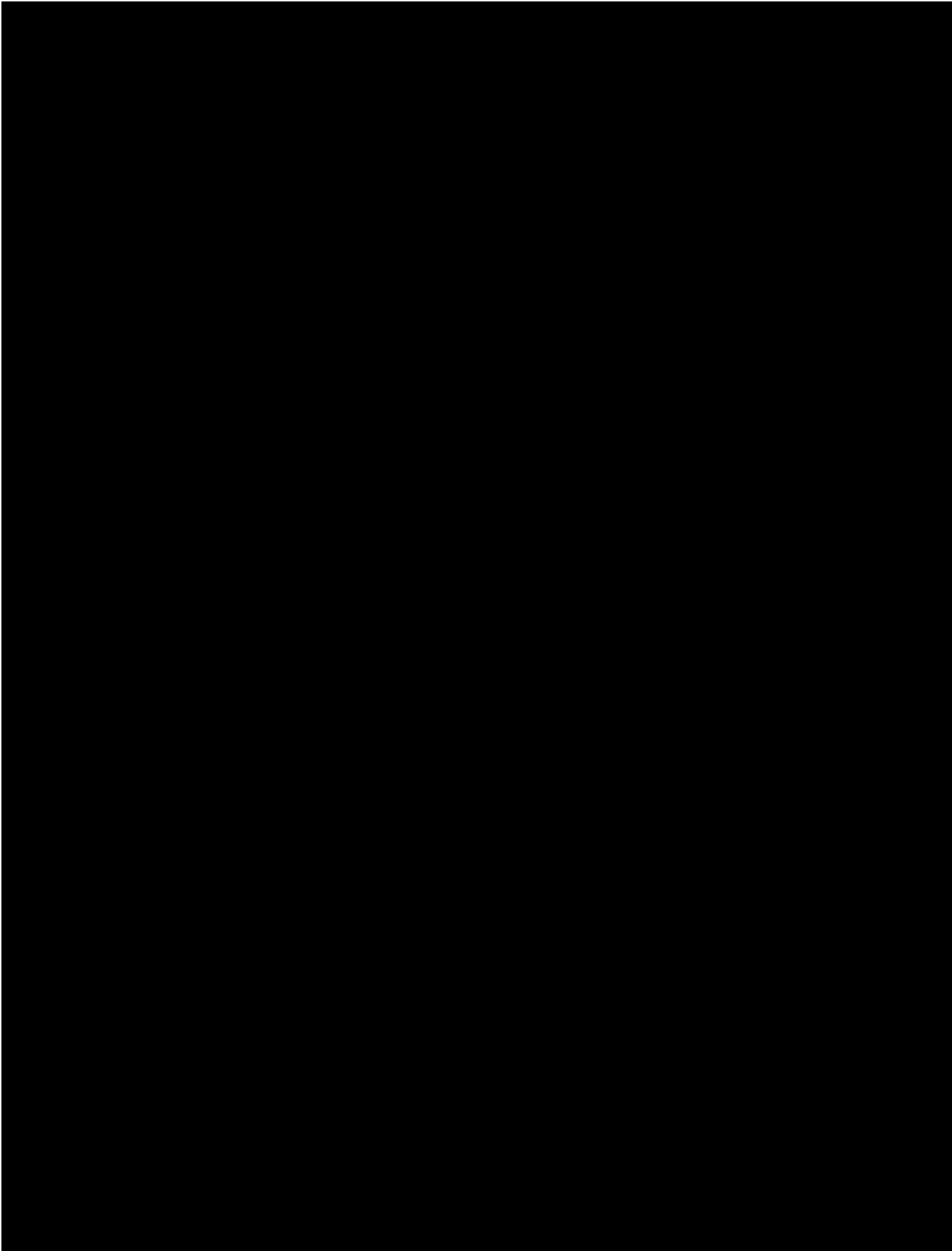
Vineyard Wind’s lease agreement with BOEM also provides the right to obtain one or more easements in federal waters for the purpose of installing and using offshore export cables. As described above, to exercise this right, Vineyard Wind must obtain approval through the federal permitting process described in Section 7.

The portion of the OECC that passes through state waters is subject to review and permitting at the state, regional, and local levels. [REDACTED]

Acquisition

[REDACTED] Table 6.2-1 provides an overview of the status of the key real property rights required to construct and operate the Project.

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]



Offshore Export Cable Corridor in Federal Waters

Per U.S.C. § 585.200(b), Vineyard Wind is entitled to one or more easements in which to locate the offshore export cables in federal waters as needed to enable grid connection for Offshore Wind Generation Facilities located in the Lease Area. [REDACTED]

Offshore Export Cable Corridor in State Waters

Onshore Export Cable Route

Onshore Substation

Joint Use

6.3 ZONING AND PERMITTING

Provide evidence that the Eligible Facility site and Offshore Delivery Facilities and interconnection locations are properly zoned or permitted. If the Eligible Facility site and Offshore Delivery Facilities and interconnection locations are not currently zoned or permitted properly, identify present and required zoning and/or land use designations and permits and provide a permitting plan and timeline to secure the necessary approvals.

Detail the zoning and permitting issues: See below and Section 7.

Permitting plan and timeline: See Section 7.

Start Date: [REDACTED] End Date: [REDACTED]

Vineyard Wind remains the most experienced offshore wind developer in the US. In 2019, our Vineyard Wind 1 project—the nation’s first commercial-scale offshore wind project—obtained all local, regional, and state permit approvals. Earlier this year, we completed the federal permitting process for Vineyard Wind 1, pioneering a successful permitting and environmental assessment approach. We are the only active US offshore wind developer to reach this significant milestone. As the Vineyard Wind 1 project starts construction and we demonstrate our ability to build Vineyard Wind 1 in compliance with its permits, Vineyard Wind 1 will continue to provide a blueprint for other projects to follow. [REDACTED]

Zoning

Eligible Facility Site

The Lease Area is entirely in federal waters and is subject only to federal jurisdiction. Thus, there are no zoning requirements for the Eligible Facility site.

Offshore Export Cable Corridor

The Project’s offshore export cables are not subject to zoning requirements.

Onshore Export Cable Route

[REDACTED]

[REDACTED]

Onshore Substation

[REDACTED]

[REDACTED]

[REDACTED]

Permitting

Eligible Facility Site

[REDACTED]

[REDACTED] The lease agreement provides Vineyard Wind the mechanism to build and

operate an offshore wind farm within the Lease Area and to install the related necessary grid connection system within federal waters. As discussed in Section 7, the federal permitting and approval process under BOEM includes submission of a COP, along with submission of an FDR and FIR. [REDACTED]

Offshore and Onshore Interconnection Route

The interconnection route for the Project, which includes both offshore and onshore elements, is described in Sections 6.1 and 6.2. The offshore portions of the interconnection route occurring in federal waters are subject to Project approval in line with the federal permitting process described immediately above. Massachusetts, regional, and local approvals are required for the portions of the offshore interconnection route occurring in state waters and onshore export cable route, as described in Section 7.

Onshore Substation

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Permitting Plan and Timeline

The Project's permitting process is underway. In July 2020, Vineyard Wind submitted the Vineyard Wind South COP, which was reviewed and deemed complete by BOEM and other consulting federal agencies. A Notice of Intent to prepare an Environmental Impact Statement was issued on June 30, 2021. Public scoping meetings were held in July 2021. Detail about the Project's permitting plan and timeline is provided in Sections 7 and 9.

6.4 SITE DESCRIPTION

Provide a description of the area surrounding the Eligible Facility site and Offshore Delivery Facilities and interconnection locations (including landfall), including a description of the local zoning, flood plain information, existing land or waterway use, and setting.

Eligible Facility Site Location

[REDACTED]

As the Eligible Facility site is located beyond state territorial waters, there are no local zoning, flood plain, or existing land use details to provide.

Offshore Delivery Facilities Locations

The Offshore Delivery Facilities locations include the following:

- the OECC from the Eligible Facility site through federal and state waters,

[REDACTED]

Offshore Export Cable Corridor

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Landfall Site

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Onshore Export Cable Route

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Onshore Substation

[REDACTED]

6.5 INTERCONNECTION FACILITY SITE CONTROL

If the bidder does not have interconnection facilities site control describe the status of the plan to obtain that control.

[REDACTED]

6.6 INTERCONNECTION REQUEST

Please provide documentation to show evidence of the interconnection request to ISO-NE, the applicable New England Transmission Owner, or any neighboring control areas, to interconnect at the Capacity Capability Interconnection Standard. Please describe the status of any planned interconnection to the grid.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

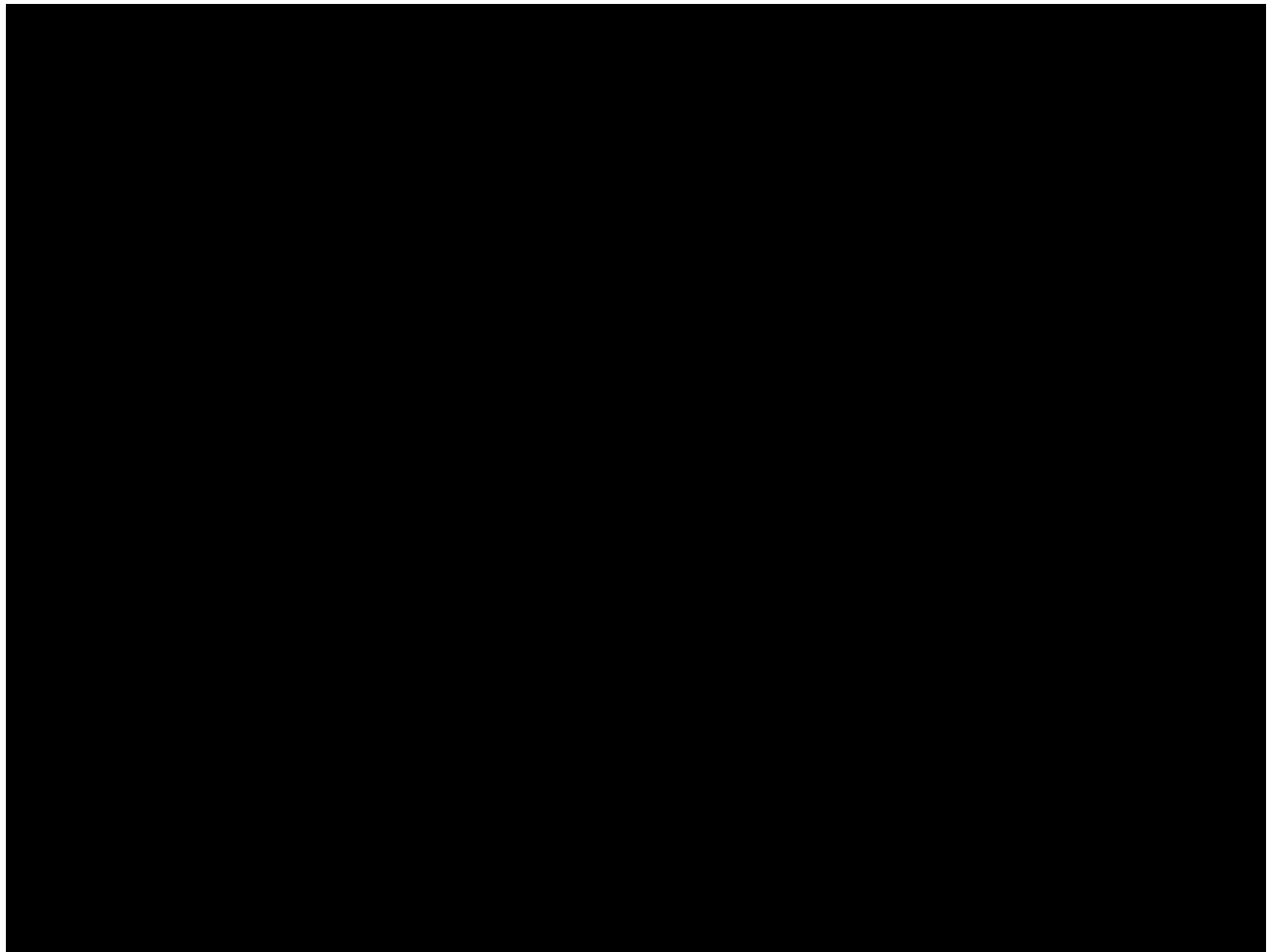
Status of Interconnection Requests and Studies

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]



6.7 ELECTRICAL SYSTEM PERFORMANCE

Provide studies that describe the Project's electrical system performance, its impact to the reliability of the New England Transmission system, how the project would satisfy ISO NE's I.3.9 requirements, and how the project will interconnect at an equivalent to the Capacity Capability Interconnection Standard. Projects that do not have I.3.9 approval from ISO-NE must include technical reports or system impact studies that approximate the ISO-NE interconnection process, including but not limited to clear documentation of study technical and cost assumptions, reasoning, and justification of such assumptions. All projects must also provide analysis that approximates the ISO-NE CCIS interconnection analysis as defined in Planning Procedure 10. Please also provide the status and expected completion date of any additional interconnection studies already underway with ISO-NE and/or the transmission owner. All studies must follow the current ISO-NE interconnection procedures and detail any assumptions regarding resources ahead of the Project in the ISO- NE interconnection queue.

All network upgrades identified in these studies must be clearly documented and included in the bid price. Provide a copy of an interconnection agreement, if any, executed by the bidder with respect to the proposed project. If an interconnection agreement has not been executed, please provide the steps that need to be completed before an interconnection agreement can be executed and the associated timeline.

Performance and its impact:

Attachments:

Copy of completed I.3.9 approval or I.3.9-equivalent study attached: ☐

If none, please explain: See response below

Copy of completed CCIS-equivalent study attached: ☒

If none, please explain:

Copy of Interconnection Agreement attached: ☐

If none, please explain: See response below.

Additionally, any other studies undertaken by ISO-NE or the bidder must be provided.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] As part of this process, ISO-NE undertook the First Cape Cod Resource Integration Study to identify the transmission upgrades necessary to enable the interconnection of proposed new offshore wind resources to Cape Cod. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Improving System Reliability

The Project will help increase the fuel diversity of New England's PTF system by adding local, high-capacity generation built at a substantial scale; the Project is large enough to make a significant contribution to replacing the capacity and energy output that is being lost by the retirement of traditional so-called baseload power plants. This reliability value is enhanced by the portfolio diversity and delivery location benefits.

[REDACTED]

[REDACTED]

[REDACTED]

CCIS

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

6.8 DELIVERABILITY CONSTRAINT ANALYSIS

Please provide documentation of the deliverability constraint analysis set forth in Appendix I to the RFP. Provide a description of the findings of the deliverability constraint analysis, including but not limited to a list of thermal overloads and voltage violations identified.

Attachments:

Copy of completed deliverability constraint analysis: ☒

If the deliverability constraint analysis was performed as a portion of a separate study, please explain and provide the study:

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

6.9 ADDITIONAL INTERCONNECTION REQUESTS

If multiple interconnection requests have been made, please specify all such active requests which have not been superseded by subsequent requests and information regarding the status of each. Provide copies of any requests made and studies completed.

[REDACTED]

[REDACTED]

6.10 NETWORK UPGRADES

Please provide cost estimates for any necessary network upgrades identified in the studies identified in Section 6.7

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

6.11 ALTERNATIVE INTERCONNECTION SCENARIO

To the extent that you provide an alternative interconnection scenario based on ISO-proposed interconnection process changes, you must also include studies using the proposed ISO-NE process. Any such studies must be accompanied with clear documentation of study technical and cost assumptions, reasoning, and justification of such assumptions.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

At this time, Vineyard Wind is only pursuing, maturing, and studying the aforementioned points of interconnection for the Project.

6.12 ELECTRICAL MODELS

Provide the electrical models of all energy resources supporting the proposed project in accordance with the filing requirements of the ISO-NE Tariff Schedule 22 and 23.

Electrical models attached: ☐ If none, please explain: See below.

[REDACTED]

[REDACTED]

6.13 ELECTRICAL ONE-LINE DIAGRAM

Provide a copy of an electrical one-line diagram showing the interconnection facilities, the relevant facilities of the transmission and/or distribution provider, and any required network upgrades identified in the studies required in Section 69 of this document.

Electrical one-line diagram attached: ☒ If none, please explain:

[REDACTED]

6.14 INTERCONNECTION FACILITIES

Specify and describe the current or new interconnection facilities (lines, transformers, switching equipment, system protection and controls, etc.) that bidder owns or is intending to construct or have constructed in order to deliver the proposed energy.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

6.15 INCREMENTAL DATA REQUIREMENTS

1. IDV file(s) in PSSE v32 format modeling all upgrades to the transmission network identified in the studies required in section 6.7 of this document. ☒ If none, please explain:
2. If the Bidder does not use PSSE, provide in text format necessary modeling data as follows:
 - Line Data:

Voltage	Thermal Ratings
Impedances (r, X and B)	
Line Length: from to	
(bus numbers and names)	
 - Transformer data (including Phase shifting transformers if applicable):

Terminal Voltages	Thermal Ratings
Impedance	
From	To
(bus numbers and names)	
 - Reactive compensation models as necessary
 - Other changes to the model that would occur due to a Project such as terminal changes for lines/transformer/generator leads/loads etc.

6.16 CONSTRAINTS OR CURTAILMENTS

Please detail with supporting information and studies (as available) that the production/delivery profile contemplated in your proposal reflects constraints or curtailments, if any, after the upgrades that are expected to take place pursuant to interconnection at an equivalent to the CCIS. If you are planning to make voluntary upgrades beyond those associated with the CCIS-equivalent standard, as more fully described in the RFP, please describe the transmission network upgrades necessary, their estimated cost (for

which the bidder would have cost responsibility, and the impact on the proposed generation schedule by reducing remaining constraints or curtailments.

[REDACTED]

SECTION 7

ENVIRONMENTAL ASSESSMENT, PERMIT ACQUISITION PLAN AND ENVIRONMENTAL ATTRIBUTES CERTIFICATION

7.0 OVERVIEW

Vineyard Wind remains the most experienced offshore wind developer in the US. In 2019, our Vineyard Wind 1 project—the nation’s first commercial-scale offshore wind project—obtained all local, regional, and state permit approvals. Earlier this year, we completed the federal permitting process for Vineyard Wind 1, pioneering a successful permitting and environmental assessment approach. We are the only active US offshore wind developer to reach this significant milestone. As the Vineyard Wind 1 project starts construction and we demonstrate our ability to build Vineyard Wind 1 in compliance with its permits, Vineyard Wind 1 will continue to provide a blueprint for other projects to follow.

The Project’s permitting process is underway. In July 2020, we submitted a Construction and Operations Plan (COP) to the Bureau of Ocean Energy Management (BOEM) for Vineyard Wind South. “Vineyard Wind South” is Vineyard Wind’s proposal to develop offshore renewable wind energy facilities in BOEM Lease Area OCS-A 0534 in two phases. Phase 1 is known as the Park City Wind project. Phase 2 will occupy the remainder of Lease Area OCS-A 0534 that is not developed for Park City Wind. The Project will be developed during Phase 2 of Vineyard Wind South.¹ [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Our unrivalled experience sets us apart from every other offshore wind developer in the nation and lends confidence to the permitting plan set forth in this section. Moreover, our proven success in advancing offshore wind projects through federal, state, and local permitting in Massachusetts underscores our aptitude for permitting well-sited offshore wind projects with minimal environmental impact.

7.1 PERMITS, LICENSES, AND ENVIRONMENTAL IMPACT STATEMENTS

Provide a list of all the permits, licenses, and environmental assessments and/or environmental impact statements required to construct and operate the project. Along with this list, identify the governmental agencies and States that are responsible for issuing approval of all the permits, licenses, and environmental assessments and/or environmental impact statements. If a bidder has secured any permit or has applied for a permit, please indicate this in the response.

Vineyard Wind continues to lead the rapidly growing US offshore wind industry with the most experience in project permitting. After working closely with BOEM staff and other federal agencies since 2017, we have the knowledge and resources needed to support a successful federal permitting and review process. Similarly, extensive experience with state, regional, and local agencies and permitting authorities in Massachusetts further ensures the success of the Project.

[REDACTED]

[REDACTED] A list the permits, licenses, and environmental assessments or statements for the Project is provided in Tables 7.1-1, 7.1-2, and 7.1-3.

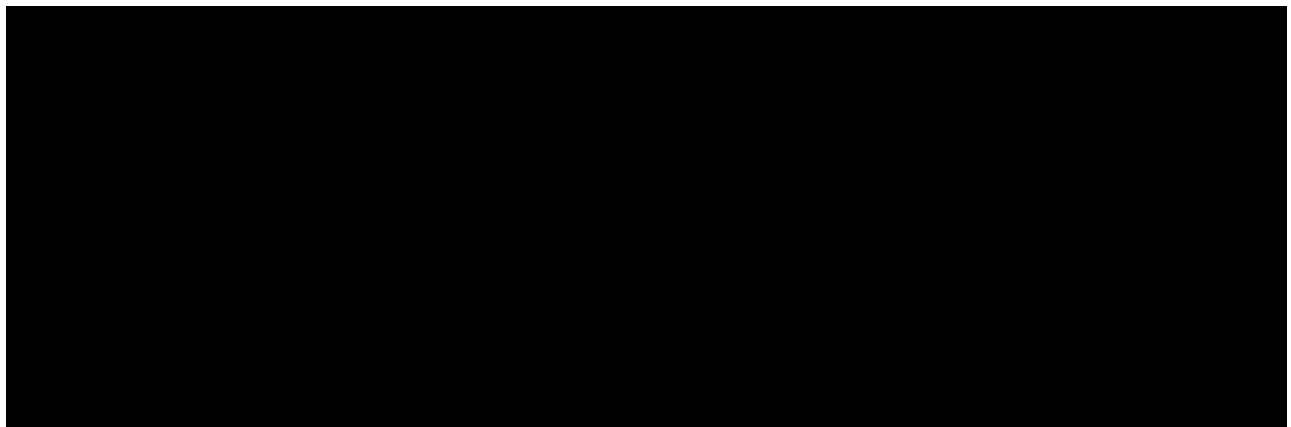
² Park City Wind is an 804 MW offshore wind energy facility that will be located in Lease Area OCS-A 0534 and potentially the southwest portion of Lease Area OCS-A 0501, which will interconnect into West Barnstable. That project was awarded long-term contracts with Connecticut electric distribution companies in 2019.

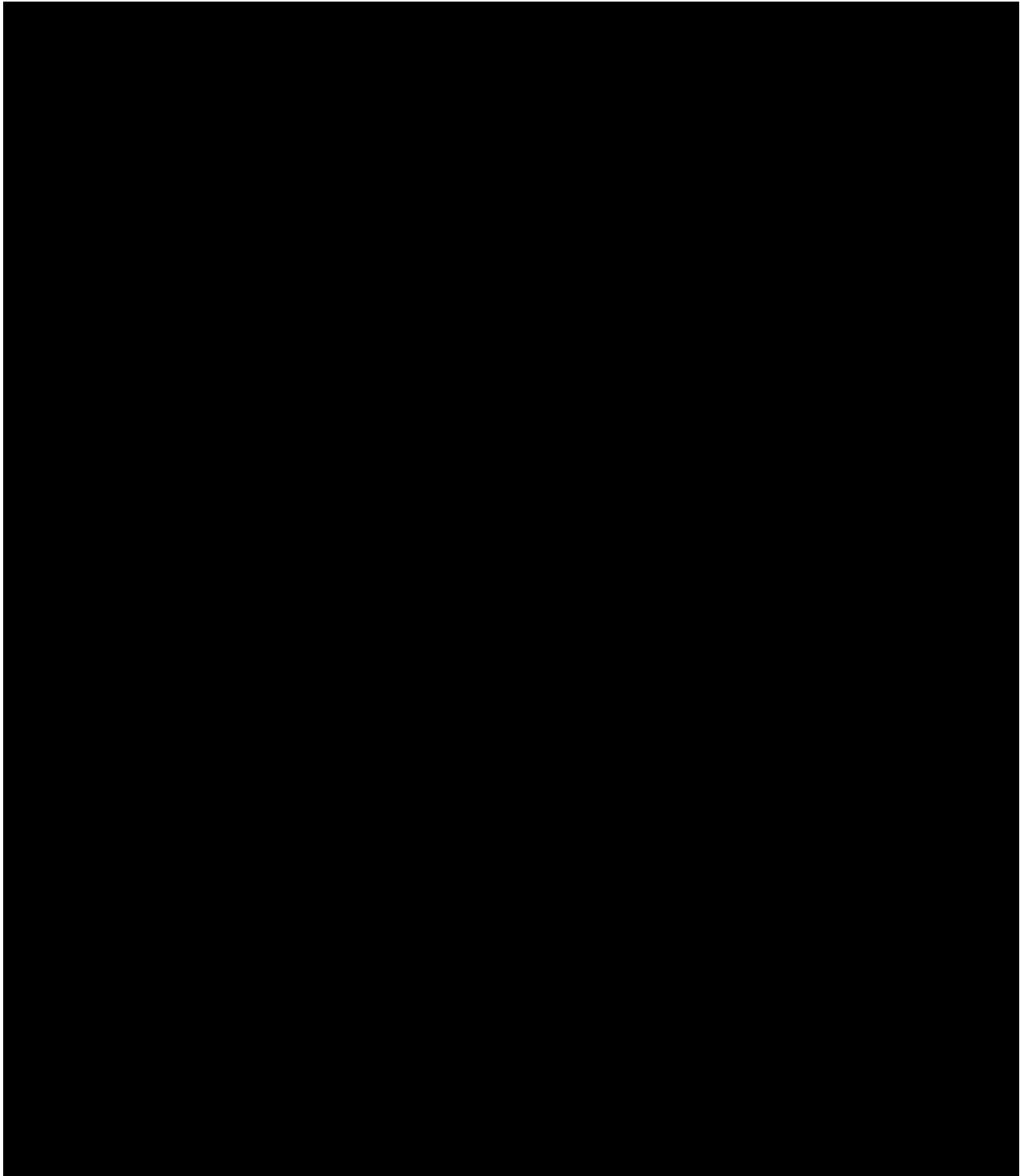
Federal Permits and Approvals

The federal permitting process for the Project is well underway. As noted above, Vineyard Wind submitted the Vineyard Wind South COP (which includes the Project) to BOEM in July 2020. The Vineyard Wind South federal permitting dashboard is available at <https://www.permits.performance.gov/permitting-project/vineyard-wind-south>, which provides a detailed schedule of the environmental review and permitting processes for Vineyard Wind South. Vineyard Wind has filed under Fixing America’s Surface Transportation Act (FAST-41) to expedite and coordinate the Project’s federal permitting process. FAST-41 is designed to improve the timeliness, predictability, and transparency of the federal environmental review and authorization process for covered infrastructure projects. FAST-41 created a new entity—the Federal Permitting Improvement Steering Council (FPISC)—composed of agency Deputy Secretary-level members and chaired by an Executive Director appointed by the President.

FAST-41 establishes procedures that standardize interagency consultation and coordination practices. Importantly, FAST-41 creates a new authority for agencies to issue regulations for the collection of fees, which, if implemented, will allow the Council to direct resources to critical functions within the interagency review process. FAST-41 codifies into law the use of the Permitting Dashboard to track project timelines.

Table 7.1-1 lists the expected federal permits, approvals, and consultations required for the Project and their current status. The timelines for each permit/approval are discussed in Section 7.2.





Federal Permitting Process

Bureau of Ocean Energy Management

BOEM is the lead federal agency for the Project. BOEM has jurisdiction under the Outer Continental Shelf Lands Act to issue leases, easements, and rights-of-way for the development of renewable energy on the Outer Continental Shelf (OCS). BOEM authorizes development on the OCS through its review and approval of a project's Site Assessment Plan (SAP) and COP.

The SAP describes the initial activities to characterize a site (e.g., installation of meteorological towers and meteorological buoys). Vineyard Wind installed a meteorological-oceanographic (metocean) buoy in Lease Area OCS-A 0501 under an approved SAP in May 2018, which has provided data to inform the design of and permitting strategy for Vineyard Wind South. Therefore, this initial step in federal permitting is already complete for Vineyard Wind South.

In July 2020, Vineyard Wind submitted the Vineyard Wind South COP, which was reviewed and deemed complete by BOEM and other consulting federal agencies. BOEM issued a Notice of Intent (NOI) to prepare an Environmental Impact Statement (EIS) on June 30, 2021. Public scoping meetings were held in July 2021.

In reviewing the COP, BOEM must comply with its obligations under the National Environmental Policy Act (NEPA), the National Historic Preservation Act (NHPA), the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA), the Migratory Bird Treaty Act (MBTA), the Clean Air Act (CAA), Marine Mammal Protection Act (MMPA), and the Endangered Species Act (ESA). Thus, BOEM coordinates and consults with numerous other federal agencies, including the National Marine Fisheries Service (NMFS), the US Fish and Wildlife Service (USFWS), the Environmental Protection Agency (EPA), and the US Coast Guard (USCG) during the review process. BOEM also coordinates with states under the Coastal Zone Management Act (CZMA) to ensure that a project is consistent with state-level coastal zone management plans. Finally, BOEM also consults with the US Department of Defense Siting Clearinghouse during its review of projects.

US Army Corps of Engineers

Section 10 of the Rivers and Harbors Act of 1899 prohibits the unauthorized obstruction or alteration of any Navigable Waters. A Section 10 permit from the US Army Corps of Engineering (USACE) is needed for the installation of the wind turbine generators (WTGs), electrical service platform (ESP), and their associated foundations, the placement of scour protection and cable protection (if/where needed), and the installation of offshore export cables within the three-nautical mile (NM) limit for state territorial waters.

Section 404 of the Clean Water Act (CWA) requires a permit before dredged or fill material can be discharged into waters of the US (within the three-NM limit for state territorial waters). A Section 404 permit from the USACE is needed because the installation of the offshore export cables may involve the discharge of dredged materials from localized sand wave dredging and because cable installation or cable protection (if needed) could change the seafloor's bottom

elevation. Similar to BOEM, the USACE must comply with its obligations under NEPA, NHPA, MSFCMA, MBTA, and ESA. However, to avoid duplication of effort, the USACE is a cooperating agency with BOEM through the NEPA process.

Environmental Protection Agency

An OCS Air Permit is required for certain emissions from vessels and equipment used during offshore construction and operation of the Project. The EPA is expected to coordinate with BOEM to satisfy its obligations under the ESA and other relevant statutes.

National Marine Fisheries Service

An Incidental Harassment Authorization (IHA) or Letter of Authorization (LOA) under the MMPA is necessary for construction, principally because of the potential noise impacts to marine mammals associated with pile driving. Under the MMPA, the noise levels associated with construction have the potential to “harass” marine mammals; therefore, an authorization is required. In addition, Vineyard Wind is already consulting with NMFS, under guidance of the MMPA, regarding any geophysical surveys or other relevant activities.

Federal Aviation Administration

The Federal Aviation Administration (FAA) requires a public notice of the proposed construction of a structure that is more than 200 feet above ground level or within certain distances of airports. Vineyard Wind will file Notices of Proposed Construction or Alteration for the temporary use or movement of any structures within territorial airspace that exceed 200 feet or any obstruction standard contained in 14 CFR Part 77 during the Project’s construction, including within ports and at construction staging areas. Though the Project’s WTGs are outside of the FAA’s jurisdiction (which extends 12 NM from the US coastline), Vineyard Wind will also consult with the US Department of Defense Siting Clearinghouse with respect to military air traffic.

Coastal Zone Management/Coastal Resources Management Council

The CZMA gives states the authority to review federal actions that affect their coastal uses and/or resources to ensure that such actions are consistent with a state’s federally approved coastal zone management program and policies. The Massachusetts Office of Coastal Zone Management (CZM) and the Rhode Island Coastal Resources Management Council (CRMC) are responsible for implementing the federal consistency review processes for Massachusetts and Rhode Island, respectively. As described further in Section V of Attachment 7.5-1, CZM will have consistency review authority over the Offshore Wind Energy Generation facility, the offshore export cable corridor, and onshore portions of the Project within the Massachusetts coastal zone. The Offshore Wind Energy Generation facility and portions of the underwater offshore export cables are located within Rhode Island’s 2018 Geographic Location Description (GLD) and are therefore subject to federal consistency review by CRMC.

Additional Review/Authorizations

Additional review and authorizations may be required for the Project, such as Private Aid to Navigation (PATON) authorizations from the USCG.

[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]

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7.2 PERMITTING TIMELINE

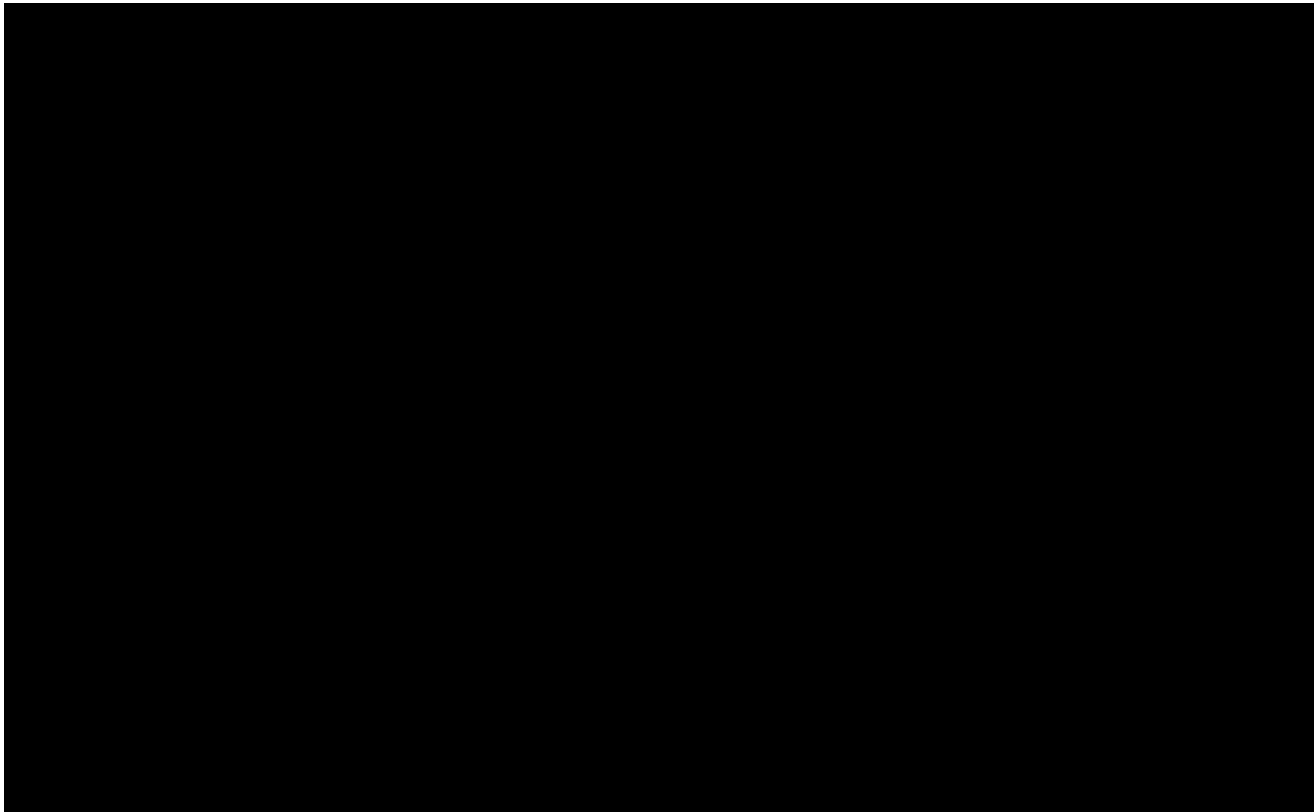
Provide the anticipated timeline for seeking and receiving the required permits, licenses, and environmental assessments and/or environmental impact statements. Include a project approval assessment which describes, in narrative form, each segment of the process, the required permit or approval, the status of the request or application and the basis for projection of success by the milestone date. All requirements should be included on the project schedule in Section 9.

The Project has been planned and designed with a robust and prudent schedule in line with the schedule provided in Section 9. We believe this timeline is the most realistic and achievable timeline for new offshore wind projects given current market and regulatory conditions. [REDACTED]

[REDACTED]

A brief overview of the permitting timeline is provided in Table 7.2-1, and major permitting requirements have been included in the Project schedule detailed in Section 9. [REDACTED]

[REDACTED]



Federal Permitting Timeline

Bureau of Ocean Energy Management



[REDACTED] Vineyard Wind has taken this into account when drafting the overall Project schedule in Section 9.

US Army Corps of Engineers

The USACE is expected to serve as a cooperating agency during BOEM's development of the EIS for the Project. The USACE will coordinate its review of the Project's Section 10 Rivers and Harbors Act and Section 404 CWA permits with BOEM's NEPA process and will issue a joint ROD with BOEM and NMFS. [REDACTED]

Environmental Protection Agency

[REDACTED] Upon receipt of the NOI, the EPA will designate the Corresponding Onshore Area and may publish a consistency update to the OCS Air Regulations (40 Code of Federal Regulations [CFR] Part 55).

[REDACTED] The EPA reviews the application for completeness within approximately 30 days and then prepares a draft permit and Statement of Basis. The draft permit is then available for public comment for 30 days. Following the close of the comment period, the EPA addresses comments and issues a final permit. The permit typically becomes effective approximately 30 days after it is finalized.

In issuing a permit, the EPA has an obligation to comply with the ESA. However, to avoid duplication of effort, the EPA typically relies upon BOEM's ESA assessments and consultations. Thus, the final permit will be issued after BOEM's ROD. [REDACTED]

National Marine Fisheries Service

NMFS has advised Vineyard Wind to seek a Letter of Authorization (LOA) for Vineyard Wind South. LOAs cover multi-year activities for up to five years through the issuance of a regulation authorizing the incidental take of marine mammals associated with the activities. The regulatory process takes approximately 15 months from the time a complete application is received. To facilitate the process, Vineyard Wind intends to submit a draft application in Q4 2021 to receive feedback from NMFS, with the final application submitted by the end of Q1 2022. NMFS will initiate the regulatory process in Q2 2022. The final regulation will be promulgated and the LOA will be issued in Q3 2023.

Federal Aviation Administration and US Coast Guard

Both the FAA and USCG will be involved in Project development and ongoing permitting activities with Vineyard Wind and through coordination with BOEM.

Coastal Zone Management and Coastal Resources Management Council

The federal consistency review process was technically initiated upon BOEM's release of the NOI for Vineyard Wind South. [REDACTED]

[REDACTED]

[REDACTED] Additional details are provided in Section V of Attachment 7.5-1.

State, Regional, and Local Timelines

[REDACTED]

[REDACTED]

[REDACTED]
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7.3 ENGAGEMENT AND ENVIRONMENTAL TRACK RECORD

Provide information (a) demonstrating past and current productive relationship with environmental, fishing, tribal, environmental justice, and onshore stakeholders and (b) demonstrating your track record of avoiding, minimizing, and mitigating environmental, fishing, tribal, environmental justice, and onshore impacts from projects similar to the proposed project.

Building Stakeholder Relationships

Vineyard Wind's track record demonstrates our ability to constructively engage with a range of stakeholders on important and complex issues and build community support for offshore wind projects. We have endeavored to build productive working relationships with a diverse array of stakeholders in Massachusetts over the last decade. These efforts, along with key achievements to date, are briefly summarized below. Additional information is provided in this section and the following attachments:

- Fisheries Mitigation Plan, Attachment 7.4-1
- Environmental Mitigation Plan, Attachment 7.5-1
- Community Engagement Plan, Attachment 7.7-1
- Support Letters, Attachment 7.7-2

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁴ See <https://www.vineyardwind.com/protecting-environment>.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁵ Vineyard Wind. 2019. Association to Preserve Cape Cod announces support for wind energy project, moves on climate. Press Release. December 19, 2018. Available at: <https://www.vineyardwind.com/news-and-updates/2018/12/20/association-to-preserve-cape-cod-announces-support-for-wind-energy-project-moves-on-climate>.

⁶ Cape Cod. 2019. Vineyard Wind Project Receives New Endorsement. Local News. January 12, 2019. Available at: <https://www.capecod.com/newscenter/vineyard-wind-project-receives-cape-cod-climate-change-collaborative-endorsement/>.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Avoiding, Minimizing, and Mitigating Impacts

Environmental Protection Measures

Vineyard Wind’s approach to reducing environmental impacts prioritizes avoidance of impacts wherever possible. Where impacts cannot be avoided, Vineyard Wind seeks to minimize and then mitigate those impacts to the maximum extent practicable. Vineyard Wind’s successful track record of avoiding, minimizing, and mitigating potential impacts is most readily demonstrated through our receipt of the Vineyard Wind 1 COP Approval.⁸ We are the only active US offshore wind developer to reach this significant milestone. The Vineyard Wind 1

⁸ The Vineyard Wind 1 COP Approval can be found here:
https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/VW1-COP-Project-Easement-Approval-Letter_0.pdf

COP Approval contains 79 pages of Terms and Conditions that provide a comprehensive suite of protective measures related to navigational and aviation safety, national security, protected species and habitat, commercial fisheries, for-hire recreational fishing, EJ, and cultural resources. These conditions represent the culmination of over four years of extensive coordination with BOEM, other federal, state, and local agencies, tribes, environmental organizations, and stakeholders to develop innovative measures that afford the highest levels of environmental protection while maintaining project viability.

Notably, the Vineyard Wind 1 COP Approval includes well over 50 avoidance, minimization, and mitigation measures to protect marine mammals and sea turtles, such as seasonal and temporal restrictions on pile driving, vessel speed restrictions, and pile driving soft-start. Between the initial submission of the Vineyard Wind 1 COP in December 2017 and final COP Approval in July 2021, Vineyard Wind significantly refined these measures through an iterative and adaptive process in consultation with NMFS, BOEM, and environmental organizations. As recently as spring 2021, Vineyard Wind proposed additional measures to protect NARW beyond those included in the historic North Atlantic Right Whale Agreement (see Section 7.3), NMFS' Biological Opinion, and BOEM's Final EIS for inclusion in the COP Approval. Vineyard Wind's industry-leading efforts to develop environmental protection measures and initiatives that proactively conserve and protect threatened and endangered species are further described in the Environmental Mitigation Plan provided as Attachment 7.5-1. Vineyard Wind expects to build upon its groundbreaking work to develop these measures with agencies and stakeholders as the Project moves forward.

Measures for Fisheries

To address mariner and fisheries stakeholder concerns during the Vineyard Wind 1 development phase, we took the unprecedented step of completely modifying the project's layout to adopt a more uniform, east-west and north-south grid pattern with one NM spacing between WTG/ESP positions. The 1 x 1 NM WTG/ESP layout was adopted to facilitate vessel navigation and commercial fishing activities in direct response to feedback from the commercial fishing industry. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

To further mitigate potential impacts to commercial fisheries from the Vineyard Wind 1 project, Vineyard Wind is establishing over \$40 million in fisheries compensation/mitigation funds.⁹ Vineyard Wind's Fisheries Manager and Fisheries Liaisons are also conducting individual outreach to fishing vessel owners to identify opportunities for fishing vessels to provide services to Vineyard Wind. Additional measures to reduce potential impacts to fisheries from our projects include the implementation of a Fisheries Communication Plan, our extensive fisheries science program, and marine navigation lighting and marking of the WTGs, which are discussed further in the Fisheries Mitigation Plan provided as Attachment 7.4-1.

Measures for Tribes

Vineyard Wind 1 was the first commercial-scale offshore wind project to finalize a Memorandum of Agreement (MOA) with Section 106 consulting parties, which memorializes Vineyard Wind 1's mitigation measures for cultural, historic, and archaeological resources. The mitigation measures include completion of ethnographic studies, preparation of National Register of Historic Places (NRHP) nomination packages, and submerged ancient landform studies, among others. This summer, Vineyard Wind held several workshops with tribes and the Massachusetts Board of Underwater Archaeological Resources to further refine the submerged ancient landform studies, which are currently underway. Environmental data collected during Vineyard Wind 1 will be shared with tribes. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Measures for Environmental Justice Communities

As described above, Vineyard Wind is implementing measures for EJ Populations, such as developing a local hiring plan, increasing tribal awareness of compensation/mitigation funds, and sharing environmental data with tribes. Additionally, during the Vineyard Wind 1 permitting process, Vineyard Wind eliminated the option to use the New Hampshire Avenue landfall site. Elimination of this landfall site avoided impacts to marine-dependent businesses in Lewis Bay and Hyannis Harbor, reducing potential impacts on employment and services in the surrounding EJ Populations. Our EJ work is set to expand with the \$15 million RAP established for Vineyard Wind 1 and additional programs outlined in this proposal (see Section 13).

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

7.4 FISHERIES MITIGATION PLAN

Please provide information on any fisheries mitigation measures designed to avoid, minimize and mitigate impacts on the commercial fishing industry, including but not limited to addressing all criteria specified under Fishing Impacts in Appendix J.

As part of the Vineyard Wind South COP, Vineyard Wind thoroughly analyzed the potential effects of Phase 2 (which includes the Project) on commercial and recreational fisheries and identified measures to first avoid, then minimize, and lastly mitigate potential impacts. This assessment, which incorporates Vineyard Wind’s expertise gained during the Vineyard Wind 1 permitting process, can be found in Sections 7.5 and 7.6 of COP Volume III. Appendix III-I of the COP presents the Navigation Safety Risk Assessment, which analyzes existing fishing vessel use within the region surrounding the Project and presents measures to mitigate impacts to navigation during construction and operations. Appendix III-N of the COP provides draft estimates of economic exposure to commercial fisheries resulting from Vineyard Wind South. The Vineyard Wind South COP can be found on BOEM’s website at <https://www.boem.gov/renewable-energy/state-activities/vineyard-wind-south-construction-and-operations-plan>.

The Project’s Fisheries Mitigation Plan, which provides information on Vineyard Wind’s measures to avoid, minimize, and mitigate potential impacts on the commercial fishing industry, including the criteria specified under Fishing Impacts in Appendix J, is provided as Attachment 7.4-1. The Fisheries Mitigation Plan is based in large part on the information contained in the Vineyard Wind South COP for Phase 2.

The Fisheries Mitigation Plan demonstrates our commitment and ability to overcome challenging circumstances and develop productive working relationships with fisheries stakeholders. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Vineyard Wind's Fisheries Communication Plan (FCP) is provided as Attachment 7.4-2.¹⁰

7.5 ENVIRONMENTAL MITIGATION PLAN

Provide a preliminary environmental characterization of the site and project, including both construction and operation. In addition, the bidder should identify environmental impacts associated with the proposed project and any potential impediments to development. A plan to avoid, minimize, or mitigate such impacts or impediments should also be included. The analysis should address all criteria specified under Environmental Impacts in Appendix J.

As part of the Vineyard Wind South COP, Vineyard Wind has completed a thorough review of existing literature and site-specific data to characterize the species and habitats within the area potentially affected by the Project. We have also already analyzed the potential effects of the Project¹¹ to physical, atmospheric, and biological resources and identified avoidance, minimization, and mitigation measures in consultation with regulators and stakeholders. This comprehensive environmental impact assessment is provided in COP Volume III, which can be found on BOEM's website at: <https://www.boem.gov/renewable-energy/state-activities/vineyard-wind-south-construction-and-operations-plan>.

The Environmental Mitigation Plan, which provides an environmental characterization of the site and Project and addresses the criteria specified under Environmental Impacts in Appendix J, is provided as Attachment 7.5-1. The Environmental Mitigation Plan is based in large part on the information contained in the Vineyard Wind South COP for Phase 2.

The Environmental Mitigation Plan outlines our industry-leading efforts to develop environmental protection measures and initiatives that proactively conserve and protect threatened and endangered species. [REDACTED]

[REDACTED]

¹⁰ Vineyard Wind is currently updating our FCP to reflect the recent segregation of Lease Area OCS-A 0501, which resulted in the creation of Lease Area OCS-A 0534, and a reorganization of the fisheries outreach team's structure. The version of the FCP provided with this proposal does not reflect these changes.

[REDACTED]

7.6 ENVIRONMENTAL JUSTICE IMPACT ASSESSMENT

Please provide information on potential impacts on Environmental Justice Populations and host communities, including but not limited to addressing all criteria specified under Environmental Justice Impacts in Appendix J.

Please propose a strategy plan to track and report on the status of environmental justice impacts, and engagement and employment (training, recruitment and hiring goals) opportunities. Strategy plans may include a commitment with a government entity to share said tracking and reporting. If such a commitment is not presented, DOER will work with selected bidder after selection but before contract execution to implement an agreed-upon tracking and reporting strategy.

An EJ impact assessment that provides information on potential impacts to EJ Populations and host communities, addresses all criteria specified under EJ Impacts in Appendix J, and describes tracking and reporting plans is provided as Attachment 7.6-1.

7.7 PUBLIC SUPPORT AND COMMUNITY ENGAGEMENT PLAN

Provide documentation identifying the level of public support for the project including letters from public officials, newspaper articles, etc. Include information on specific localized support and/or opposition to the project of which the bidder is aware. Provide copies of any agreements with communities and other constituencies impacted by the project. Provide a stakeholder map and a plan for community engagement activities and targeted stakeholder outreach.

Vineyard Wind's community engagement work in Massachusetts over the past decade has fostered strong community support for offshore wind. Vineyard Wind is viewed by many as a trusted community partner and our first project, Vineyard Wind 1, enjoys substantial public support. The Project will benefit greatly from these efforts and the relationships we have developed along the way. [REDACTED]

Community Engagement Plan

Vineyard Wind has developed a Community Engagement Plan (CEP) for the Project (see Attachment 7.7-1). The CEP builds on the experience gained developing Vineyard Wind 1 and provides a high degree of assurance that potentially impacted communities will support the Project. The CEP includes a stakeholder map and describes community engagement strategies for the Project's design and permitting, construction, and operations phases.

The CEP outlines a thoughtful approach to cultivate Project support, respectfully respond to and work with opposition, and develop community benefits on a collaborative basis. The CEP's key objectives are to:

- identify and provide accurate, factual, timely, and relevant information to stakeholders;
- build and maintain trust and constructive stakeholder relationships;
- provide a range of opportunities for meaningful public engagement and stakeholder consultation;
- ensure the Project and its benefits are well-understood by communities, stakeholders, opinion leaders, and public officials;
- incorporate stakeholder input into Project design, construction, and operations plans wherever feasible; and
- deliver tangible and direct economic benefits from the Project to local communities.

[REDACTED]

Community Activities and Events

Vineyard Wind spends a great deal of time organizing, attending, speaking at, and sponsoring community events. Vineyard Wind believes this kind of engagement is not only important to build support for its projects but is a necessary part of being a good corporate citizen. Vineyard Wind's regular newsletters showcase the range of events that staff at all levels of Vineyard Wind participate in on a regular basis. These include career fairs for high school students, presenting in classrooms to elementary school students, speaking at community roundtables on climate change, sponsoring fisheries-related trade shows, and organizing events aimed at increasing consumer awareness around renewable energy and electric vehicle transport solutions.

[REDACTED]

[REDACTED]

[Redacted]

Public Support

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Additional support for Vineyard Wind’s offshore wind development efforts has been shown during the first public comment period for the Vineyard Wind South COP. BOEM’s issuance of an NOI for the COP opened a public comment period that ended on July 30, 2021. A total of 83 oral and written comments were received with 65 letters expressing support for Vineyard Wind and/or offshore wind. Furthermore, a grassroots effort organized by the Environmental League of Massachusetts, urging the “swift and thorough review” of the Vineyard Wind South COP, resulted in more than 420 supportive petition signatures. Example letters, transcripts of oral comments, and the petition are provided in Attachment 7.7-3.

During this public comment period, BOEM hosted three virtual scoping meetings for the Vineyard Wind South COP. Thirty-three of the 38 comments made during these meetings were supportive of Vineyard Wind, the Vineyard South COP, and/or offshore wind. Three of the 38 comments expressed concern about Vineyard Wind South and/or offshore wind while the remaining two comments expressed unclear support or opposition for the Vineyard Wind South COP and/or offshore wind.

[REDACTED]

Vineyard Wind in the Media

Vineyard Wind’s offshore wind development efforts have attracted significant media coverage, the vast majority of which has been positive. Noteworthy news stories from 2021 include the issuance of the ROD for Vineyard Wind 1, Vineyard Wind’s signing of the first Project Labor Agreement in US offshore wind, and BOEM’s issuance of the NOI for the Vineyard Wind South COP. A selection of news stories is included as Attachment 7.7-4.

Agreements

[REDACTED]

[REDACTED]

Good Neighbor Agreement

A first in the US offshore wind industry, Vineyard Wind entered into a Good Neighbor Agreement with the Town of Nantucket and several other island organizations that memorializes agreements on design features to minimize potential visual impacts to the island as well as collaboration and financial support for the community to pursue climate mitigation and resiliency projects. The Town has pledged to work with Vineyard Wind to enhance our community engagement efforts on Nantucket as we pursue regulatory approvals at the local, state, and federal level (see Attachment 7.7-5).

[REDACTED]

Community Benefits Agreement

Vineyard Wind will continue its partnership with Vineyard Power, a 501(c)12 non-profit community-owned energy cooperative on Martha's Vineyard. We have a long-standing collaborative partnership with Vineyard Power, which began in 2010 and was formalized in 2015 when the two parties entered into the nation's first offshore wind CBA. Among other things, the CBA has conferred to Vineyard Power a significant and defined community engagement role on Martha's Vineyard and secured community benefits funds.

Vineyard Power also serves as a program partner, along with Citizens Energy Corporation, Inc., for the RAP. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

7.8 NEW CLASS I ELIGIBLE RESOURCE

Provide documentation demonstrating that the project will be qualified as New Class I Renewable Portfolio Standard Eligible Resource under M.G.L. c. 25A, § 11F, and 225 CMR 14.00.

The Project is a new offshore wind energy generation resource located within the ISO-NE Control Area that will begin operating after December 31, 1997 and generate electricity using wind energy as its fuel source. The Project will therefore qualify as a “New Class I Renewable Portfolio Standard Eligible Resource” as defined under M.G.L. c. 25A § 11F and 225 C.M.R. 14.00. Vineyard Wind will provide documentation demonstrating such qualification at the appropriate time as per the regulations.

7.9 NEPOOL GIS ACCOUNT

All bidders must include sufficient information and documentation that demonstrates that the bidder will utilize an appropriate tracking system to ensure a unit-specific accounting of the delivery of Offshore Wind Energy Generation, to enable the Department of Environmental Protection, in consultation with DOER, to accurately measure progress in achieving the commonwealth's goals under chapter 298 of the acts of 2008 or Chapter 21N of the General Laws. The RECs associated with Offshore Wind Energy Generation must be delivered into the Distribution Companies’ NEPOOL GIS accounts.

Vineyard Wind will utilize the New England Power Pool Generation Information System (NEPOOL GIS) as the tracking system to ensure a unit-specific accounting of the delivery of

Offshore Wind Energy Generation, to enable the Massachusetts Department of Environmental Protection, in consultation with the Massachusetts Department of Energy Resources, to accurately measure progress in achieving the Commonwealth's goals under chapter 298 of the acts of 2008 or Chapter 21N of the General Laws. Additionally, Vineyard Wind hereby certifies that the Renewable Energy Credits associated with the Project's Offshore Wind Energy Generation will be delivered into the Distribution Companies' NEPOOL GIS accounts according to the terms specified in any power purchase agreement.

7.10 CLAIMS OR LITIGATION

Identify any existing, preliminary or pending claims or litigation, or matters before any federal agency or any state legislature or regulatory agency that might affect the feasibility or timing of the project or the ability or timing to obtain or retain the required permits for the project.

There are no existing, preliminary, or pending claims or litigation, or matters before any federal agency or any state legislature or regulatory agency that might affect the feasibility of the Project or the ability to obtain or retain the required permits for the Project.

SECTION 8

ENGINEERING AND TECHNOLOGY; COMMERCIAL ACCESS TO EQUIPMENT

8.0 OVERVIEW

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

² Park City Wind is an 804 MW project that Vineyard Wind is developing in the northern portion of Lease Area OCS-A 0534 (and potentially a portion of Lease Area OCS-A 0501). Park City Wind constitutes Phase 1 of Vineyard Wind South (see Section 7).

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

8.1 ENGINEERING PLAN

Provide a reasonable but preliminary engineering plan which includes the following information:

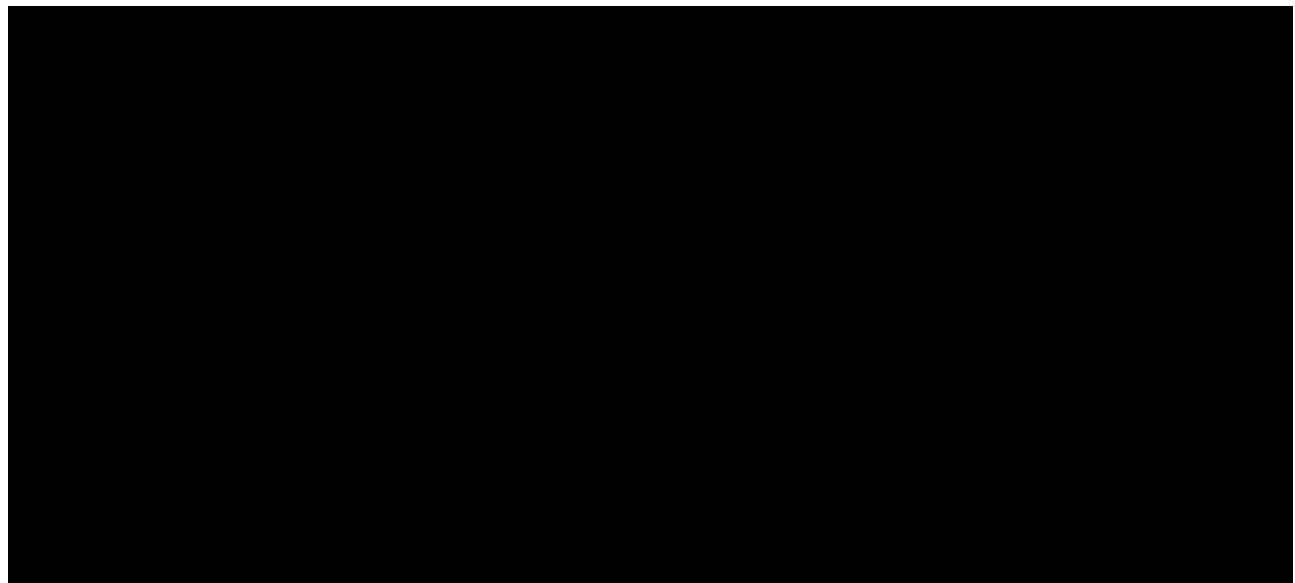
- i. Type of generation and delivery technology
- ii. Major equipment to be used (including nacelle, hub, blade, tower, foundation, delivery facilities structures and platforms, electrical equipment and cable), including the primary and alternative turbine equipment and their expected capacity rating.
- iii. Manufacturer of each of the equipment components listed above as well as the location of where each component will be manufactured.
- iv. Status of acquisition of the equipment components, including whether orders are in place and/ or production slots secured
- v. Whether the bidder has a contract for the equipment. If not, describe the bidder's plan for securing equipment and the status of any pertinent commercial arrangements
- vi. Equipment vendors selected/considered
- vii. Track record of equipment operations
- viii. If the equipment manufacturer has not yet been selected, identify in the equipment procurement strategy the factors under consideration for selecting the preferred equipment

Type of Generation and Delivery Technology

The Project will generate and reliably deliver cost-effective renewable electricity to Massachusetts through its Offshore Wind Energy Generation facility and electrical transmission system. The major technology and equipment groups that comprise the Project are the WTGs, foundations, inter-array cables, electrical service platform (ESP), offshore export cables, onshore export cables, and onshore substation, which are illustrated in Figure 8.1-1 and described below.



We are therefore confident that the Project's preliminary engineering plan will deliver a robust offshore wind project in support of the Massachusetts' climate and renewable energy goals.



Major Equipment Components

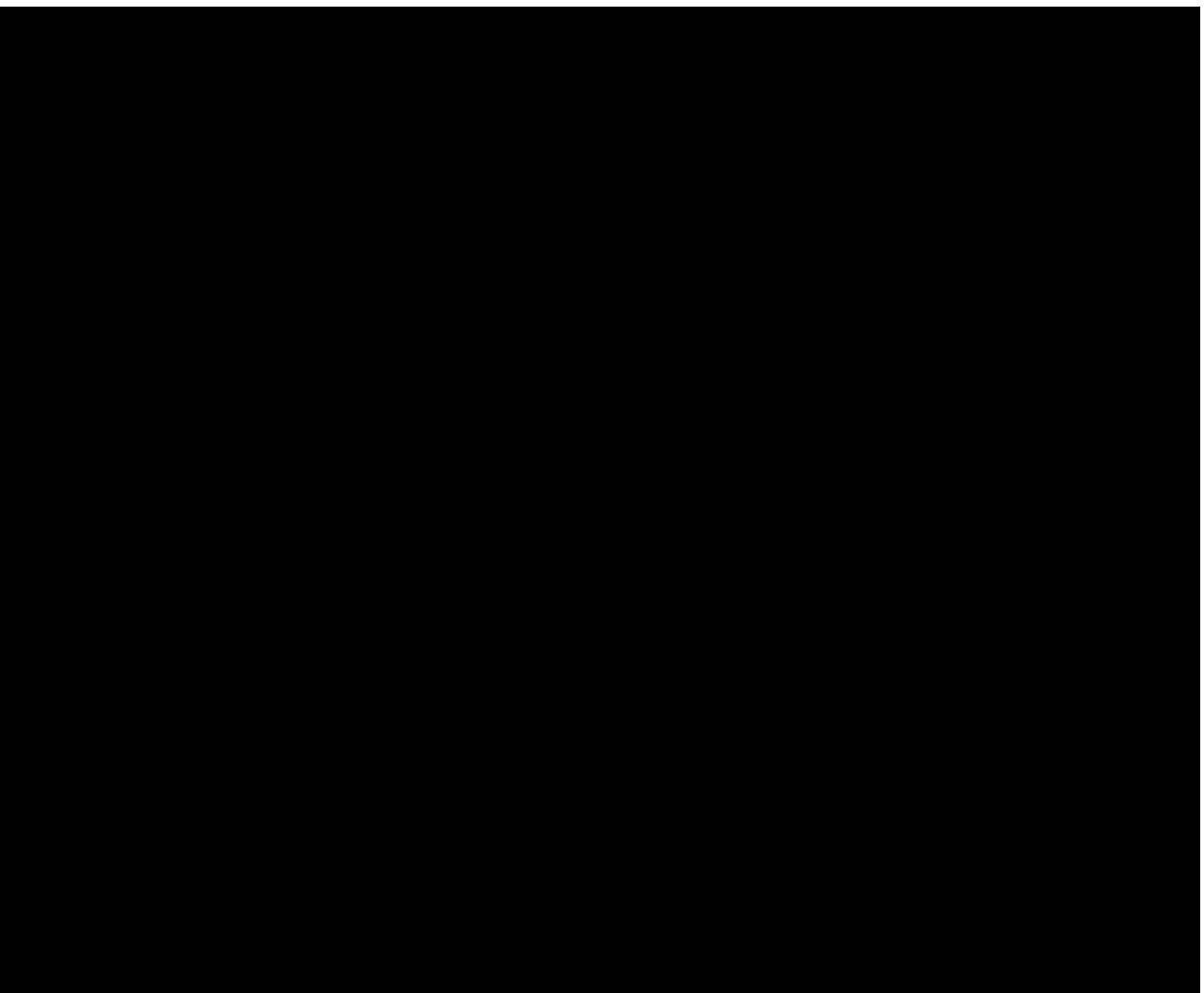
Wind Turbine Generators

A WTG consists of a tower, a nacelle, and a three-bladed rotor connected at the hub. [REDACTED]

[REDACTED] The nacelle (housing) and rotor hub are located on top of the WTG tower. The nacelle contains a driveshaft and gearbox or direct-drive system (depending on WTG type), as well as the electrical generator, electric motors to yaw and pitch the WTG, and workspace. The nacelle also contains a full array of instrumentation, controls, fire protection systems and other safety equipment, ventilation and cooling, and ancillary equipment. Wind sensors mounted on top of the nacelle are used to control the yaw and pitch system. The yaw system turns the

nacelle into the wind to maximize power production and out of the wind to maintain the WTG's safety in high winds. The blade pitch controllers adjust the angle of the blades to optimize power production whilst mitigating loads under the prevailing conditions. [REDACTED]

A schematic of a typical WTG of the type planned for the Project is provided as Figure 8.1-2. The technical specifications of the WTG considered for the Project are included as Attachment 8.1-1.



Foundations

The selection of a foundation concept is one of the most crucial decisions made in offshore wind project design with regards to structural resiliency. Vineyard Wind has conducted significant technical and commercial due diligence to develop and de-risk the foundation

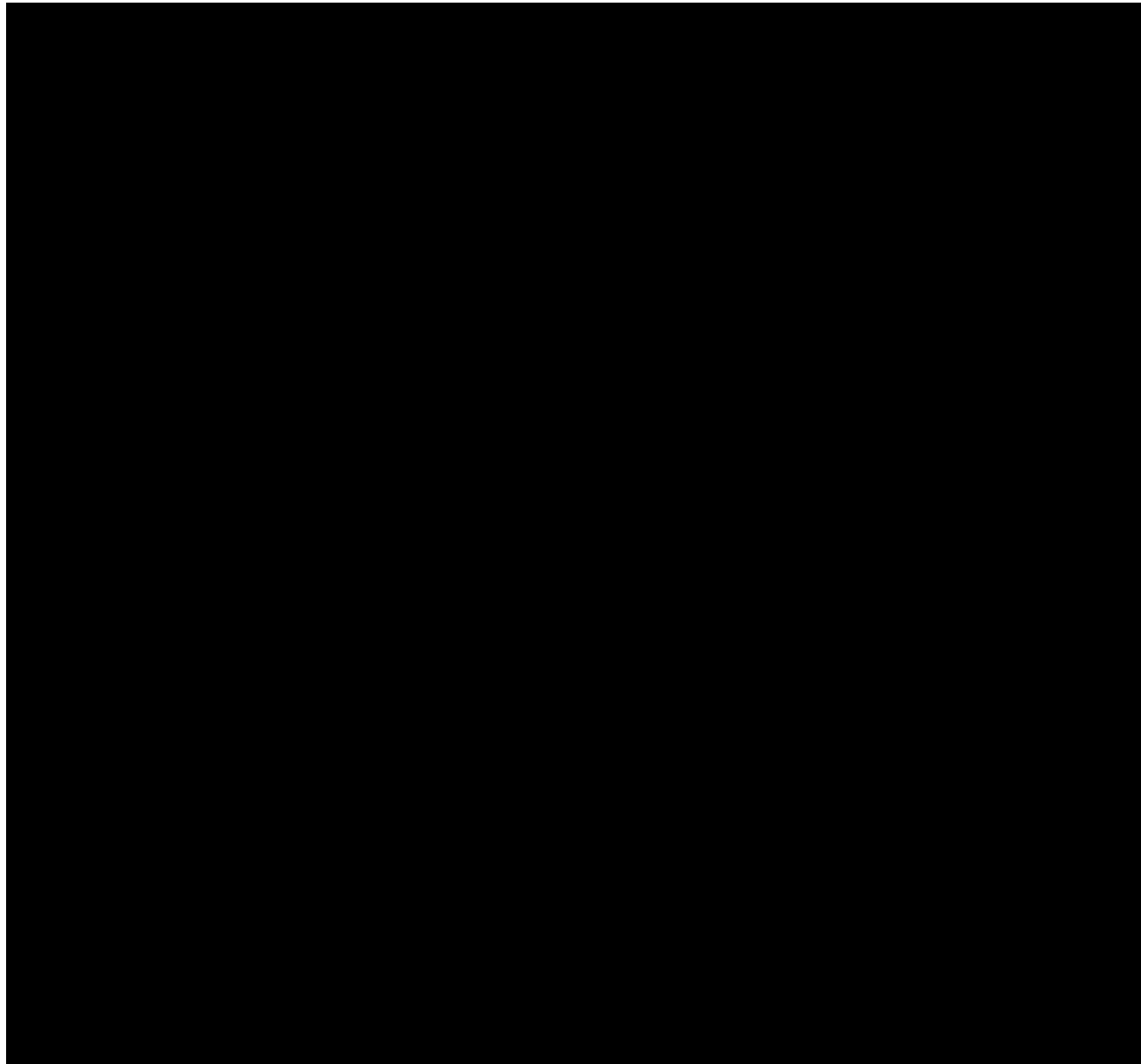
requirements for the Project. [REDACTED]

[REDACTED]

[REDACTED]

Monopile Foundation Concept

A monopile is a single, hollow cylinder fabricated from steel that is driven into the seabed. A TP is mounted on top of the monopile to connect the top of the monopile to the bottom of the WTG tower. The Project's monopile foundation concept is illustrated in Figure 8.1-3.



[REDACTED]

The foundation typically includes the following: inter-array cable hang-off supports, corrosion protection systems (both internally and externally), a boat landing or personnel hoist for accessing each WTG, a Davit crane(s) to lift tools and parts from the service vessel, marine

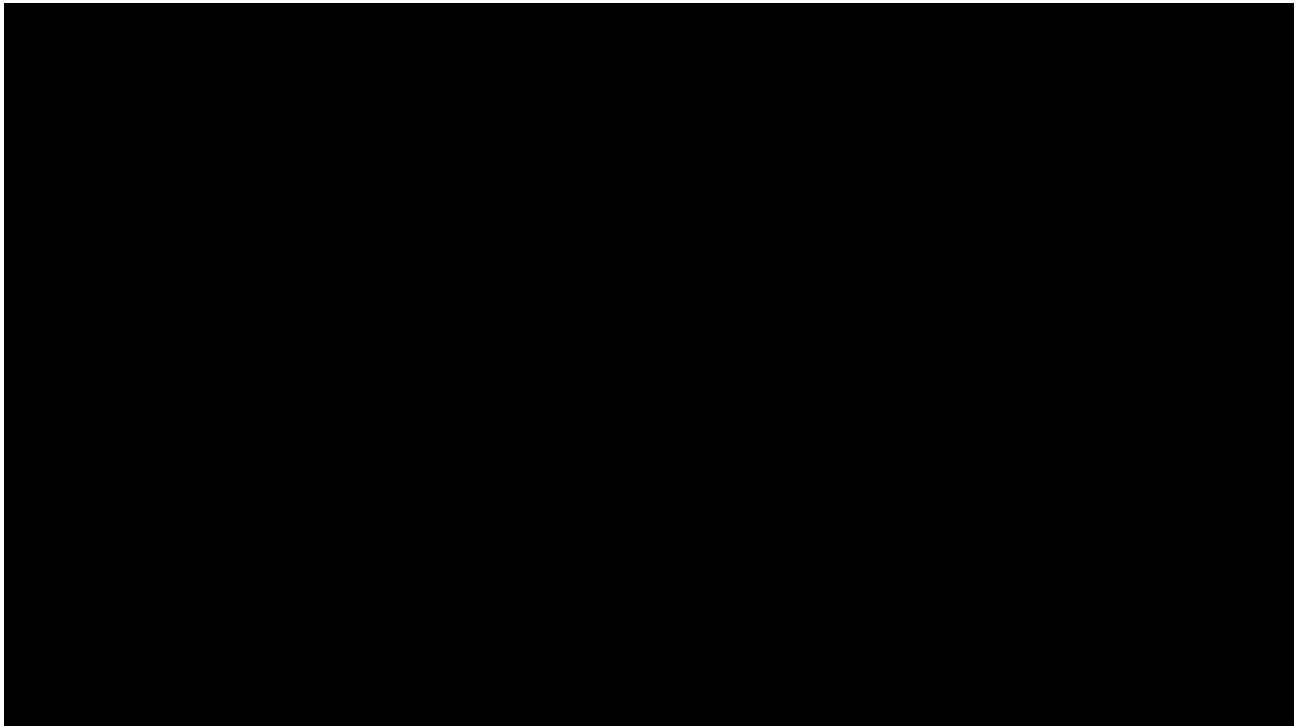
navigation aids (e.g., identification marking and lights), external and internal platforms (i.e., scaffolding), and various electrical components. Scour protection is often installed around each WTG foundation to protect the foundations from scour development.

Jacket Foundation Concept

The jacket design concept consists of a three- or four-legged support structure with an integrated TP. [REDACTED]

[REDACTED]

A jacket foundation also contains secondary structures, such as boat landings, cable tubes, a tower flange for mounting the WTG, internal and external platforms, and various types of electrical equipment needed during installation and operation. A jacket is also equipped with a corrosion protection system designed in accordance with relevant standards. The jacket foundation concepts for WTGs are illustrated in Figure 8.1-4.



[REDACTED]

[REDACTED]
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[REDACTED]

Delivery Facilities

Vineyard Wind has performed extensive electrical design and installation studies to mature and optimize the Project's transmission infrastructure. These studies have incorporated significant data gathered within the Offshore Wind Energy Generation site and along the OECC. Collectively, site data, engineering studies, and supplier outreach affirm a highly viable, well advanced Offshore Delivery Facilities concept for the Project.

[REDACTED]

[REDACTED]

[REDACTED]

Inter-Array Cables

Vineyard Wind has developed a complete layout for the Project, which includes the expected inter-array cable design to connect the WTGs to the ESP.³ The 66-kV inter-array cables are typically three-core copper or aluminum cables manufactured and installed within a single armored bundle. The Project is expected to use a mixture of copper and aluminum conductors

[REDACTED]

based on electrical design studies for the Project and current commodity rates affecting supply prices in the market. [REDACTED]

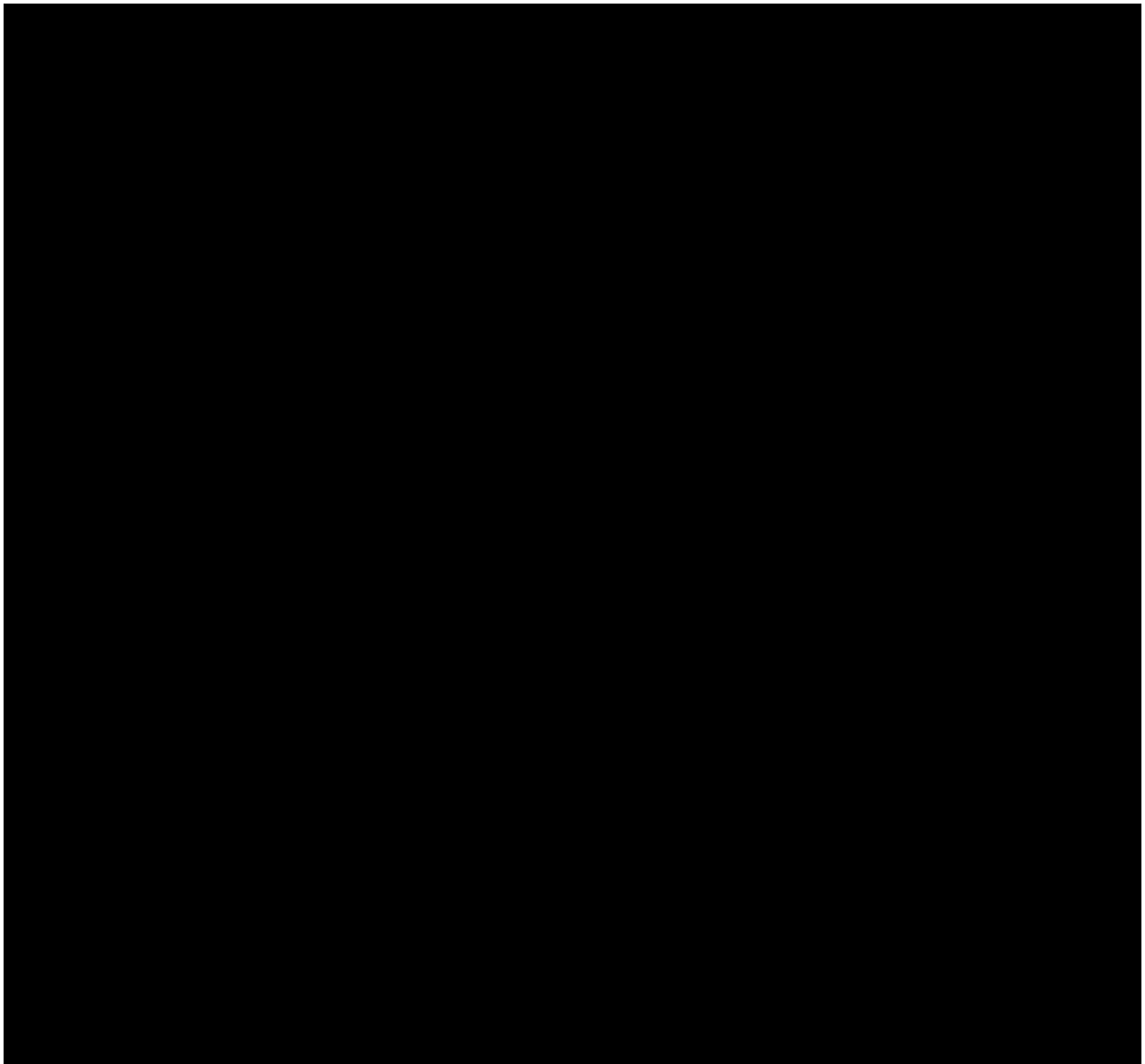
[REDACTED] with the smaller cables being used between the more distant WTGs along each string leading to the ESP.

Electrical Service Platform

The ESP is comprised of two primary structures: the topside, which contains the electrical components and is located above water, and the foundation substructure, which is mainly below water. The ESP topside is typically mounted on a jacket foundation, as depicted in Figure 8.1-5. [REDACTED]

[REDACTED]

[REDACTED]



Offshore Export Cables

Vineyard Wind has completed substantial design work to develop the offshore export cable concept for the Project. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

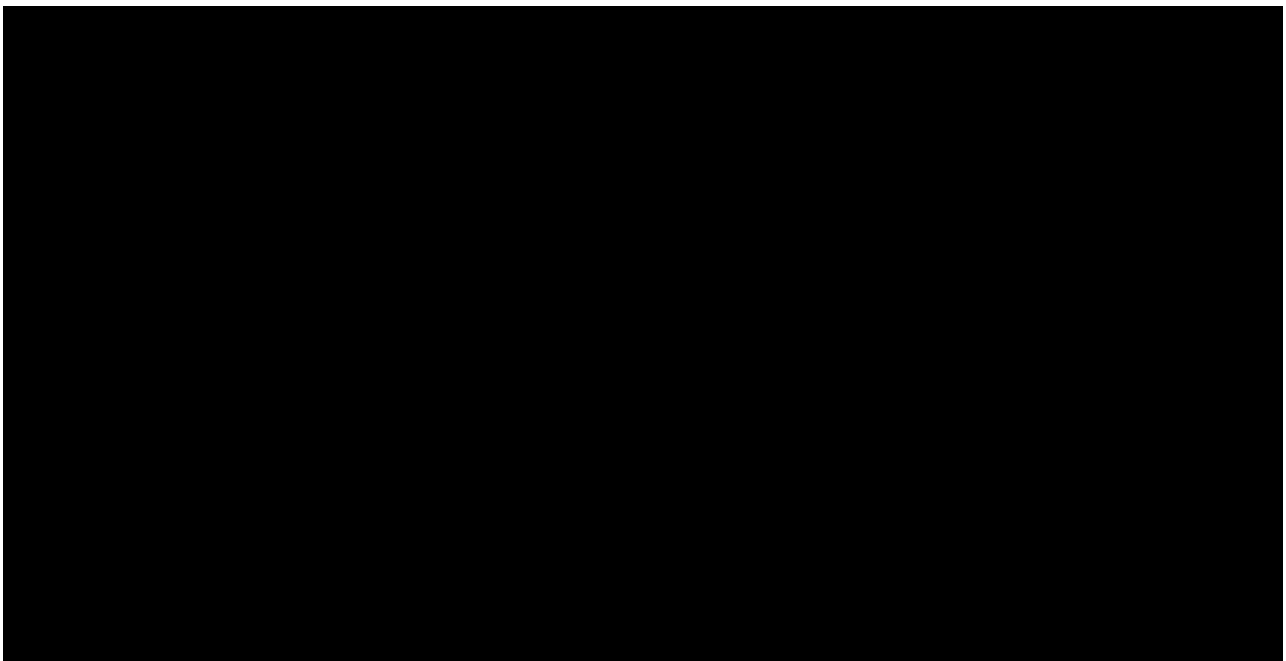
[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]



Onshore Export Cables

The Project's offshore export cables will be brought to shore and into buried transition vaults located at the landfall site. Within the transition vaults, the offshore export cables will be connected to the onshore export cables. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] The conductor material will most likely be aluminum, but copper may also be used, depending on the specific optimization of the cables and the logistics around installation. The onshore export cables are expected to be installed in concrete duct banks, which will provide the necessary mechanical protection and thermal conditions for operation

of the cables. [REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

Onshore Substation

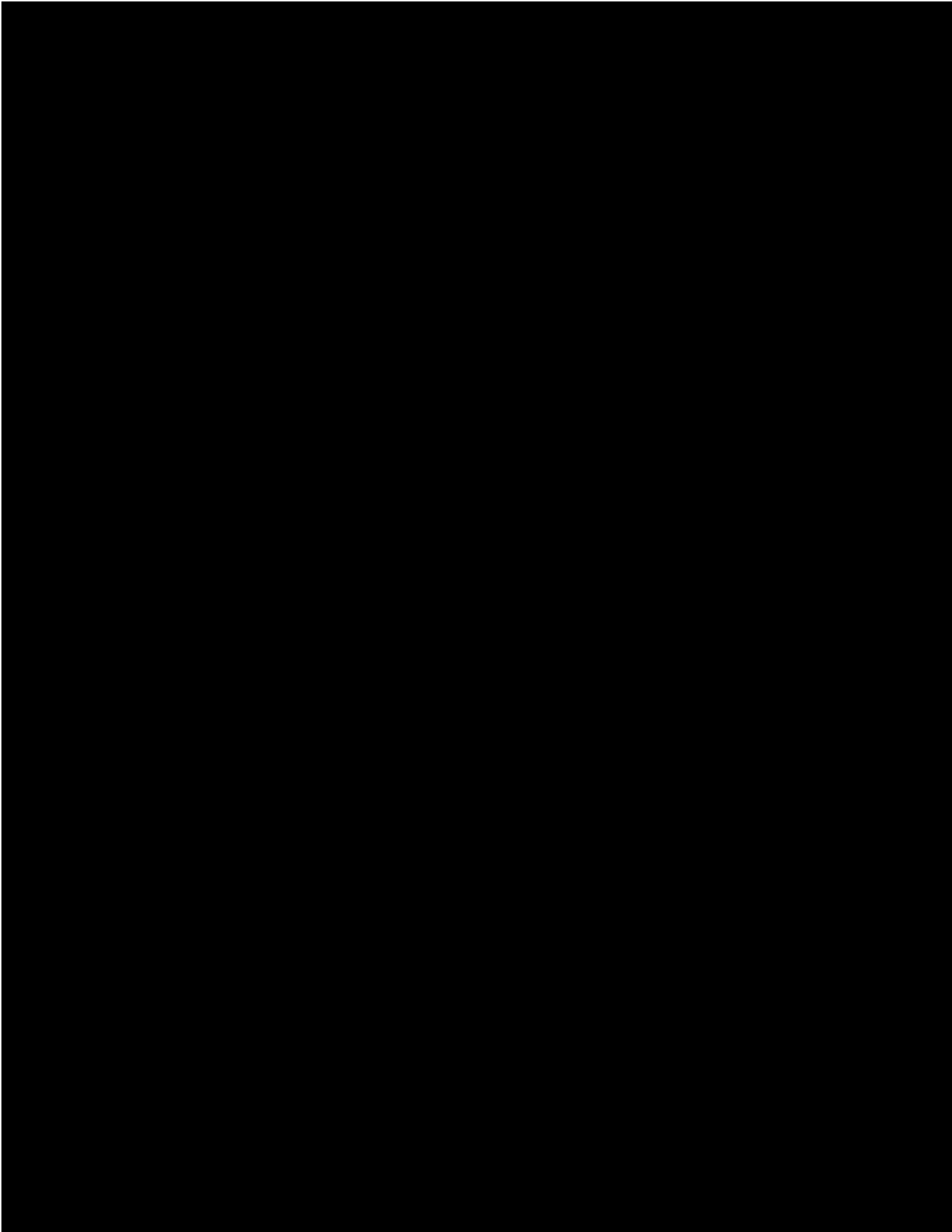
At the onshore substation, the onshore export cable voltage will step up in preparation for connection at the interconnection point. The onshore substation will likely house transformers, switchgear, and other necessary equipment and may also include a small control equipment enclosure. The onshore substation will be similar to that of our Vineyard Wind 1 and Park City Wind projects. The main electrical equipment is typical of other onshore substations and the size requirements are likewise typical for projects of this size. [REDACTED]
[REDACTED]
[REDACTED]

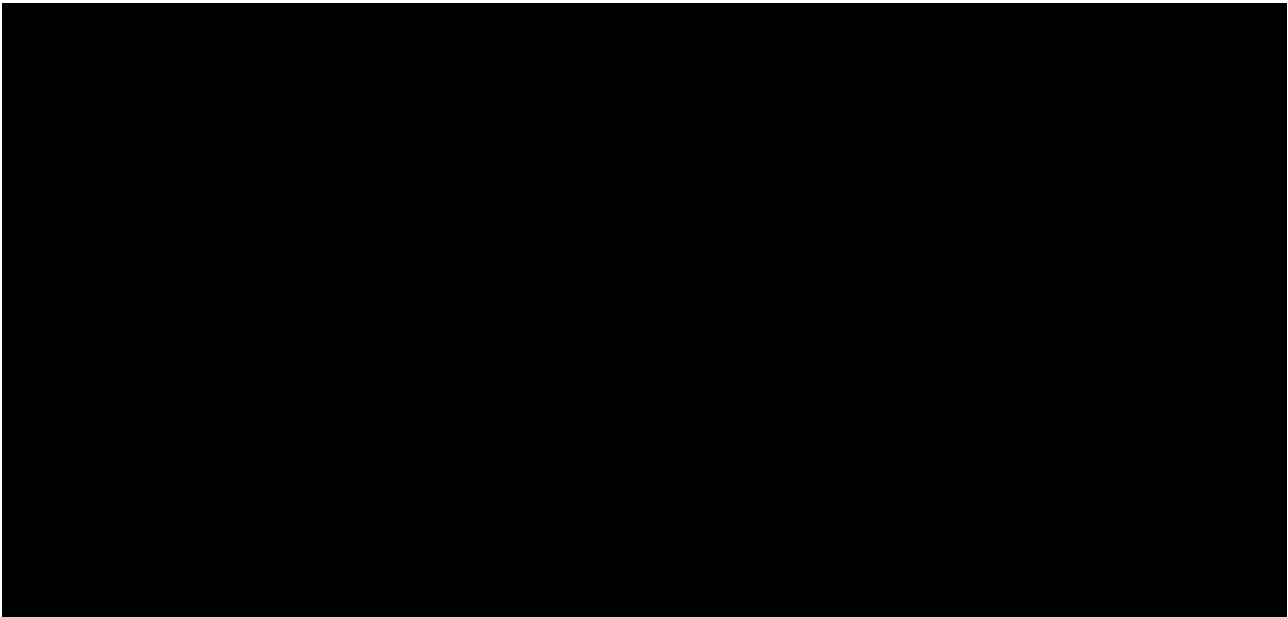
Equipment Manufacturers

Vineyard Wind has leveraged its experience in developing and completing the procurement process for Vineyard Wind 1 to identify cost-effective opportunities to use and support the offshore wind supply chain that is emerging along the US East Coast, particularly within Massachusetts.

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

Table 8.1-1 summarizes some of the potential locations for the manufacturers of key Project components. This is not a final or exhaustive list; other locations may come into play as engineering and procurement work proceeds and the East Coast's offshore wind supply chain matures.



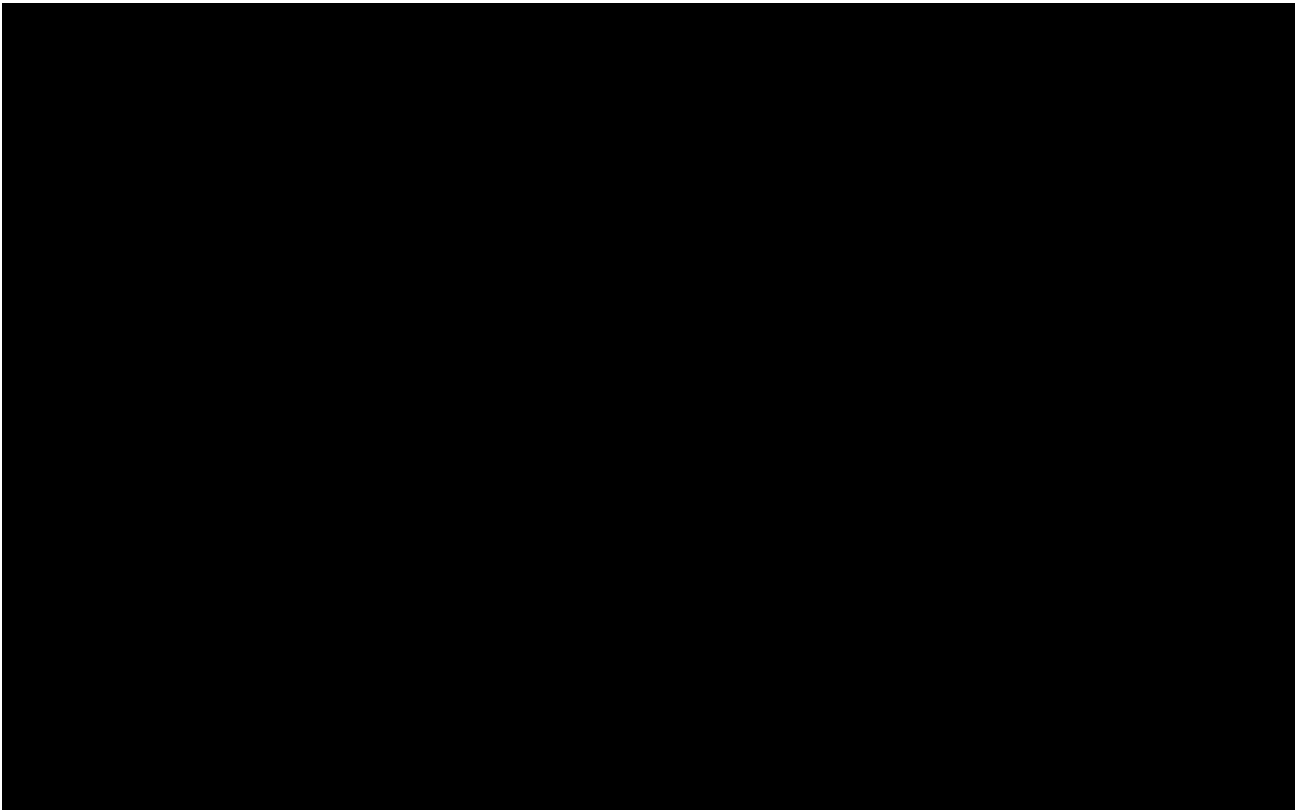


Equipment Acquisition

[REDACTED]

[REDACTED]

A list of potential component suppliers that we have engaged with is provided in Figure 8.1-7.

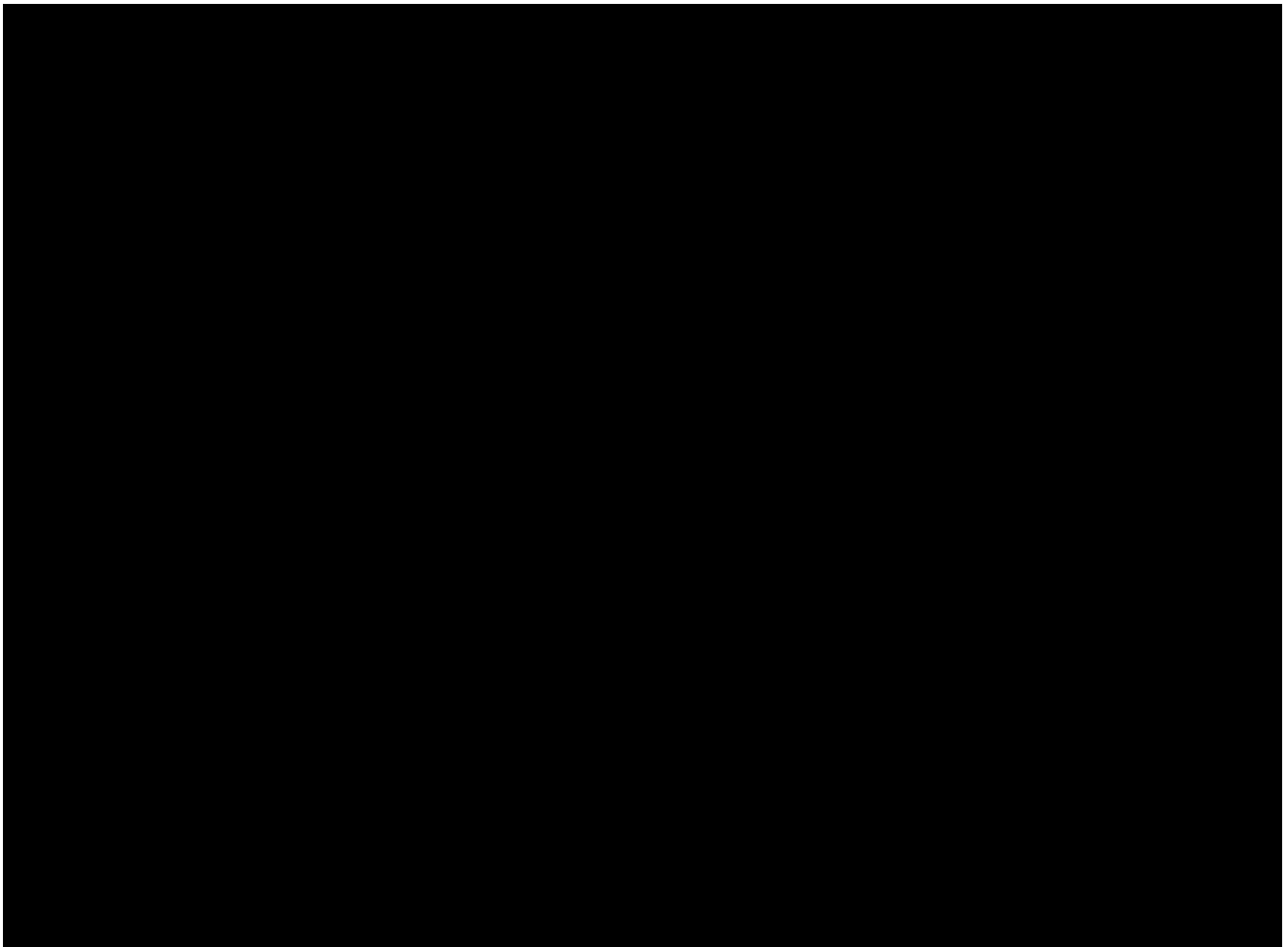


Equipment Contracting

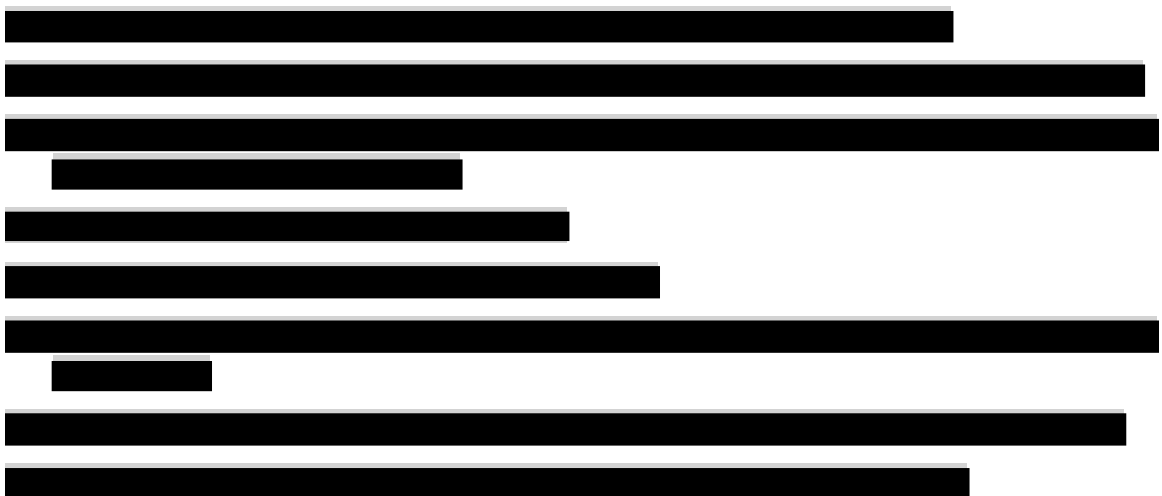
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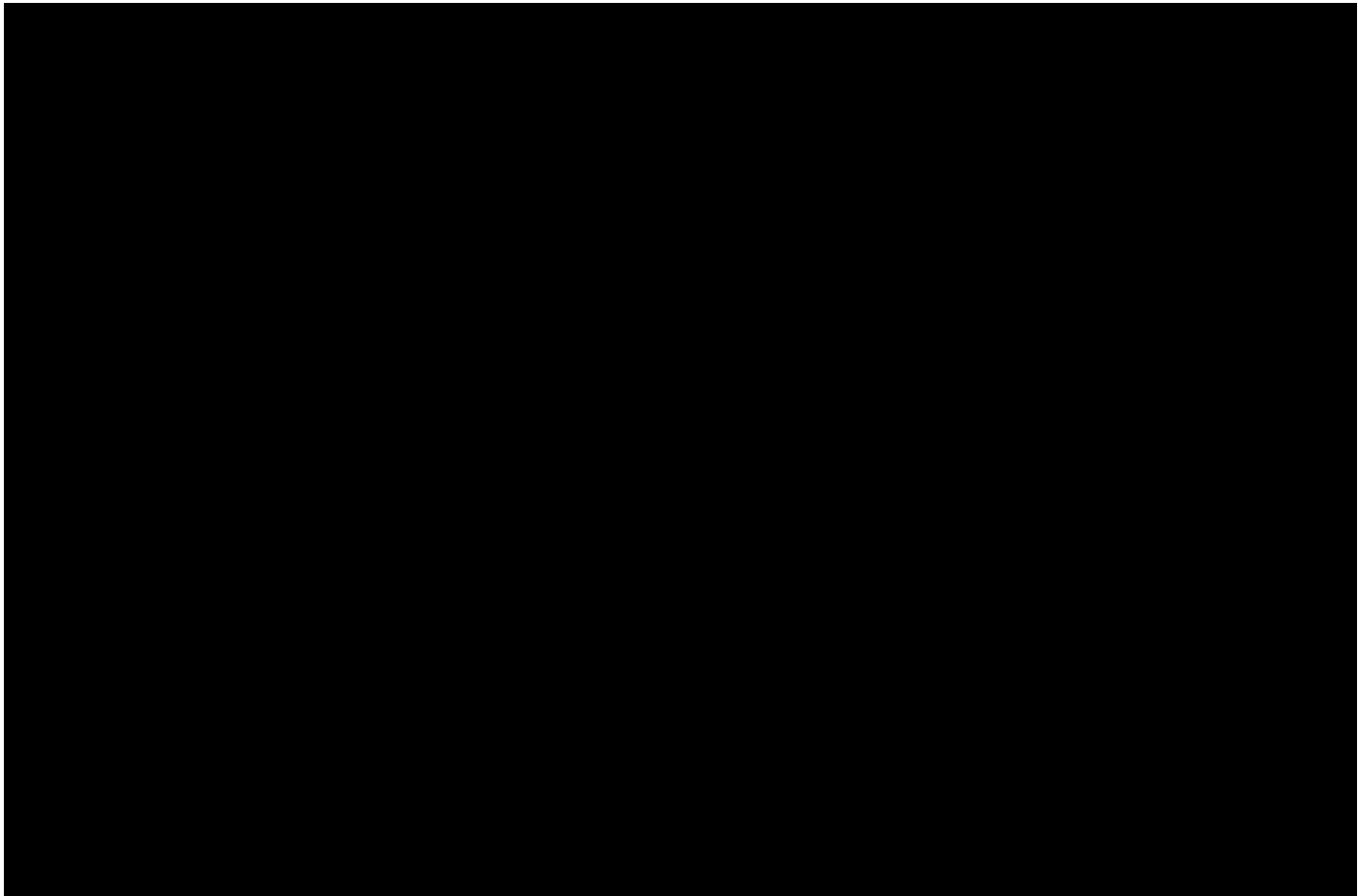
[Redacted text block]

[Redacted text] Information regarding how Vineyard Wind intends to leverage the Project's procurement process to increase diversity in the offshore wind supply chain is provided in Section 13.



The Project's procurement plan builds on the procurement processes implemented for Vineyard Wind 1 and underway for Park City Wind, as illustrated in Figure 8.1-9, creating and leveraging synergies between the projects. The procurement timeline accounts for:





Equipment Track Record

Wind Turbine Generators

The WTGs under consideration for the Project are based on well-known, proven technology and will be delivered from leading original equipment manufacturers in the industry. The latest offerings and roadmap for major WTG manufacturers are detailed below:

[Redacted]	
[Redacted]	[Redacted]
[Redacted]	[Redacted]
[Redacted]	[Redacted]
[Redacted]	[Redacted]
[Redacted]	[Redacted]
[Redacted]	[Redacted]
[Redacted]	[Redacted]
[Redacted]	[Redacted]
[Redacted]	[Redacted]
[Redacted]	[Redacted]

[REDACTED]

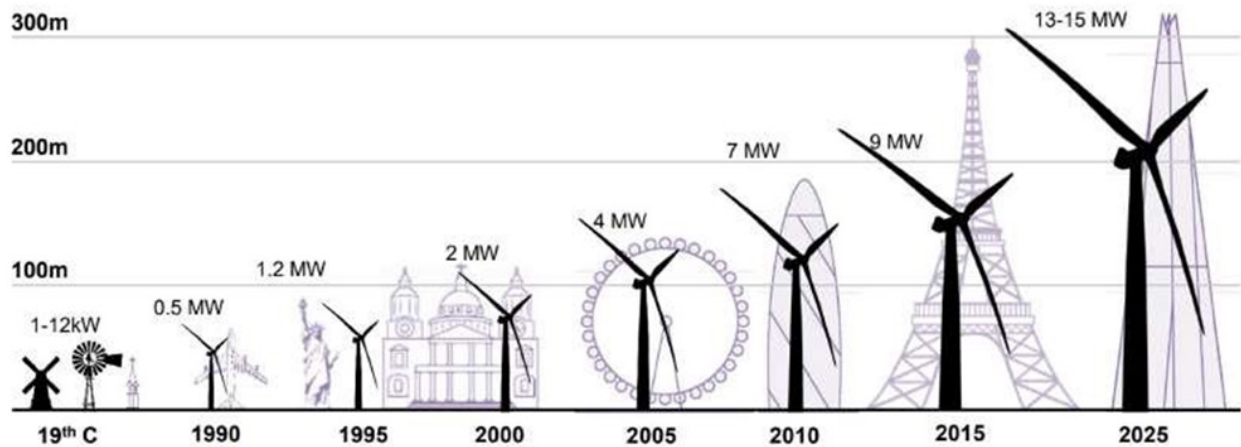
[REDACTED]

[REDACTED]

[REDACTED]

For example, Bloomberg New Energy Finance has estimated that offshore WTGs will reach ratings of 13 to 15 MW by 2025 (see Figure 8.1-10); this projection is consistent with what the market has delivered and our commercial conversations with suppliers to understand what to expect on the Project's timeline.

Figure 8.1-10 WTG Capacity Development



Source: Bloomberg New Energy Finance

Foundations

Monopiles and TPs are well-known and proven technologies used across numerous offshore wind projects worldwide. The first monopile projects were installed at the Lely offshore wind project in the Netherlands in 1994. The Blyth Offshore Windfarm (England), which began operation in 2000, and the Horns Rev 1 project (Denmark), which began operation in 2002, represented some of the first large-scale commercial deployments of the technology. Since then, more than 4,250 monopiles have been deployed in the offshore wind industry. The Shareholder Companies also have extensive experience with monopiles, including monopiles with dimensions comparable to those required for the Project.

Inter-Array Cables

Inter-array cables are a well-known technology that has been used for many years in the wind industry. The 66-kV cables proposed for the Project were developed from the proven 33-kV technology and were first tested at the Blyth demonstrator project in 2017; shortly thereafter, 66-kV cables were installed at Nissum Bredning Vind (Denmark) and Aberdeen Bay (UK). Several suppliers now have 66-kV cable designs that are fully certified and ready for commercial applications.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Electrical Service Platform

ESPs have been in use in the offshore wind industry since 2002. [REDACTED]

[REDACTED] The Shareholder Companies and members of Vineyard Wind's staff also have experience with ESPs of similar complexity.

Export Cables

[REDACTED]

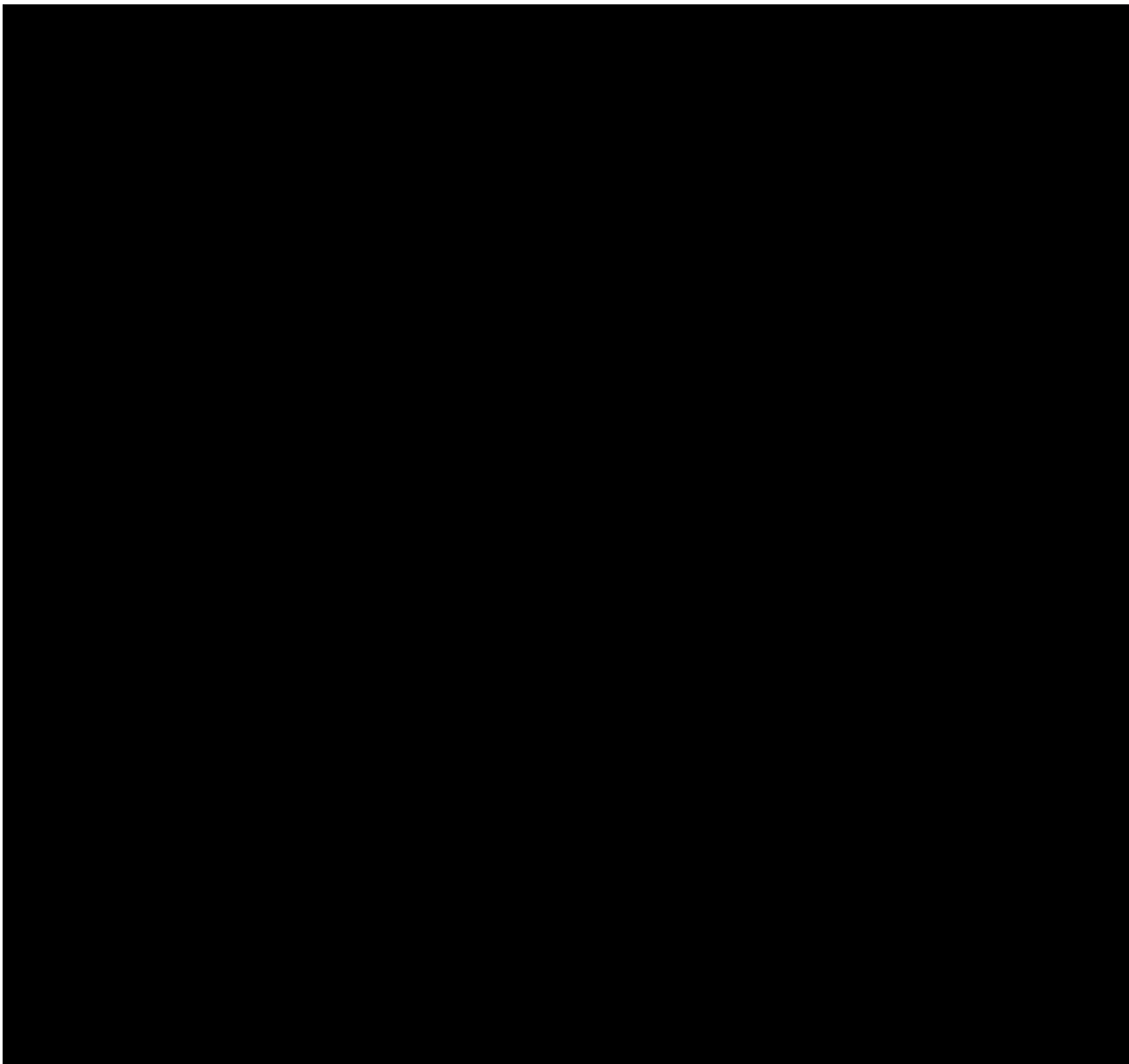
Onshore Substation

The onshore substation's electrical design will be comparable to that of most other offshore wind onshore substations. There are many experienced contractors in New England and the rest of the US with the expertise to build this type of onshore substation. For an overview of Shareholder Company affiliate Avangrid Networks' substantial onshore interconnection experience and long track record of US renewable energy project construction, refer to Attachment 12.2-1

Equipment Procurement Strategy

[REDACTED]

[REDACTED] Table 8.1-2 outlines key factors that Vineyard Wind will consider when procuring equipment for the Project.



8.2 KEY EQUIPMENT SUPPLIERS

If the bidder has not yet selected the major equipment for a project, please provide a list of the key equipment suppliers under consideration.

A list of key equipment suppliers under consideration is provided in Section 8.1 (see Figure 8.1-7). 


8.3 EQUIPMENT TRACK RECORD

Please identify the same or similar equipment by the same manufacturer that are presently in commercial operation including the number installed, installed capacity and estimated generation for the past three years.

A general overview of the equipment track record for each Project component is provided in Section 8.1.

[REDACTED]

[REDACTED]

8.4 TECHNOLOGY MATURITY

For less mature technologies or equipment, provide evidence (including identifying specific applications) that the technology or equipment to be employed for energy production is ready for transfer to the design and construction phases. Also, address how the status of the technology or equipment is being considered in the financial and permitting plans for the project. Provide the status of testing/ qualification for any equipment in development.

[REDACTED]

[REDACTED] Further, all equipment will be manufactured by or with the involvement of industry leaders. As part of the financing process, an in-depth review of the applied technologies will be performed and taken into consideration when designing the Project schedule (see Section 9).

8.5 EQUIPMENT LIST

Please indicate if the bidder has a full and complete list of equipment needed for all physical aspects of the bid, including generation facilities, turbine support structures, electrical platforms, delivery facilities, and mandatory and voluntary transmission system upgrades. If not, identify the areas of uncertainty and when the full and complete list of equipment will be identified.

Section 8.1 provides a full and complete list of all major equipment needed for all physical aspects of the bid. [REDACTED]

8.6 TIMELINE FOR SECURING EQUIPMENT

Please indicate if the bidder has secured its equipment for all physical aspects of the bid, including generation facilities, delivery facilities, and mandatory and voluntary transmission system upgrades. If not, identify the long-lead equipment and describe the timing for securing this equipment.

[REDACTED]

Section 8.1 provides details on the Project's procurement plan. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

SECTION 9

PROJECT SCHEDULE

9.0 OVERVIEW

The Project's schedule is based on the extensive experience of Vineyard Wind and that of our Shareholder Companies.¹ The experience gained advancing Vineyard Wind 1 as well as Park City Wind provides unmatched insight into permitting, procurement, and installation timelines for US offshore wind projects. As such, Vineyard Wind is better positioned than any offshore wind developer to develop, execute, and maintain a robust and prudent schedule. [REDACTED]

[REDACTED]

[REDACTED]

A high-level schedule is provided in Figure 9.0-1.

9.1 PROJECT SCHEDULE

Identify the elements on the critical path. The schedule should include, at a minimum, preliminary engineering, financing, acquisition of real property rights, Federal, state and/or local permits, licenses, environmental assessments and/or environmental impact statements (including anticipated permit submittal and approval dates), completion of interconnection studies and approvals, procurement, facility contracts, start of construction, construction

[REDACTED]

[REDACTED]

schedule, and any other requirements that could influence the project schedule and the commercial operation date.

In developing the Project's schedule and critical path, we first identified the key milestones and workstreams and then mapped out the primary activities to deliver the Project in accordance with the key milestones. The following subsections describe the high-level Project schedule along with a list of critical path activities. The schedule provided in Figure 9.1-1 shows the Project's main activities and their alignment, with additional details on sub-tasks and their alignment included in Attachment 9.1-1. The Project's critical path activities are also identified in Figure 9.1-1 and further described in Table 9.1-1.

[REDACTED]

[REDACTED]

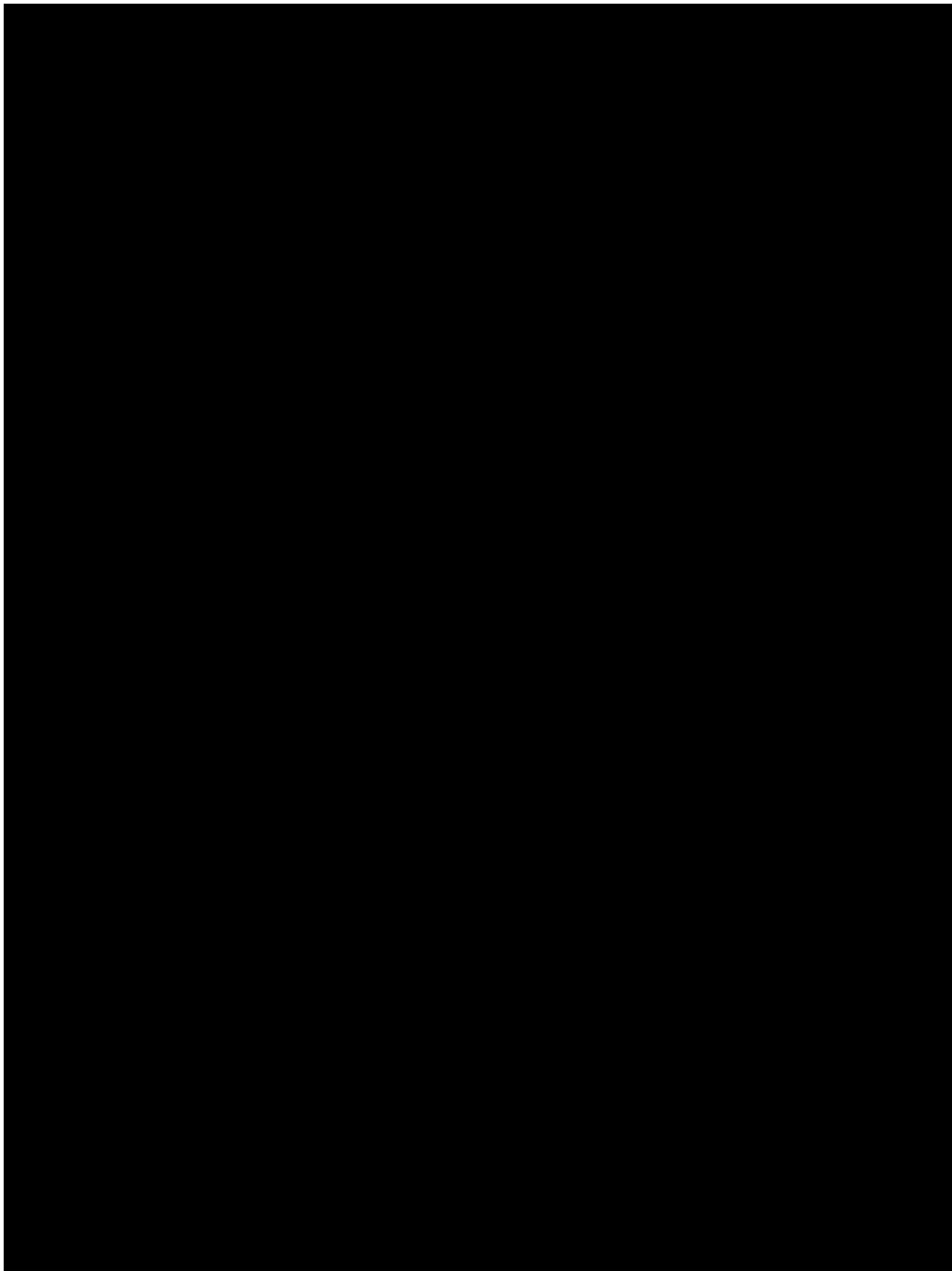
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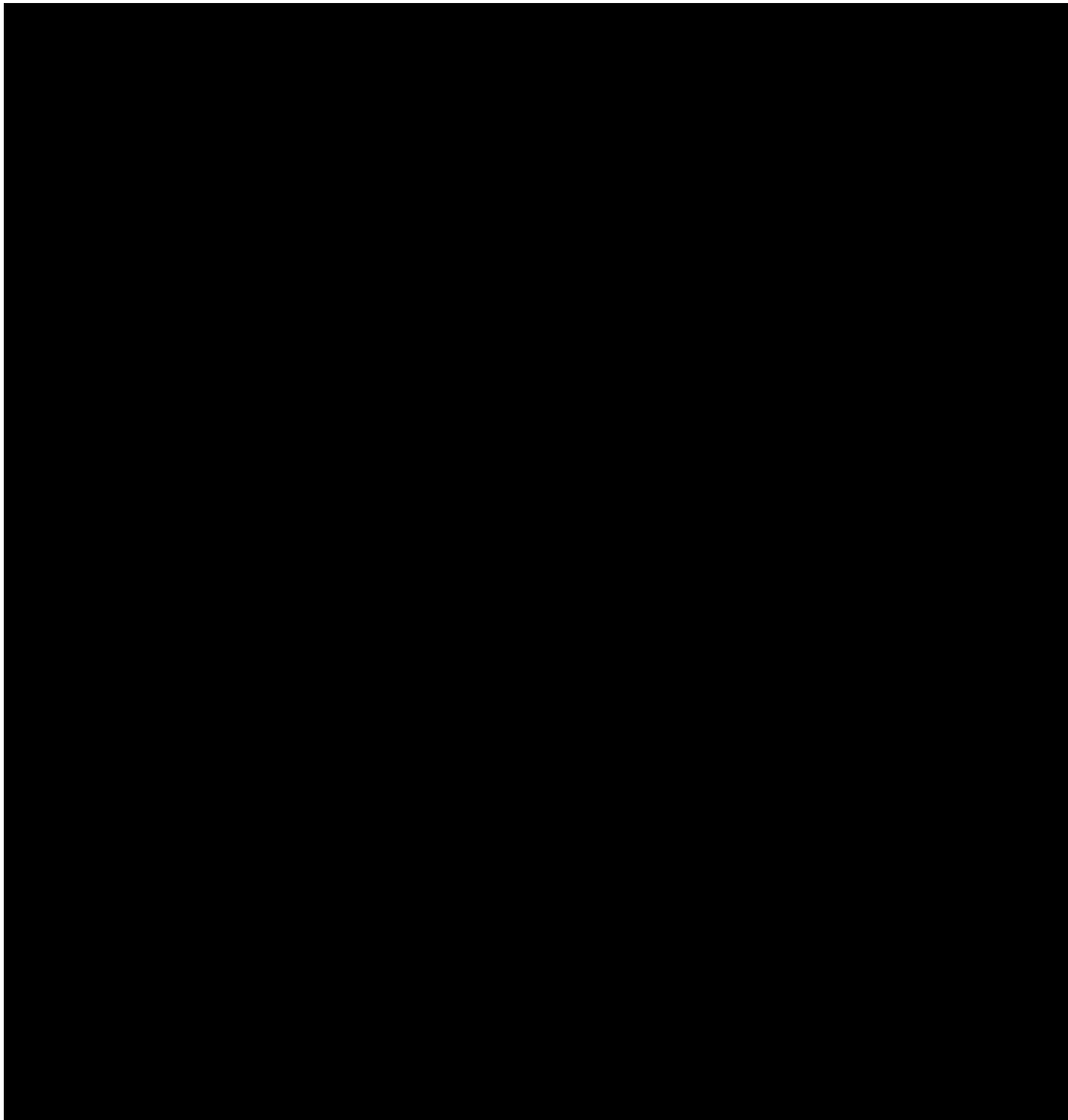
[REDACTED]

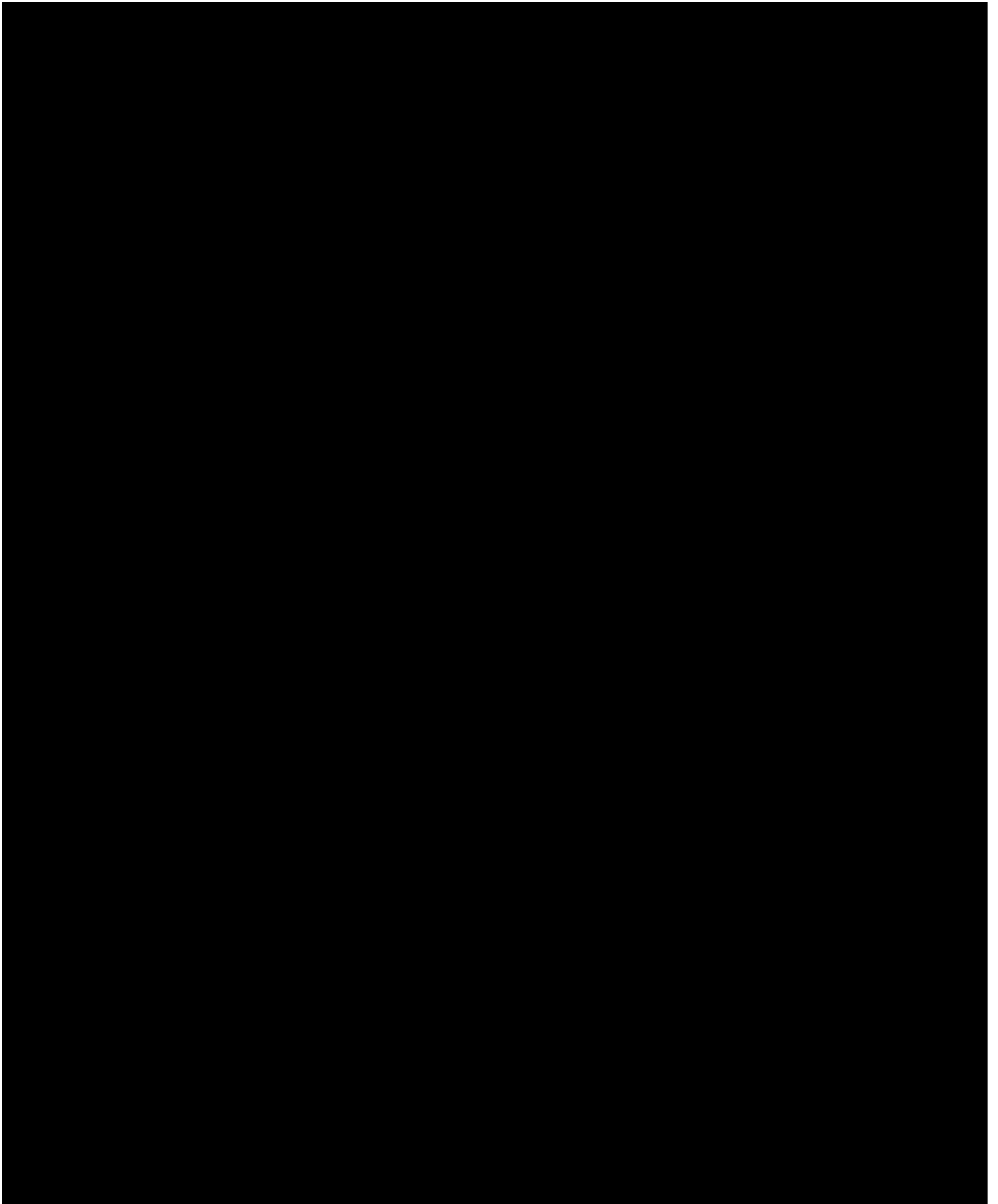
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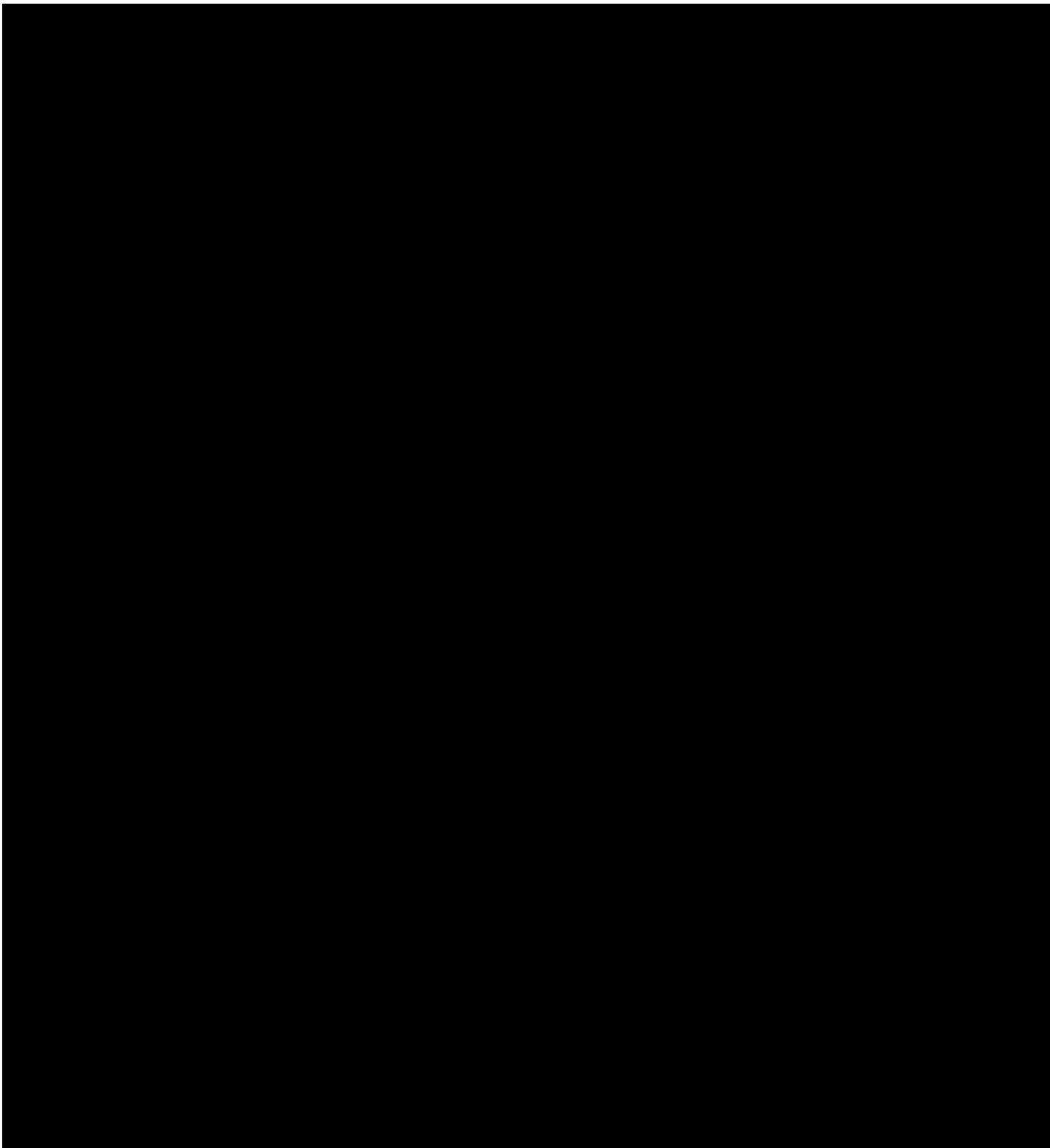
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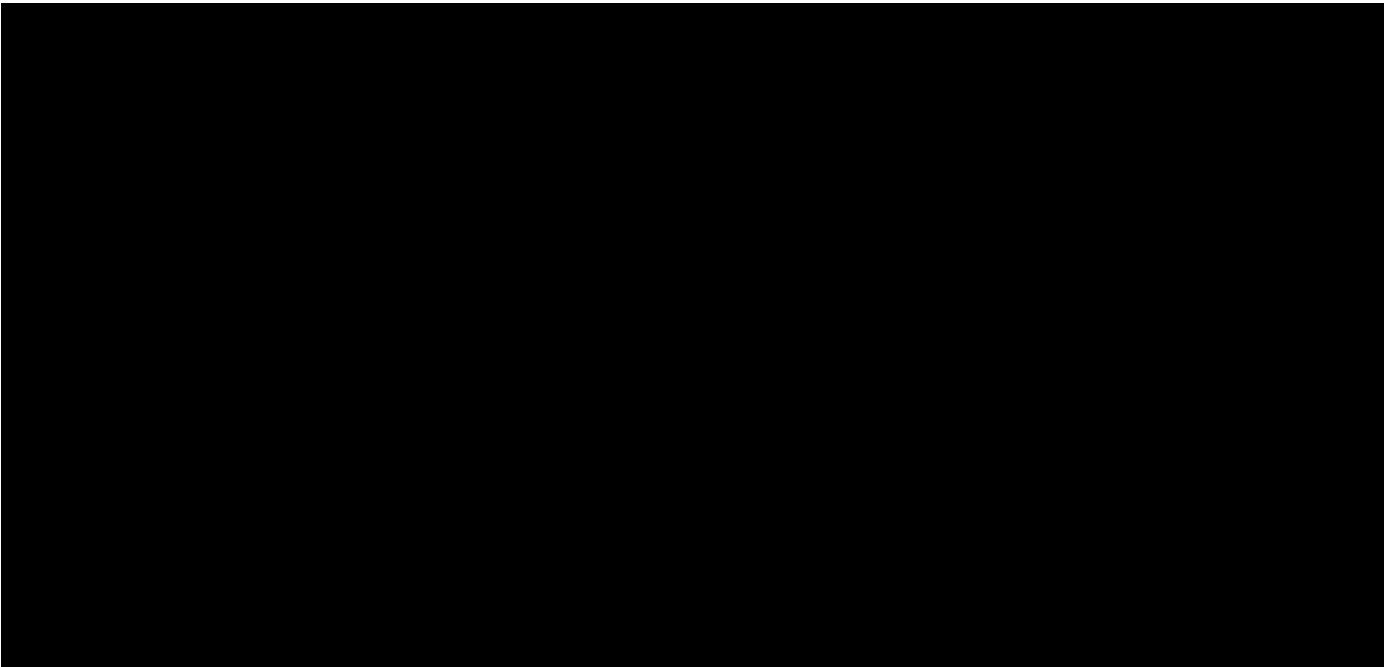
[REDACTED]











9.2 MARITIME VESSELS AND LOGISTICS

Include a discussion on use of maritime vessels and access to them, as well as the bidder’s plans to secure any specialized vessels or other equipment consistent with the construction schedule. Provide any agreements, options, or other materials reflecting the bidder’s efforts so far to secure such vessels or other equipment (and any letters of intent to the extent signed agreements are not in place). Also include a description and discussion of the laydown facility/facilities to be used for construction, assembly, staging, storage, and deployment.

[Redacted text block]

[Redacted text block]

[Redacted text block]

[REDACTED]

Table 9.2-1 provides a description and the status of the key scopes listed above. Robust solutions have been identified for each scope, and Vineyard Wind is confident that multiple market solutions exist and are available in the Project’s timeframe. Further detail, including information on marine vessels and port facilities, can be found in Section 10.

[REDACTED]



9.3 STATUS OF CRITICAL PATH ITEMS

Detail the status of all critical path items, such as receipt of all necessary siting, environmental, and ISO-NE approvals.

[Redacted text block]

[Redacted text block]

[Redacted text block]

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[Redacted]

Key Activities Not on the Critical Path

[Redacted]

[Redacted]

SECTION 10

CONSTRUCTION AND LOGISTICS

10.0 OVERVIEW

This section provides a detailed construction plan for the Project that addresses all necessary arrangements and processes for outfitting, assembly, storage, and deployment of major Project components. [REDACTED]

[REDACTED]

[REDACTED] The construction plan also draws on Copenhagen Infrastructure Partners' (CIP's) and Avangrid Renewables' (the "Shareholder Companies") and their affiliates' experience across 35 offshore wind projects totaling almost 20,000 MW of capacity in Australia, Europe, Southeast Asia, and the US.

With the Vineyard Wind 1 project, Vineyard Wind is leading the US offshore wind industry as the only developer to obtain permitting approval at the federal and state levels, conclude procurement and contracting for all major contract packages, finalize interconnection agreements, successfully implement a financing plan, [REDACTED]

[REDACTED] Vineyard Wind 1 went through a rigorous technical due diligence process led by expert advisors of the lender group, which included nine of the largest international banks in the world. The Project's construction and logistics plan has been prepared by the same team using the invaluable experience gained through Vineyard Wind 1.

[REDACTED]

[REDACTED]

[REDACTED]

¹ Park City Wind is an 804 MW project that Vineyard Wind is developing in the northern portion of Lease Area OCS-A 0534 (and potentially a portion of Lease Area OCS-A 0501). Park City Wind constitutes Phase 1 of Vineyard Wind South (see Section 7).

[REDACTED]

[REDACTED]

[REDACTED]

10.1 MAJOR TASKS AND EQUIPMENT

Please list the major tasks or steps associated with deployment of the proposed project and the necessary specialized equipment (e.g. vessels, cranes).

The Project consists of the following six main work packages:

- Foundations
- Electrical service platform (ESP)
- Offshore export cables
- Inter-array cables
- WTGs
- Onshore works

The projected sequence of major tasks for these work packages is depicted on the Project's schedule, which is provided in Section 9. In developing the Project's schedule, Vineyard Wind conducted a detailed logistical analysis for multiple installation scenarios. Among other things, this analysis examined various vessel spreads and potential use of different harbors, including their operational and load-out capabilities. [REDACTED]

[REDACTED]

[REDACTED] These results provide Vineyard Wind with unique insights and support the development of an ambitious and robust logistical concept and construction plan.

The transport and installation vessel spread terminologies used throughout this section are defined in Table 10.1-1.

Table 10.1-1 Installation Vessels and Technologies

Description	Terminology
Feeder Vessels	
Transportation from US harbors to the Offshore Wind Energy Generation site using Jones Act compliant vessels; oceangoing tugs are required for long distances	<ul style="list-style-type: none"> ▪ Jack-up feeder vessels ▪ Tugs ▪ Articulated tug barges (ATBs) ▪ Barges
Transport Barges	
Transportation from overseas manufacturer's fabrication facilities to the Offshore Wind Energy Generation site or a port for staging using non US-flagged vessels (i.e., not Jones Act compliant); oceangoing tugs are required for long distances	<ul style="list-style-type: none"> ▪ Tugs ▪ Barges ▪ ATBs
Heavy Transport Vessels (HTVs)	
General transport vessel for foundations, the ESP, WTGs, cables, and other Project equipment from the manufacturer site to the Offshore Wind Energy Generation site or staging port	<ul style="list-style-type: none"> ▪ Semi-submersible HTVs ▪ Heavy transportation vessels with cranes (lower capacity than heavy lift vessels [HLVs]) ▪ Transportation vessels (without craneage capability)
Heavy Lift Vessel(s)	
Expected installation vessel for foundations and the ESP	<ul style="list-style-type: none"> ▪ Dynamic positioning (DP) or anchored HLVs with cranes
Jack-Up Installation Vessel(s)	
Expected installation vessel for WTGs	<ul style="list-style-type: none"> ▪ Jack-up installation vessel(s) with cranes
Cable Installation Vessels	
Cable laying vessels and cable transport vessels are large vessels that contain specialized cable spools for transport and payout of cable during installation	<ul style="list-style-type: none"> ▪ Cable laying vessel(s) ▪ Cable transport vessels
Specialized Support Vessels	
Various vessels specifically designed to support offshore wind construction and operation, crew lodging and transportation, and/or general port and offshore logistics	<ul style="list-style-type: none"> ▪ Fall pipe vessel ▪ Offshore support vessels ▪ Noise mitigation support vessels ▪ Crew transfer vessels (CTV) ▪ Service operation vessel (SOV) ▪ Anchor handling tug supply (AHTS) vessels ▪ Dredging vessel ▪ Walk-to-work vessels ▪ Accommodation vessels ▪ Survey vessels ▪ Safety vessels

An overview of the major tasks associated with Project deployment, including the specialized equipment required to complete each of the work packages, is provided in Table 10.1-2.

Table 10.1-2 Major Tasks and Specialized Equipment for Deployment

Major Task	Specialized Equipment
Work Package: Foundations	
Scour protection transport and installation Foundation transport Foundation installation	<ul style="list-style-type: none"> ▪ Scour protection (i.e., rock material) ▪ Fall pipe vessel or other specialized scour protection installation vessel ▪ Remotely operated vehicles (ROVs) ▪ Mud mats (if needed) ▪ Feeder vessels, transport barges, and/or HTVs ▪ HLV(s) ▪ Hydraulic hammer(s), pile gripper/piling frame, pile upending and lifting tool(s) ▪ Vibratory hammer and drilling equipment (if required) ▪ Suction bucket pumps (if required) ▪ Grouting material and equipment (if needed) ▪ Noise mitigation support vessels ▪ Noise mitigation system(s) ▪ Protected Species Observer (PSO) team including vessel(s) ▪ Passive acoustic monitoring (PAM) system and vessel ▪ CTVs and helicopter ▪ Safety vessel ▪ Survey equipment
Work Package: Electrical Service Platform	
ESP transport ESP installation ESP offshore commissioning	<ul style="list-style-type: none"> ▪ Feeder vessels, transport barges, and/or HTVs ▪ HLV(s) ▪ Hydraulic hammer, pile gripper/piling frame, pile upending and lifting tool(s) ▪ Vibratory hammer and drilling equipment (if required) ▪ Grouting material and equipment (if needed) ▪ Noise mitigation support vessels ▪ Noise mitigation system(s) ▪ PSO team including vessel(s) ▪ PAM system and vessel

Table 10.1-2 Major Tasks and Specialized Equipment for Deployment (Continued)

Major Task	Specialized Equipment
Work Package: Electrical Service Platform	
ESP transport ESP installation ESP offshore commissioning (Continued)	<ul style="list-style-type: none"> ▪ Accommodation vessel (either floating or jack-up vessel) ▪ CTVs and helicopter ▪ Survey equipment ▪ Generators (if required)
Pre-lay surveys and pre-lay grapnel run Cable transport, installation (laying and burial), and jointing Landfall site installation Cable pull-in (into the ESP) Termination and commissioning works	<ul style="list-style-type: none"> ▪ Cable transport vessel(s) (if required) ▪ Survey vessel and equipment ▪ Pre-lay grapnel run vessel and grapnel train ▪ Jack-up vessel and AHTS vessels (if required) ▪ Boulder clearance vessel (if required) ▪ Installation buoys ▪ Cable laying vessel ▪ Cable support vessel (incl. ROVs) ▪ Burial tool(s) (jet plow, jet trenchers, mechanical plow, etc.) ▪ Dredging vessel (if required) ▪ Cable entry protection system ▪ CTVs ▪ Cable protection placement vessels (if required) ▪ Cable protection (if required) ▪ Temporary and permanent hang-offs ▪ Messenger wires and cable pulling heads ▪ Safety vessels
Work Package: Inter-Array Cables	
Cable transport Pre-lay surveys and pre-lay grapnel run Cable installation (laying and burial) Cable pull-in (into the WTG foundations and ESP) Termination and commissioning works	<ul style="list-style-type: none"> ▪ Feeder vessels (if required) ▪ Cable transport vessel(s) (if required) ▪ Survey vessel and equipment ▪ Pre-lay grapnel run vessel and grapnel train ▪ AHTS (if required) ▪ Installation buoys ▪ Cable laying vessel ▪ Cable support vessel (incl. ROVs) ▪ Burial tool (jet plow, jet trenchers, mechanical plow, etc.) ▪ Cable entry protection system ▪ CTVs and/or walk-to-work vessels

Table 10.1-2 Major Tasks and Specialized Equipment for Deployment (Continued)

Major Task	Specialized Equipment
Work Package: Inter-Array Cables	
Cable transport Pre-lay surveys and pre-lay grapnel run Cable installation (laying and burial) Cable pull-in (into the WTG foundations and ESP) Termination and commissioning works (Continued)	<ul style="list-style-type: none"> ▪ Cable protection placement vessels (if required) ▪ Cable protection (if required) ▪ Temporary and permanent hang-offs ▪ Messenger wires and cable pulling heads ▪ Winches and generators (if required) ▪ Safety vessels
WTG transportation to the pre-assembly harbor Harbor logistics and pre-assembly WTG transportation and installation at the site WTG commissioning	<ul style="list-style-type: none"> ▪ Transport barges and/or HTVs ▪ Mobile harbor quayside cranes ▪ Harbor and offshore tugs (if required) ▪ Jack-up installation vessel ▪ Feeder vessels ▪ Climbing crane (if used) ▪ Lifting equipment, frames, and racks ▪ CTVs and helicopter ▪ Walk-to-work vessel, SOV, or accommodation vessel ▪ Generators (if required)
Work Package: Onshore Works	
[REDACTED] [REDACTED] [REDACTED] [REDACTED]	[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]

10.2 SITE CONTROL

Please provide documentation to demonstrate site control for all marine terminals and other waterfront facilities that will be used to stage, assemble, and deploy the project for each stage of construction.

- i. Evidence that the bidder or the equipment/service provider have a valid lease, or option to lease, a marine terminal and/or waterfront facility for construction of the offshore wind energy project (e.g., by virtue of ownership or land development rights obtained from the owner).
- ii. If not available, describe the status of acquisition of real property rights for necessary marine terminal and/or waterfront facilities, any options in place for the exercise of these rights and describe the plan for securing the necessary real property rights, including the proposed timeline. Include these plans and the timeline in the overall project schedule. Provide any agreements, options, or other materials reflecting the bidder's efforts so far to secure real property rights (and any letters of intent to the extent signed agreements are not in place).
- iii. Identify any joint use of existing or proposed real property rights for marine terminal or waterfront facilities.

Marine Terminal Facilities

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

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[REDACTED]

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Joint Use

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

10.3 STAGING AND DEVELOPMENT

Please describe the proposed approach for staging and deployment of major project components to the project site. Indicate the number, type and size of vessels that will be used, and their respective roles, as well as the projected timing of their use. Please include specific information on how the bidder's deployment strategy will conform to requirements of the Merchant Marine Act of 1920 (the Jones Act).

Since 2016, Vineyard Wind has been developing and analyzing potential concepts to secure cost-effective and reliable logistics, ports, and vessel solutions for Vineyard Wind 1 and its future projects. During this time, Vineyard Wind has engaged extensively with the primary US and European-based installation contractors. Securing access to appropriate vessels and identifying logistical solutions are essential to the successful and on-time deployment of an offshore wind project (particularly in the US) given Jones Act restrictions, harbor access clearances, space limitations at ports, and the fact that the US supply chain for vessels and logistics is less developed than the current European market.

Vineyard Wind has leveraged its unparalleled experience with Vineyard Wind 1 and Park City Wind and invested considerable resources into investigating harbor facilities and logistical solutions for the staging and deployment of the Project's major components. This includes conducting a robust set of internal analyses on logistical solutions for WTG installation from numerous ports in the northeastern US with various vessel concepts and installation methods.

[REDACTED]

[REDACTED] Vineyard Wind has also engaged in direct dialogue with numerous potential contractors and suppliers to validate the Project's construction plan (see Section 10.4).

The following discussion provides an overview of the approach for staging and deployment of major components for each of the Project's six main work packages.

Foundations

Vineyard Wind expects to primarily utilize monopile foundations with transition pieces (TPs) for the WTGs, with the potential for a portion of the WTGs to utilize jackets. If jackets are used, they may be connected to the seabed using pin piles or suction buckets (see Section 8). The final technology selections will be made after final survey works and WTG selection.

The Vineyard Wind team has considerable experience with monopile foundations. Monopile foundations topped with TPs will be used to support the Vineyard Wind 1 WTGs and are expected to be deployed for Park City Wind. Vineyard Wind completed multiple rounds of comprehensive competitive tendering for the Vineyard Wind 1 project's monopile foundations and has finalized contracts for the fabrication, transportation, and offshore installation logistics, which inform the Project's technical and cost basis. [REDACTED]

[REDACTED]

[REDACTED]

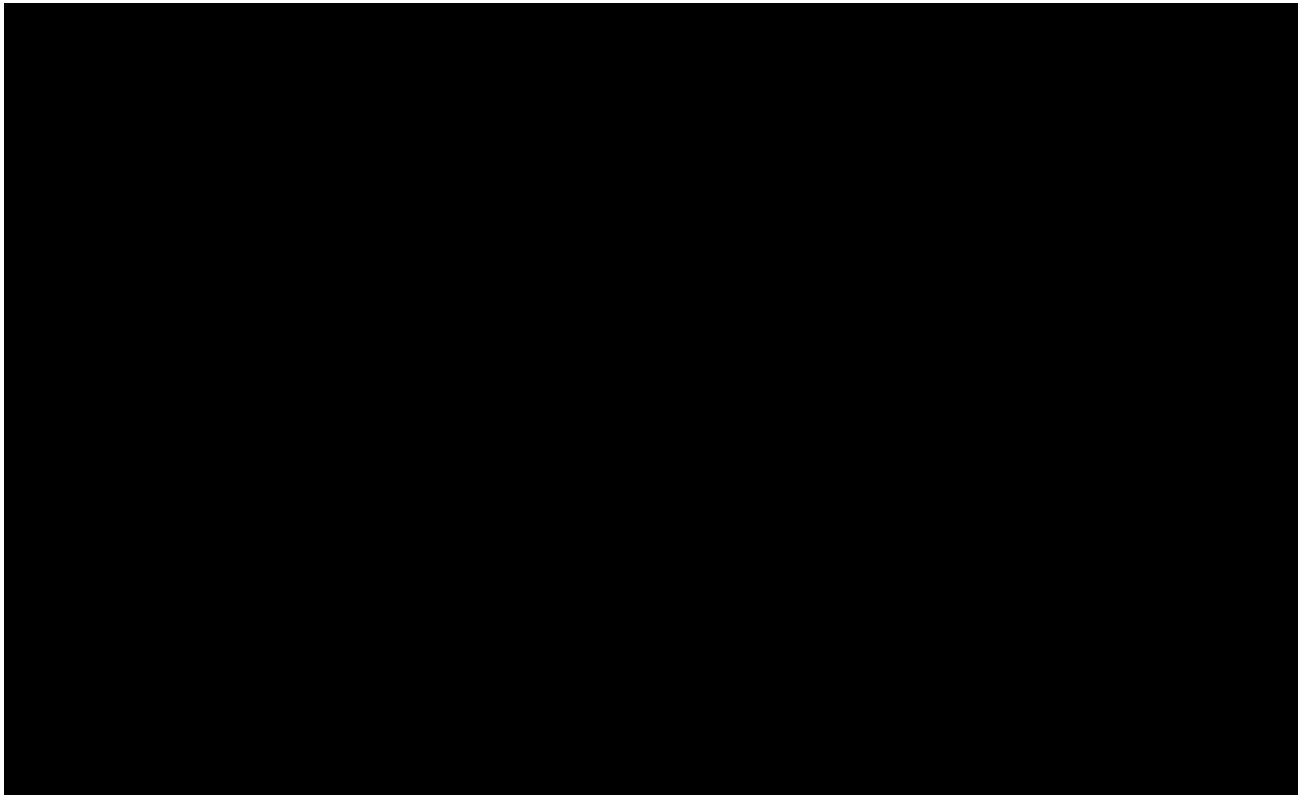
Foundation deployment consists of the following major tasks:

- Scour protection transport and installation
- Foundation transport
- Foundation installation

Scour Protection Transport and Installation

The benefit of scour protection is that foundation penetration can be minimized, as the design does not have to account for significant scour development. The need for scour protection is specific to the final design of the foundation concept(s) selected and will be further assessed upon detailed engineering of the foundations. It is anticipated that scour protection will be needed for the larger diameter monopiles and suction bucket jackets, but may or may not be needed for the smaller diameter piles used for jacket foundations.

If scour protection is used, it is expected to consist of one or two layers of rock material placed around the base of the foundation. Scour protection may be installed up to several months prior to the start of foundation installation and/or after foundation installation following the multi-step process outlined in Table 10.3-1. The steps shown in Table 10.3-1 describe the installation of rock material, which is the most widely used scour protection material in the offshore wind industry.



Several techniques exist for placing scour protection at the base of foundations, such as side dumping, placement with a crane/bucket, or fall pipes. The fall pipe method, in which a pipe extends from a vessel to the seafloor near the foundation location, is the most precise technique and is expected to be used wherever possible. A remotely operated vehicle (ROV) at the fall pipe's lower end would likely be used to control the lateral movement of the fall pipe and monitor the installation process. Scour protection installation vessels will likely operate in dynamic positioning (DP) mode and will move along a pre-determined pattern to minimize usage of the scour protection material and ensure even distribution of the rock material.

Foundation Transport



[REDACTED]

[REDACTED]

[REDACTED]

HTVs are generally very maneuverable, and some are equipped with DP systems, allowing them to maintain their position next to the heavy lift vessel (HLV) and foundation position during foundation installation. A DP system is a computer-controlled system that automatically maintains a vessel's position and heading by using its own propellers and thrusters (i.e., without the use of anchors). [REDACTED]

[REDACTED]

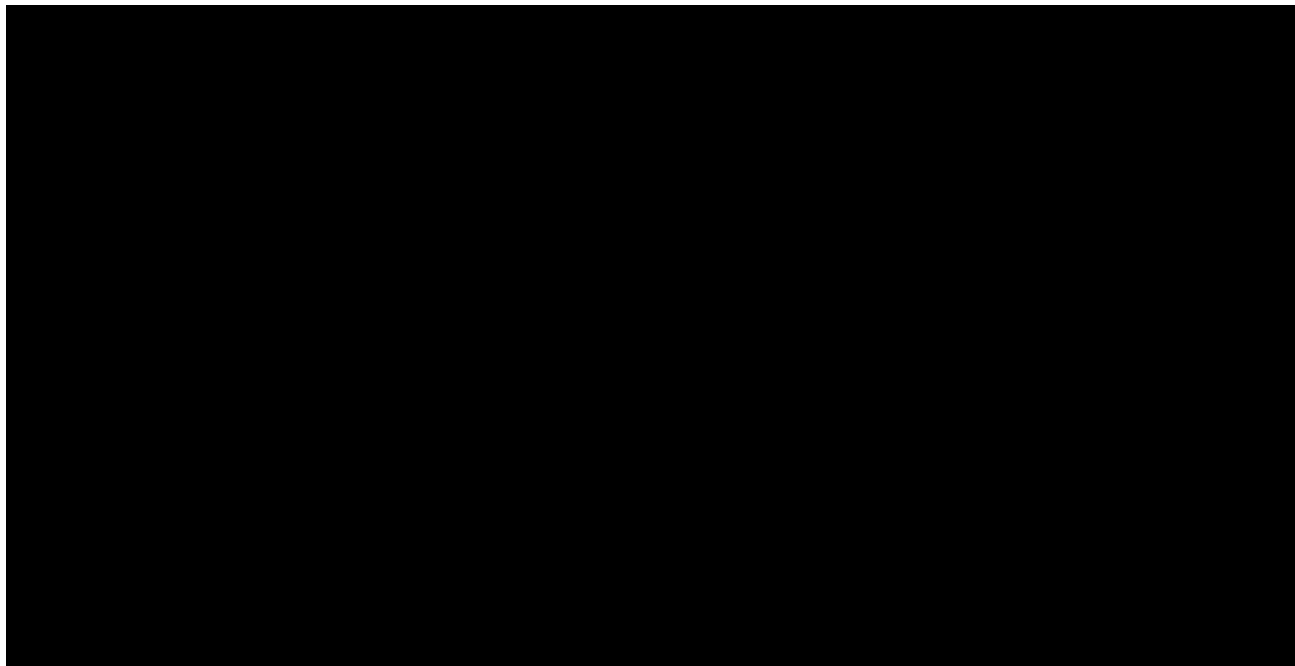
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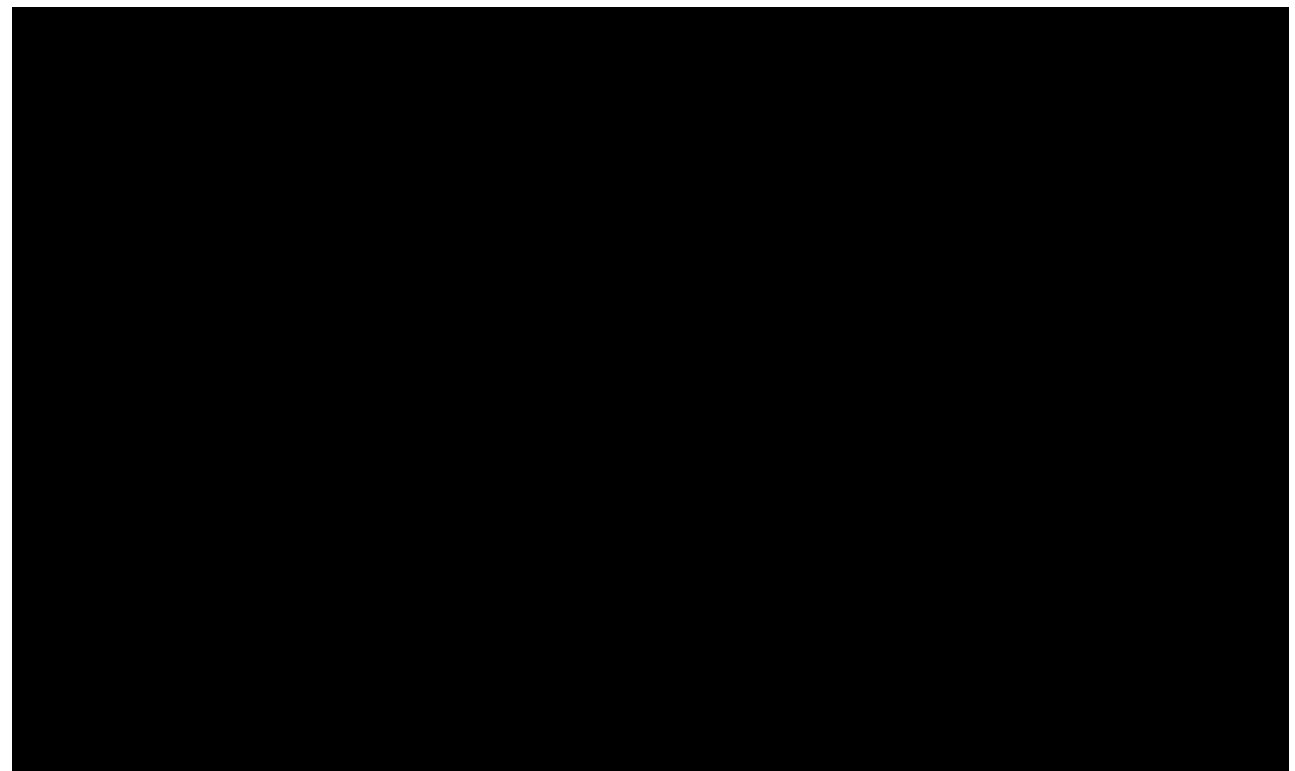
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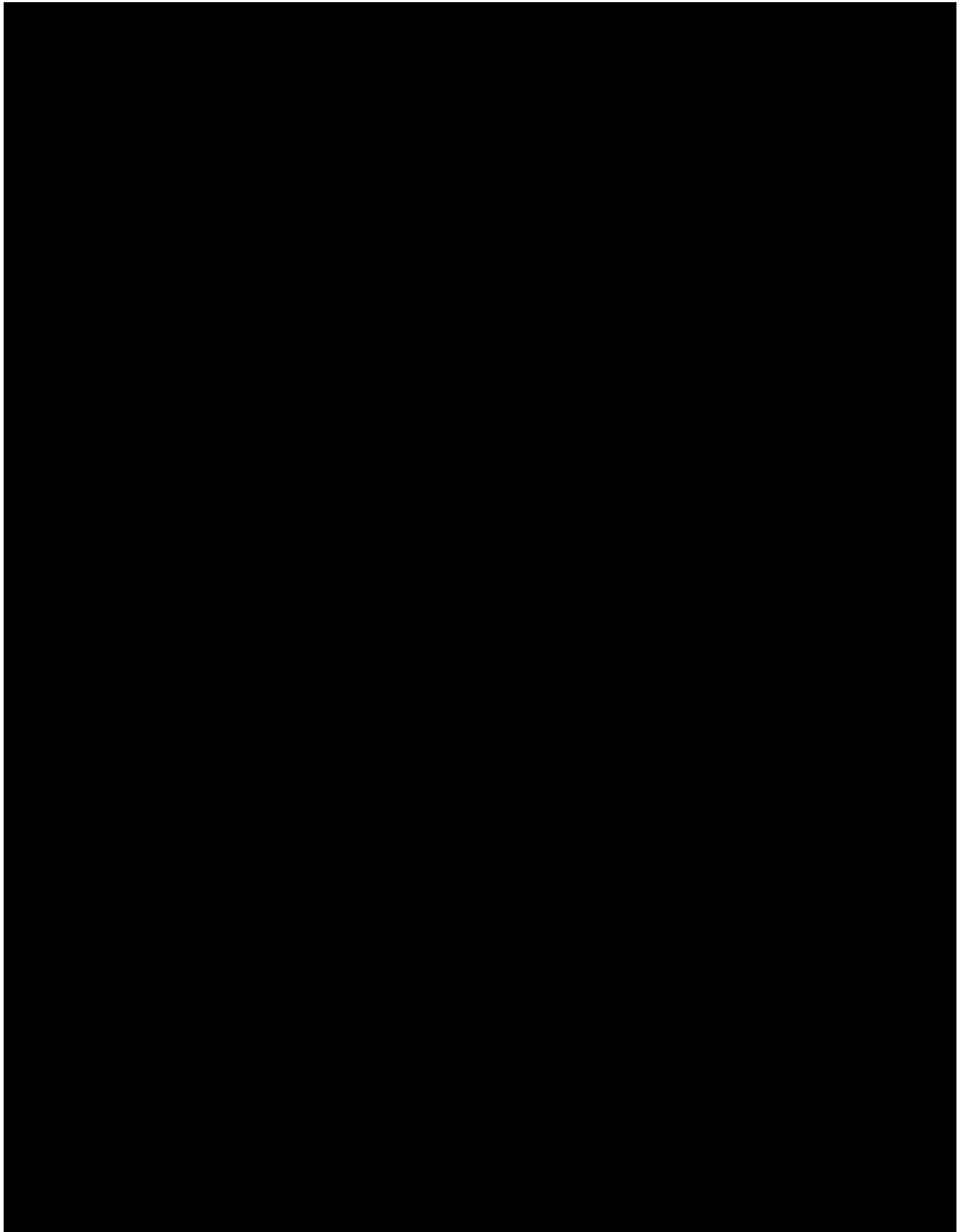
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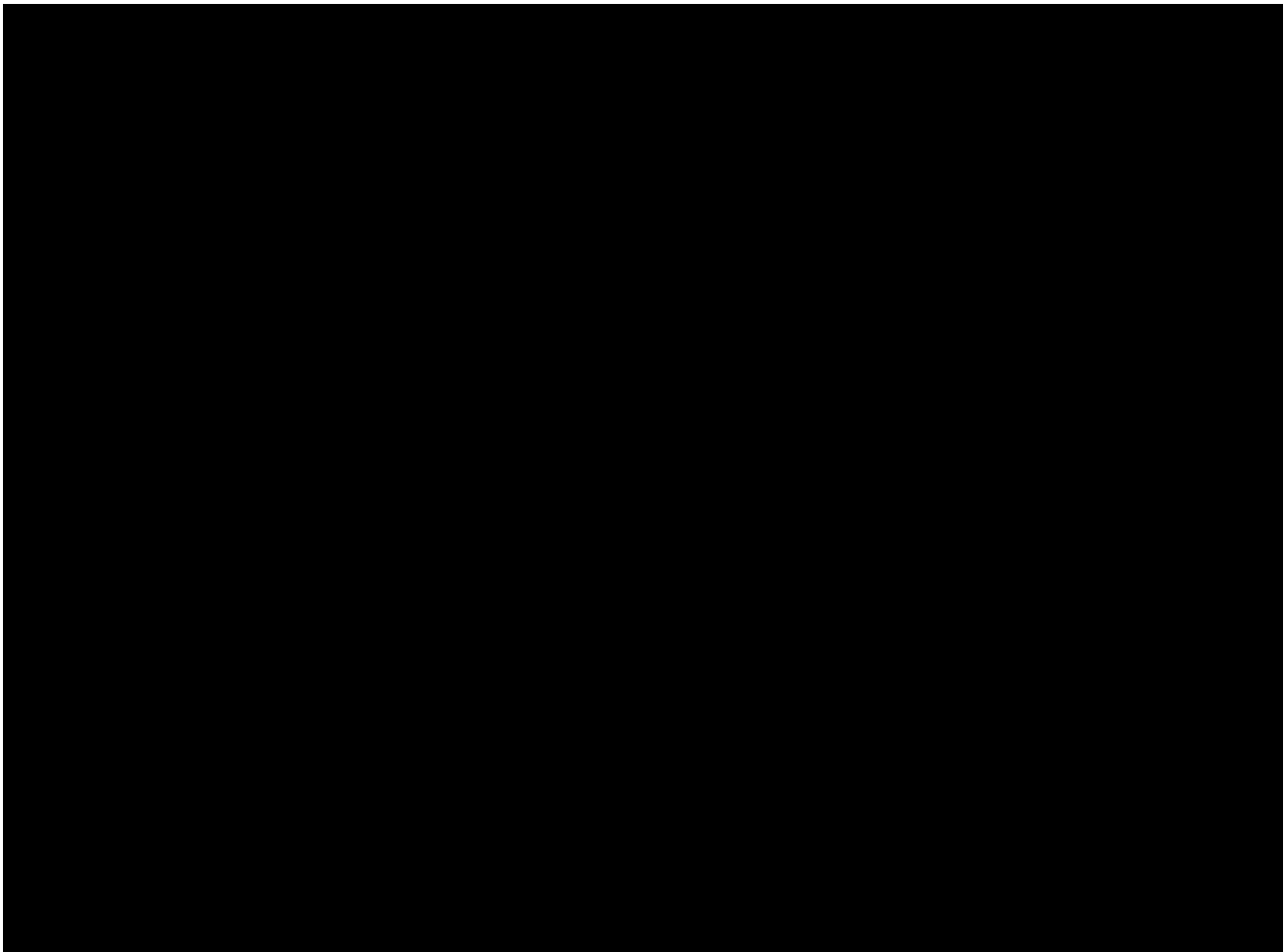


Foundation Installation


 Table 10.3-3 describes the installation of monopiles with transition pieces, piled jackets, and suction bucket jackets.







[REDACTED]

[REDACTED]

Electrical Service Platform

[REDACTED]

[REDACTED] The Shareholder Companies and Vineyard Wind staff also have experience transporting and installing ESPs for several other offshore wind projects in Europe.

The ESP consists of two primary components: (1) the topside, which houses the electrical components; and (2) the foundation substructure. As described in Section 8, Vineyard Wind expects the ESP topside to be installed on a piled jacket. This is a conventional offshore substation design. The deployment of the ESP will consist of the following main tasks:

- ESP transport and installation
- ESP offshore commissioning

ESP Transport and Installation

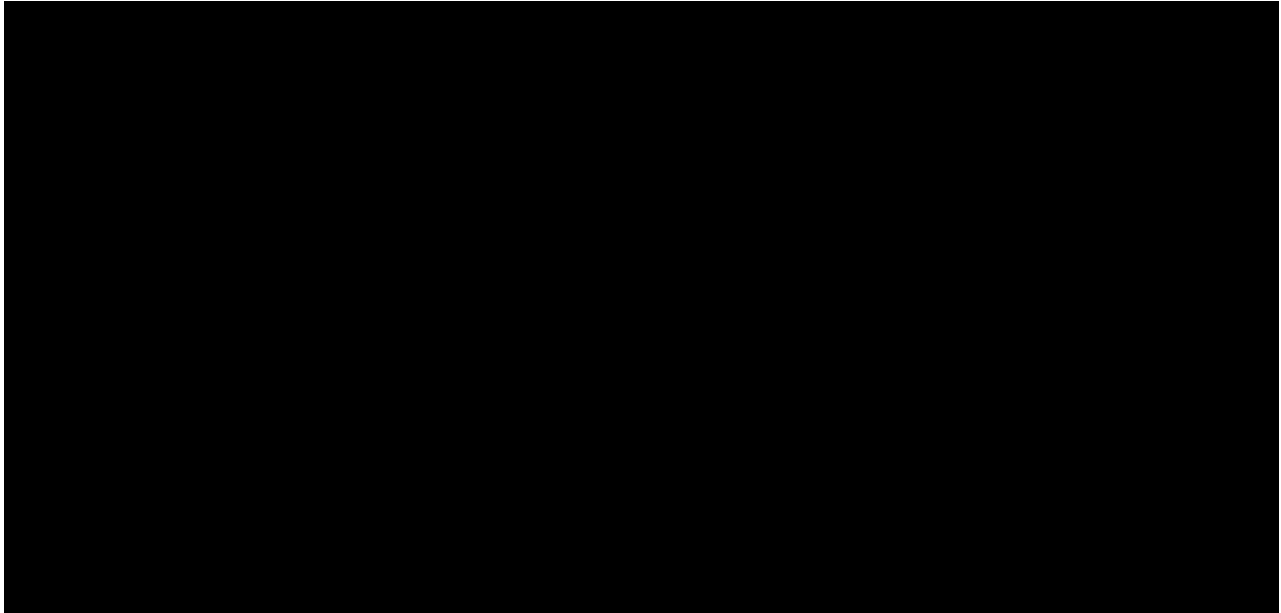
[REDACTED] The specific steps required to transport and install the ESP foundation are similar to those described above for WTG foundations in Tables 10.3-2 and 10.3-3. [REDACTED]

To install the ESP topside, the installation vessel will position itself next to the foundation. The installation vessel's crane will then lift the topside from its deck or a separate transport vessel and place it on the foundation. The topside and the foundation will be connected using bolted connections and/or welding. ESP topside installation activities are enumerated in Table 10.3-4. [REDACTED]

[REDACTED] These cables will be routed through J-tubes (or a similar alternative) located on the foundation. If required, once the cables are connected to the ESP, the corrosion protection/control system is expected to be installed around the foundation utilizing a similar design as the WTG foundations.

ESP Offshore Commissioning

After the ESP is installed, offshore commissioning will commence. ESP commissioning, which entails conducting tests of the electrical infrastructure and safety systems on the ESP prior to commercial operations, may last several months. The steps for commissioning are indicated below in Table 10.3-5. During the commissioning period, a vessel may be positioned adjacent to the ESP to provide accommodations for workers performing commissioning activities. A similar “onshore” commissioning of the ESP occurs as part of the final manufacturing process for the topside and is conducted at the factory prior to ESP transport.



Offshore Export Cables



Offshore export cable installation consists of the following main steps:

- Route clearance (e.g., boulder relocation), pre-lay grapnel run, and pre-lay surveys
- Cable transportation, installation, and jointing
- Landfall site installation
- Cable pull-in into the ESP
- Cable termination and commissioning works

Route Clearance, Pre-lay Grapnel Run, and Pre-Lay Surveys

Any large boulders along the final offshore export cable alignments may need to be relocated prior to cable installation, facilitating installation without any obstructions to the burial tool and better ensuring sufficient burial. Boulder relocation is expected to be accomplished either by means of a grab tool suspended from a vessel's crane that lifts individual boulders clear of the route or by using a plow-like tool that is towed along the route to push boulders aside (this may occur during the cable installation process). Boulders will be shifted perpendicular to the cable route; no boulders will be removed from the site.

The planned cable alignments will be prepared with a pre-lay grapnel run. The pre-lay grapnel run involves a vessel towing a grapnel train over the cable route to find and recover debris crossing the cable route. This will be performed in advance of the cable deployment to minimize the risk of any debris on the seabed hindering cable installation. A pre-lay survey will be carried out shortly before cable installation to confirm that the cable route is free of obstructions and verify seabed conditions.⁵

Cable Transportation, Installation, and Jointing

[REDACTED]

To install each cable, the cable laying vessel will move along the cable alignment using anchors or DP while likely simultaneously laying and burying the cable. The offshore export cables can be installed from shore towards the Offshore Wind Energy Generation site or in the opposite direction.

The offshore export cables will have a target burial depth of 5 to 8 ft below the seafloor, which Vineyard Wind engineers have determined is more than twice the burial depth required to protect the cables from fishing activities and also provides a maximum of 1 in 100,000 year probability of anchor strike, which is considered a negligible risk. Several possible techniques may be used during cable installation to achieve the target burial depth. Based on currently available technologies, the majority of the offshore export cables are expected to be installed using jetting techniques (e.g., jet plow or jet trenching) or mechanical plow. Additional specialty techniques, such as mechanical trenching or precision installation by diver or ROV, may be used to maximize the likelihood of achieving sufficient burial depth (such as in areas of coarser or more consolidated sediment, rocky bottom, or other difficult conditions). While the actual offshore export cable installation method(s) will be determined by the cable installer

⁵ The Environmental Mitigation Plan, included as Attachment 7.5-1, discusses measures that Vineyard Wind would adopt to minimize potential environmental impacts associated with these and other construction and installation activities.

based on site-specific environmental conditions, Vineyard Wind will prioritize the least environmentally impactful cable installation alternative(s) that is/are practicable for each segment of cable installation.

During installation, the burial tool will grade-out near jointing locations and at the ESP. Where the offshore export cables approach the ESP foundation, the cables will likely be protected by a cable entry protection system intended to reduce fatigue and mechanical loads as the cables transition above the seabed and into the foundation.

[REDACTED]

[REDACTED]

Landfall Site Installation

[REDACTED]

[REDACTED]

⁶ The Environmental Mitigation Plan, included as Attachment 7.5-1, discusses measures that Vineyard Wind would adopt to minimize potential environmental impacts associated with these and other construction and installation activities.

[REDACTED]

[REDACTED]

Cable Pull-In into the ESP

As the cable laying vessel approaches the ESP, it will stop at a calculated distance and the cable will be cut and sealed. To commence cable pull-in into the ESP, an ROV will be lowered to the seabed to recover a pre-installed messenger wire from the base of the foundation and connect it to the pull-in head of the cable. Using the messenger wire, a winch on the ESP will then begin to pull the cable up through the foundation into the ESP topside. As pull-in progresses, the cable laying vessel will move towards the ESP and the cable will be lowered to the seabed. Once the cable is on the seabed, the pull-in continues from the ESP-mounted winch until the cable reaches the hang-off point where a dedicated team will install the temporary hang-off.

Cable Termination and Commissioning

[REDACTED]

Inter-Array Cables

[REDACTED] Inter-array

cable installation consists of the following main steps:

- Pre-lay surveys and pre-lay grapnel run
- Cable transportation and installation
- Cable pull-in into the foundations and ESP
- Cable termination and commissioning



Pre-Lay Surveys and Pre-lay Grapnel Run

The planned cable alignments within the Offshore Wind Energy Generation site will be prepared with a pre-lay grapnel run. The pre-lay grapnel run involves a vessel towing a grapnel train over the cable alignments to find and recover debris crossing the cable route. A pre-lay survey will be carried out shortly before cable installation to confirm that the cable alignments are free of obstructions and verify seabed conditions.

Cable Transportation and Installation

The inter-array cables will be transported directly from their fabrication facility to the Offshore Wind Energy Generation site on the cable laying vessel or on a separate transport vessel.

Upon arrival at the Offshore Wind Energy Generation site, the first end of an inter-array cable will be pulled into a WTG or ESP foundation using winches installed on the foundation. With the required cable length pulled-in, the cable laying vessel will move in the direction of the next foundation, surface laying the cable along the planned route. The departure angle of the cable will be constantly monitored along with the laid cable length as it leaves the vessel. These measures ensure the cable is not laid with too much tension (which would prevent it from sinking during burial) and help ensure that the cable's maximum bending radius is not compromised. As the installation vessel approaches the next foundation, the remaining length required to carry out the second-end pull-in will be calculated and the cable will be cut.

Cable burial operations will then be performed by the cable laying vessel or a separate dedicated burial vessel (this is referred to as "post-lay burial") likely using a jetting technique.

Cable Pull-In into the Foundations and ESP

Messenger wires will be used to pull the inter-array cables into the foundations. Messenger wires can be pre-installed in foundations onshore or installed offshore depending on the final strategy or specific foundations selected. In the case of monopiles, messenger wires would likely be installed directly offshore. Before the inter-array cables are pulled in, the preparation teams will install the pull-in rigging equipment and winch on the ESP and WTG foundations.

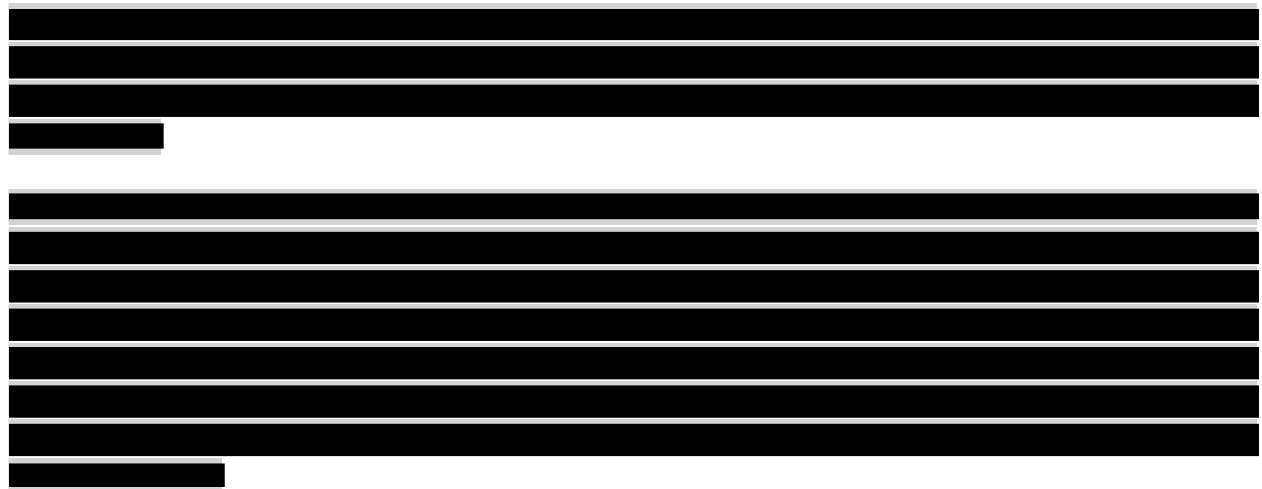
The messenger wire will be recovered by the cable laying vessel using an ROV. Once the messenger wire is on the vessel, it will be connected to the cable pull-in head. After connection of the messenger wire to the cable rigging, the preparation team will increase tension on the wire using the winch and the cable laying vessel will simultaneously pay out cable. The pull-in will continue until the cable is in the right position in the foundation, where it will be secured at the temporary hang-off point.

The cables will likely be installed with a cable entry protection system to ensure cable integrity. Additional cable protection may be placed over the cable entry protection system to secure it in place and limit movement of the cable. An ROV will carry out a final visual inspection of the cable entry protection system and cable and ensure that there are no issues with the scour protection surrounding the foundation.

Cable Termination and Commissioning

After the inter-array cable is secured on the temporary hang-off, the termination team will strip the cables to expose the power cores and fiber optics. The permanent hang-off will then be installed. The power cores will be routed inside the WTG foundation or ESP and terminated at a dedicated junction box/T-connector. The fiber optic cables will be connected into the fiber optic patch box. Ground wires will be connected to the dedicated ground points. Once termination is completed, the inter-array cables will be fully tested and commissioned to confirm they can be energized safely.

Wind Turbine Generators



WTG staging and deployment are expected to consist of the following major tasks:

- WTG transportation to the pre-assembly harbor
- Harbor logistics and pre-assembly
- WTG transportation and installation at the Offshore Wind Energy Generation site
- WTG commissioning

WTG Transportation to the Pre-Assembly Harbor

The WTG consists of three major components: the tower sections, the nacelle, and three blades. Each component will be prepared at a fabrication facility and shipped to the pre-assembly harbor. [REDACTED]

[REDACTED]

At the pre-assembly harbor, a sufficient stock of components will be accumulated prior to WTG installation to maintain a steady pace of installation activities. WTG components may be transported from their manufacturing sites to the pre-assembly harbor on multi-purpose HTVs or transport barges. These vessels are readily available in the market and various suppliers are already engaged with Vineyard Wind on our other projects.

[REDACTED]

[REDACTED] WTG transport will proceed according to the steps outlined in Table 10.3-6.

[REDACTED]

Harbor Logistics and Pre-Assembly

The main activities at the pre-assembly harbor will be moving WTG components from transport vessels to storage and back onto feeder vessels for transport to the Offshore Wind Energy Generation site for installation. When the nacelles, blades, and tower sections arrive at port, the handling steps listed in Table 10.3-7 will occur. Mobile harbor cranes will likely be used for inbound logistics if no crane capability is available on the HTVs and for outbound logistics to lift the WTG components onto the feeder vessels.

[REDACTED]



WTG Transportation and Installation at the Offshore Wind Energy Generation Site

[Redacted text block]

[Redacted text block]

[REDACTED]

WTG installation will occur continuously until all WTGs are installed onto their foundations.

[REDACTED]

The WTG installation process (assuming the use of a feeder concept) is further described in Table 10.3-8.

[REDACTED]

[REDACTED]



WTG Commissioning

WTG installation will be followed by commissioning, where the WTGs are prepared for operation and energized. Commissioning involves conducting tests of the electrical infrastructure and the WTG before responsibility is passed on to the operations and maintenance teams for the duration of the WTG's service life. The WTG commissioning phase will happen in parallel with the WTG installation phase.

Onshore Works

Onshore works consist of the following major tasks:

- Onshore substation construction
- Landfall site construction
- Duct bank installation
- Cable transport, installation, and commissioning

Onshore Substation Construction

Vineyard Wind will construct an onshore substation where the onshore export cable voltage will step up in preparation for interconnection to the ISO New England grid at the existing West Barnstable substation. The onshore substation's electrical design will be comparable to that of most other offshore wind onshore substations (see Section 8). There are many experienced contractors in New England and the rest of the US with the expertise to build this type of onshore substation and Vineyard Wind has already initiated site preparation for the Vineyard Wind 1 onshore substation.

Construction of the onshore substation will be completed in four primary phases: (1) site preparation; (2) assembly of foundations and primary structures; (3) equipment installation; and (4) site restoration. Site preparation involves installation of a security fence and gates, placement of erosion controls, clearing and grading of the substation site, and excavation

work. The assembly phase involves constructing the foundations and structural facilities. Phase three involves the installation, erection, testing, and commissioning of electrical equipment. Site restoration includes cleanup, landscaping, and site stabilization. Construction of the onshore substation is planned to occur in parallel with the onshore duct bank and cable installation.

Landfall Site Construction

[REDACTED]

Duct Bank Installation

The onshore export cables are expected to be installed in underground duct banks primarily within existing public roadway layouts (either beneath the road or within the shoulder) and utility rights-of-way (ROWs) (see Section 6). The duct bank will likely consist of plastic pipes or sleeves encased in concrete with each onshore export cable and fiber optic cable installed within its own pipe or sleeve. The duct bank provides mechanical protection for the cable from vehicle loading and allows for easier access and less environmental disturbance in the event that a cable repair is necessary post-installation.

The duct bank is expected to be installed via open trenching with conventional construction equipment (e.g., hydraulic excavator, backhoe, dump trucks, etc.). Similar to the installation of water mains and gas lines, in roadway sections, saw cutting and removal of the existing pavement is required before excavation of the open trench. Along utility ROWs, some clearing and grading may be required to accommodate excavation and stockpiling of soils and provide access for construction equipment. Once installation of the duct bank is complete, the trenches will be backfilled, and the road will be restored to its original condition. The top of the duct bank typically has a minimum of 3 ft of cover comprised of properly compacted sand topped by pavement. Any excess soil or soil unsuitable for use as backfill will be transported off-site in accordance with applicable regulations. For construction within utility ROWs, any disturbed vegetated areas will be loamed and seeded to match pre-existing vegetation.

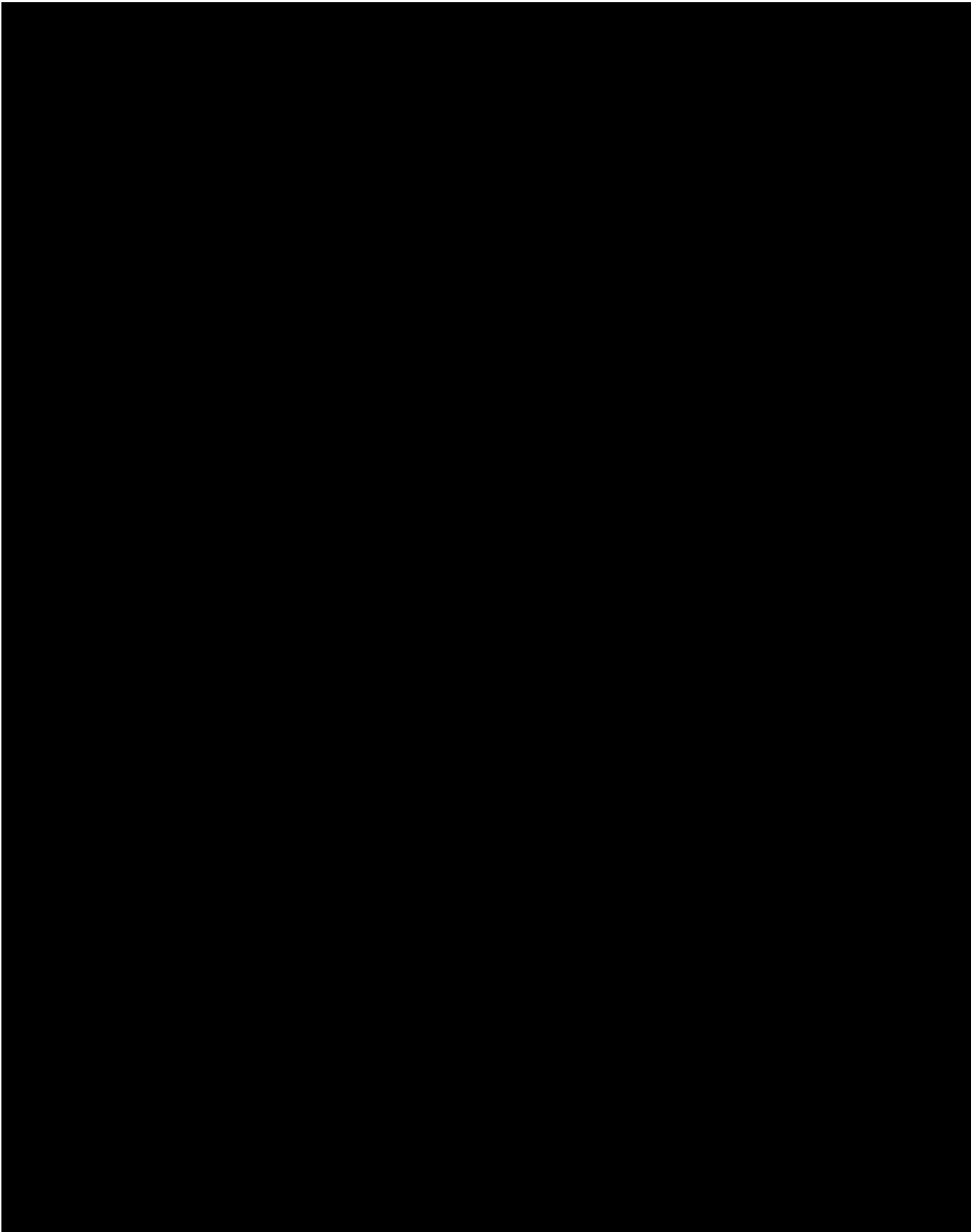
Specialty trenchless crossing methods (e.g., HDD, pipe jacking, direct pipe, auger bore) are expected to be used where the onshore export cables traverse unique features such as busy roadways, wetlands, and waterbodies in order to avoid impacts to those features. The trenchless crossing method(s) utilized will depend on location, mechanical loading considerations, safety factors, environmental impacts, and other applicable requirements.

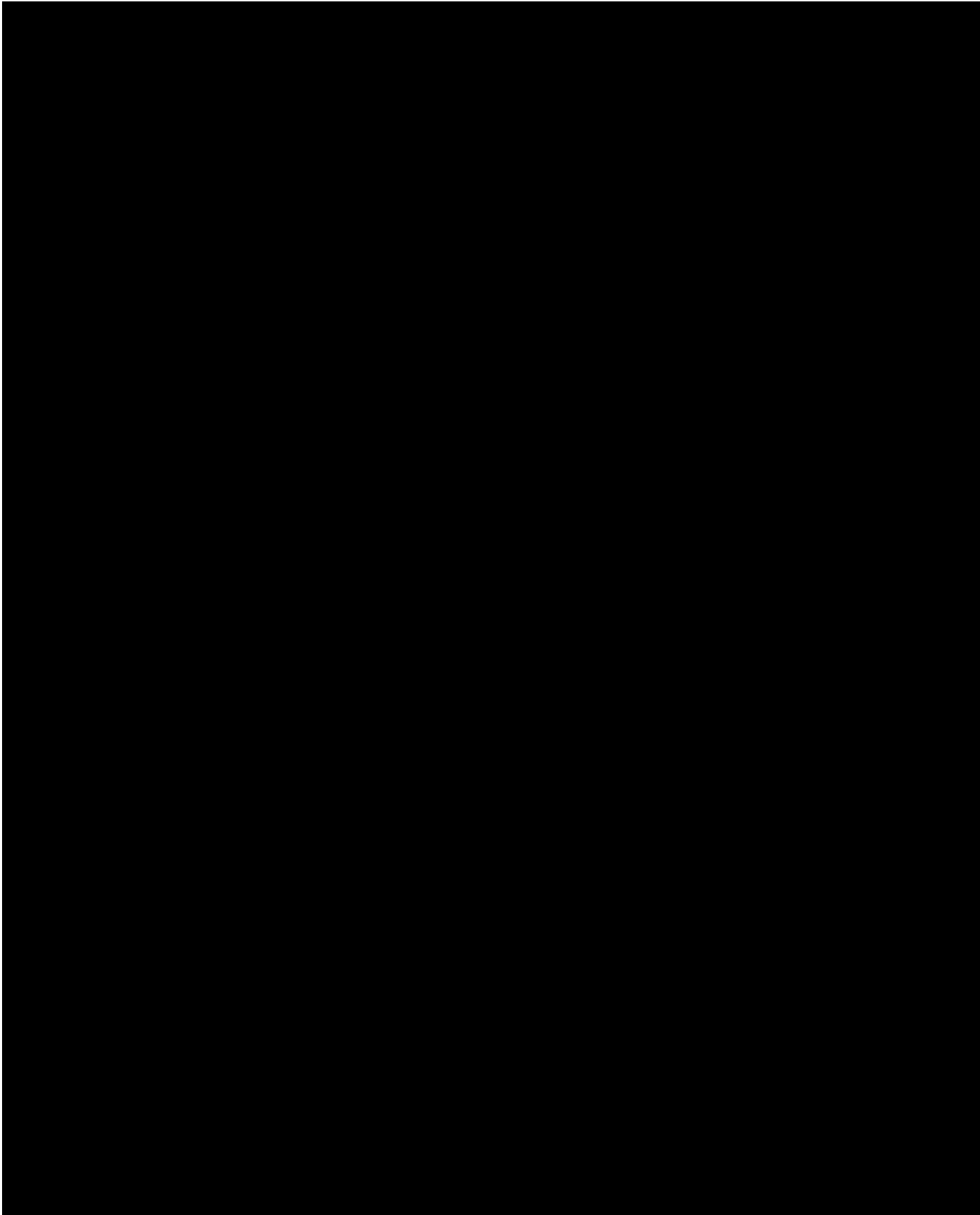
Cable Transport, Installation, and Commissioning

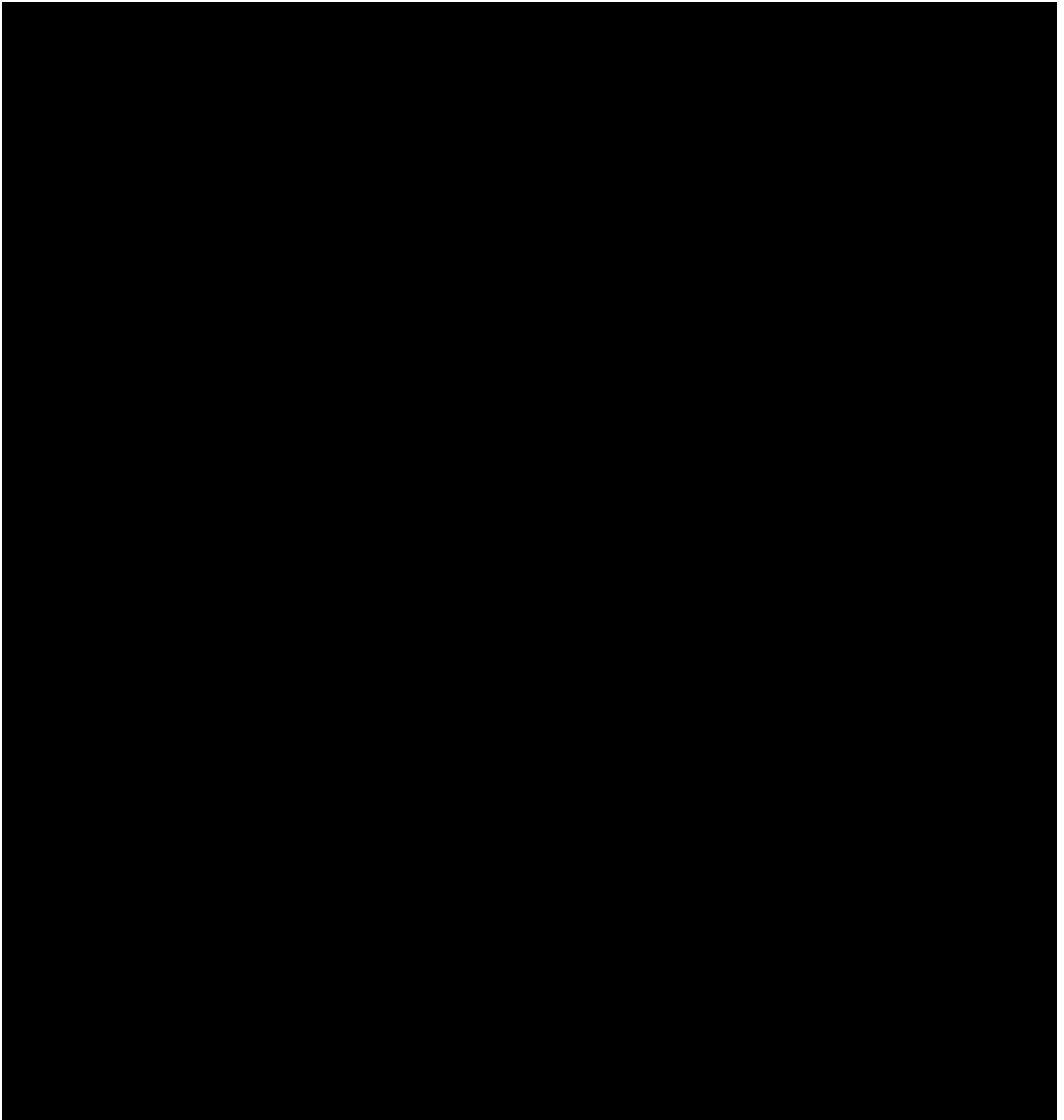
Once the duct bank is in place, the onshore export cables are pulled into place via underground splice vaults (i.e., underground concrete chambers) and associated manholes, which are spaced along the duct bank. It is anticipated that the onshore cables will be transported to site by truck in order to reduce the need for a large staging area for cable laydown. Each cable will be installed between splice vaults; a reel containing the cable length will be positioned at one splice vault and the pulling vehicle with a winch will be at the other splice vault. Once cables are installed between the splice vaults, the cables will be spliced together. The supplier will test and commission the cables following cable installation and termination.

Vessel Types and Respective Roles

An overview of expected vessels, including the number, type, size, and anticipated roles on the Project for each offshore package is provided in Table 10.3-9. The list is indicative and non-exhaustive.







The Coastwise Laws

This section provides specific information on how the Project's deployment strategy will conform to the requirements of the Merchant Marine Act of 1920 (Jones Act) and the Passenger Vessel Services Act (PVSA; 46 U.S.C. § 55103). In September 2020, the US House of Representatives passed the Expanding Access to Sustainable Energy Act of 2019, which further

affirms the currently understood position that foreign-flagged vessels cannot transport merchandise for offshore wind projects between ports and highlights that US Customs and Border Protection will enforce these regulations during offshore wind project construction. Congress' recent amendments to Section 4(a) of the Outer Continental Shelf Lands Act (OCSLA) contained in the National Defense Authorization Act for Fiscal Year 2021 also cleared up any ambiguity regarding whether US laws (including the Jones Act) governing offshore energy apply equally to the offshore wind industry.

The Project's installation logistics are developed around the main principles of the Jones Act in close cooperation with potential contractors and vessel owners. [REDACTED]

[REDACTED]

The following details the relevant parts of the Jones Act, PVSA, and related court rulings:

[REDACTED]

[REDACTED]

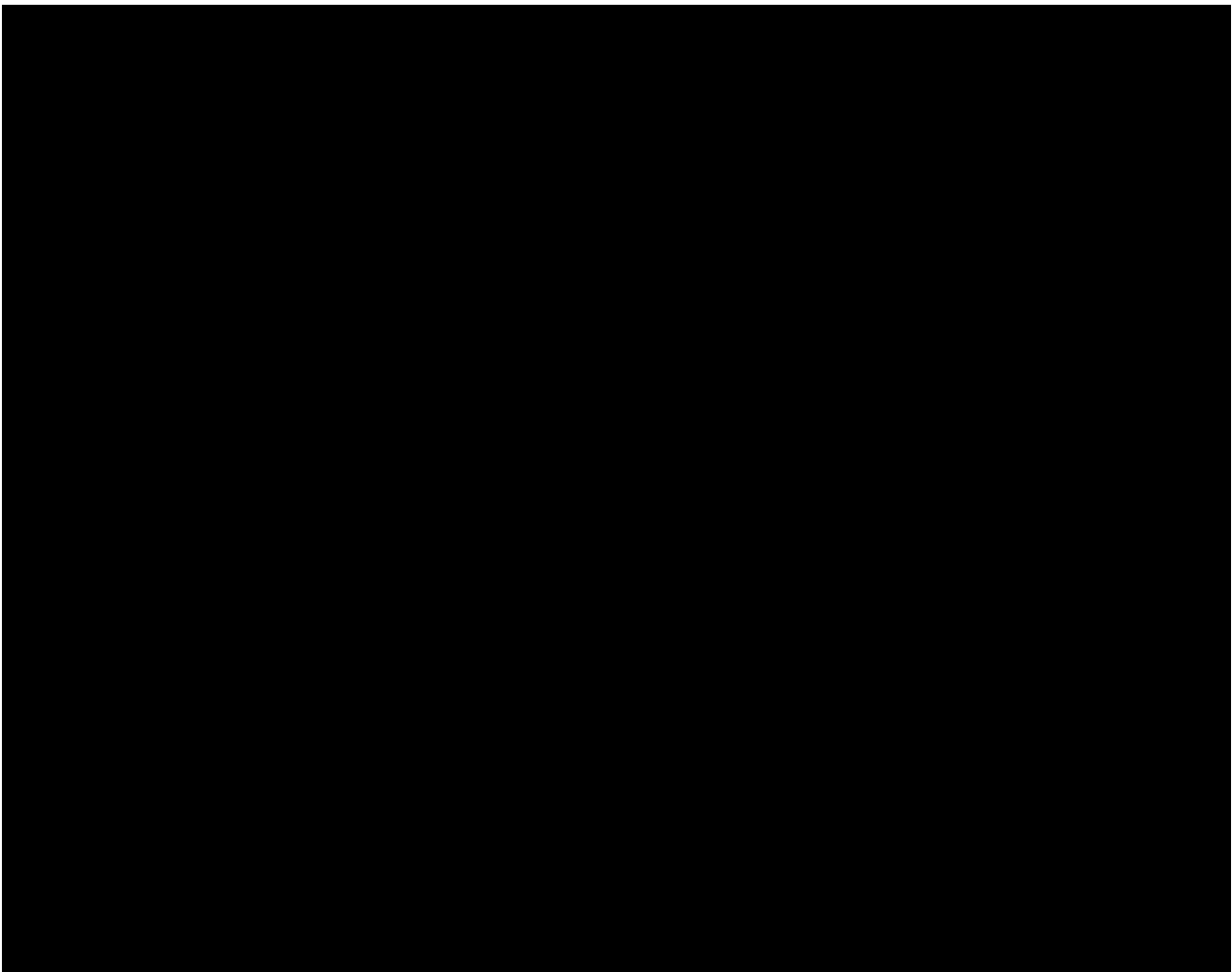
[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

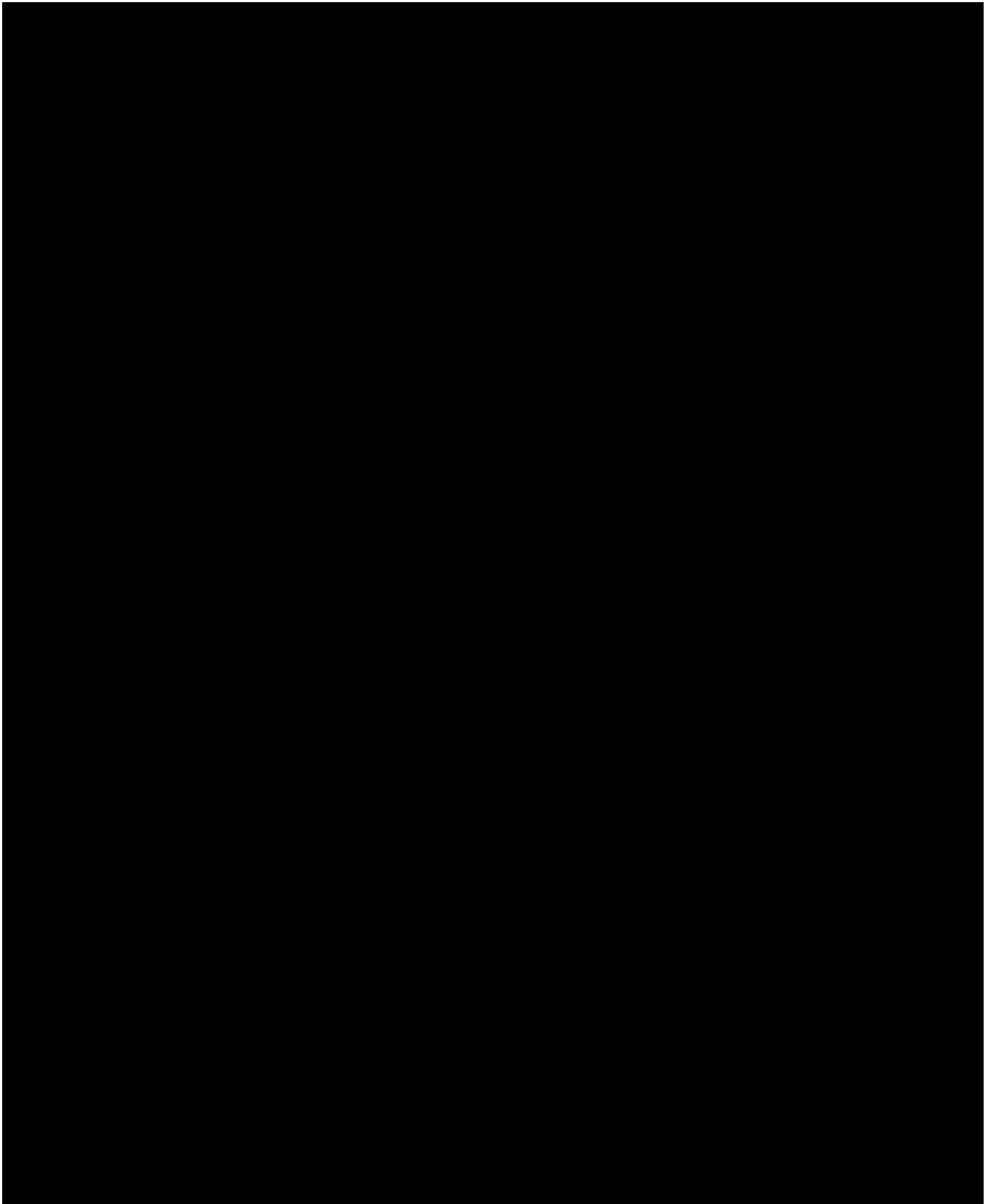


10.4 RESPONSIBLE PARTIES AND ROLES

List the party (e.g. the bidder, or equipment/service providers under contract to the bidder) responsible for each deployment activity and describe the role of each party. Describe the status of bidder’s contractual agreements with third-party equipment/service providers.

Parties Potentially Involved in Project Deployment

Table 10.4-1 provides a list of the potential parties involved in Project deployment along with their scope of responsibility for each of the work packages. This list represents the suppliers with whom Vineyard Wind has been in direct dialogue. Tier 2 suppliers have been approached (such as harbor owners, crane companies, supply vessel owners, and transport vessel owners) but are not included in the table below. This list is not to be considered complete as other suppliers are likely to be considered relevant to the Project.



Contractual Agreements with Third-Party Equipment/Service Providers

[REDACTED]

[REDACTED]

[REDACTED] The experience gained from these procurement processes, including the supply chain dialogues that have happened along the way, have been incorporated into the planned procurement process for the Project.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Equipment orders for the Project will be made in accordance with the procurement process described in Section 8 and the schedule outlined in Section 9.

OPERATIONS AND MAINTENANCE

This section details the operations and maintenance (O&M) plan for the Project, which draws heavily from the substantial effort undertaken to develop our first project, Vineyard Wind 1. Vineyard Wind is the only US developer in the advanced stages of implementing an O&M plan for a commercial-scale offshore wind project. The O&M plan has also been benchmarked against similar plans developed for offshore wind projects owned and operated by Copenhagen Infrastructure Partners P/S (CIP) and Avangrid Renewables LLC (Avangrid Renewables)—together referred to as the “Shareholder Companies”—across the globe.

[illegible]

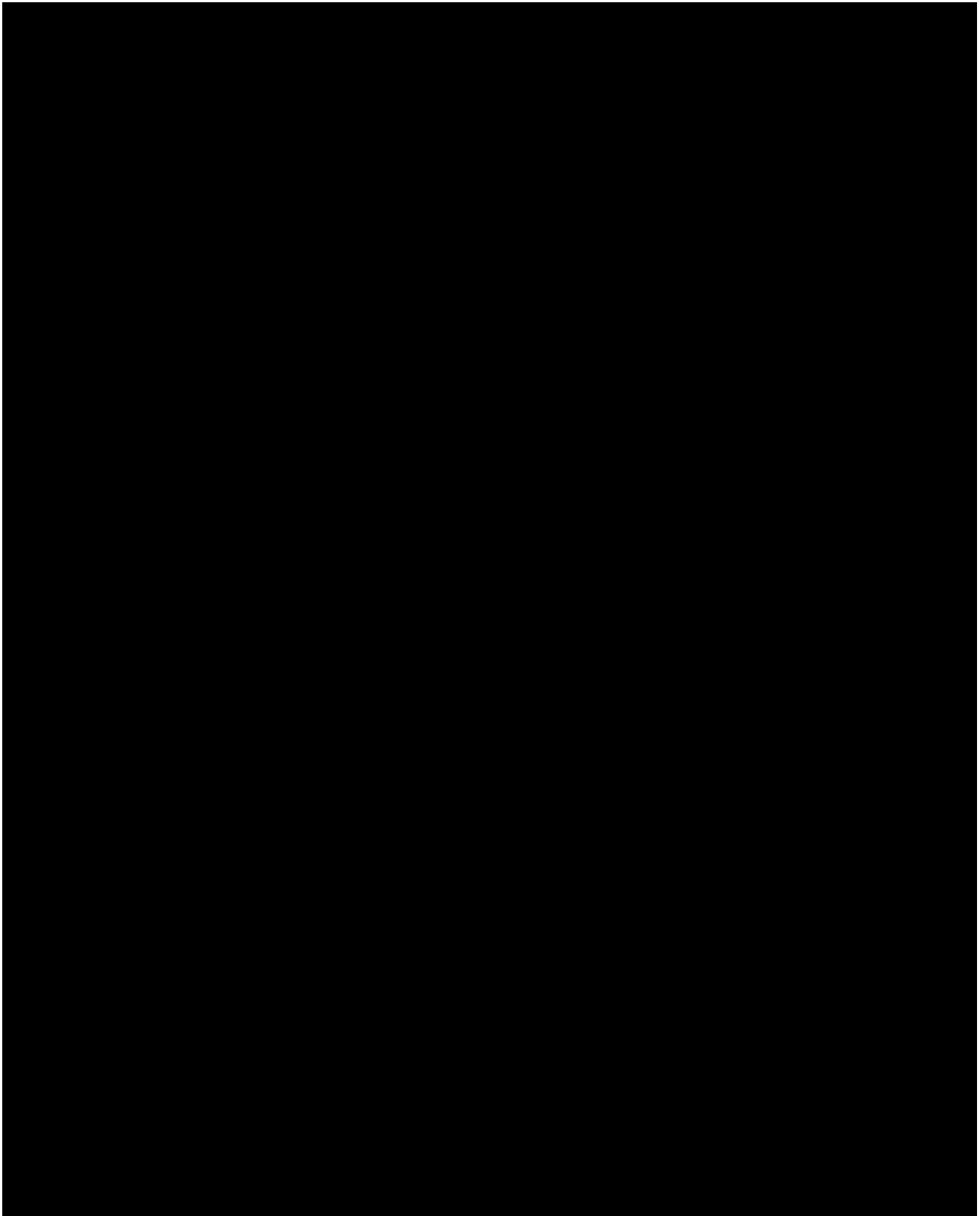
[REDACTED]

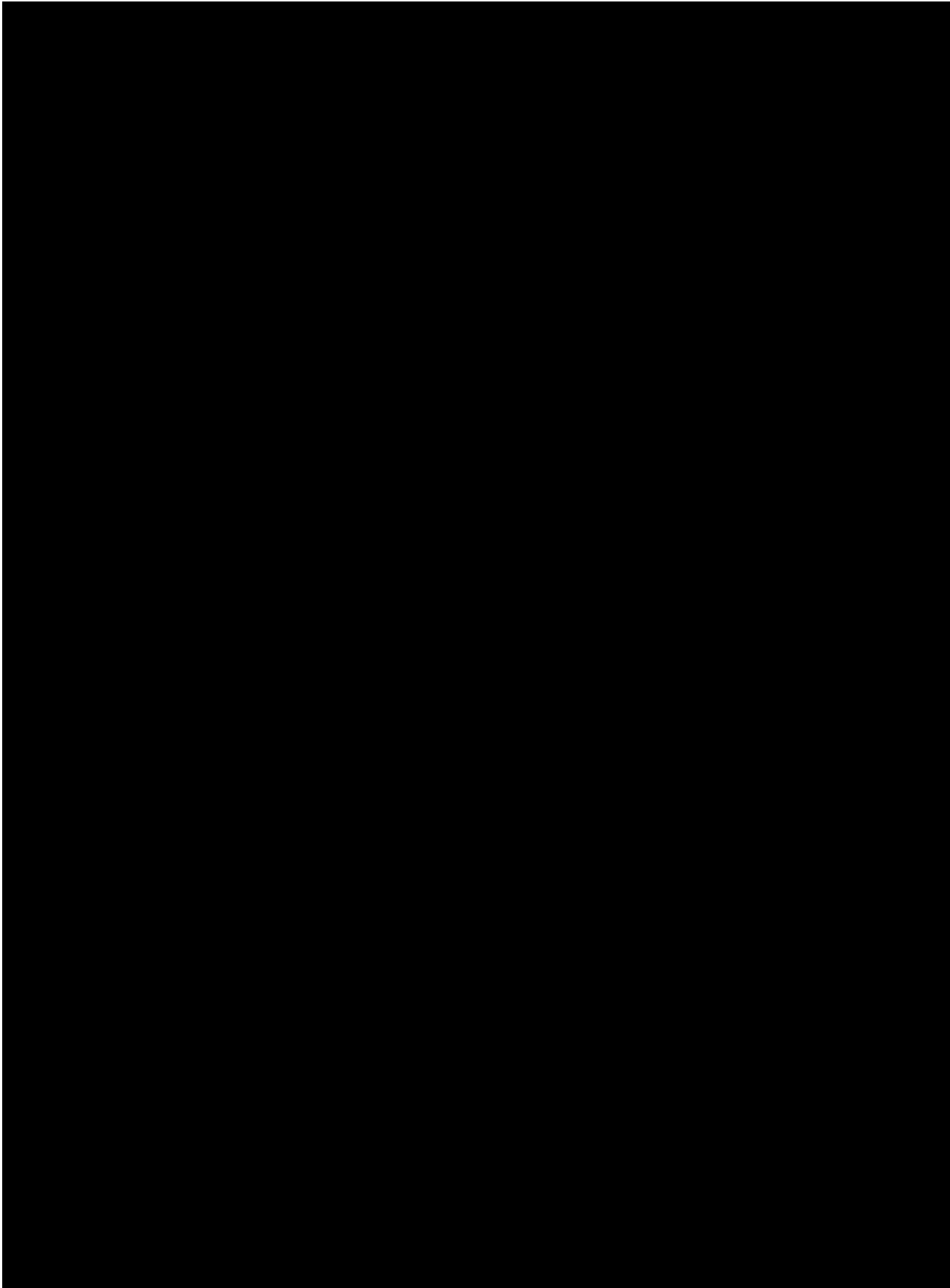
11.1 O&M PLAN

Provide an O&M plan for the project that demonstrates the long term operational viability of the proposed project. The plan should include the location of the O&M base, a discussion of the staffing levels proposed for the project, the expected role of the project sponsor or turbine manufacturer/outside contractor, scheduling of major maintenance activity, and the plan for testing equipment.

[REDACTED]

[REDACTED]





[REDACTED]

[REDACTED]

[REDACTED] The activities include inspecting safety equipment (e.g., lifting equipment, firefighting system, etc.), servicing electrical equipment on the substations, assessing the integrity of structures both above and below water, and performing surveys of cables to confirm cable burial depths.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

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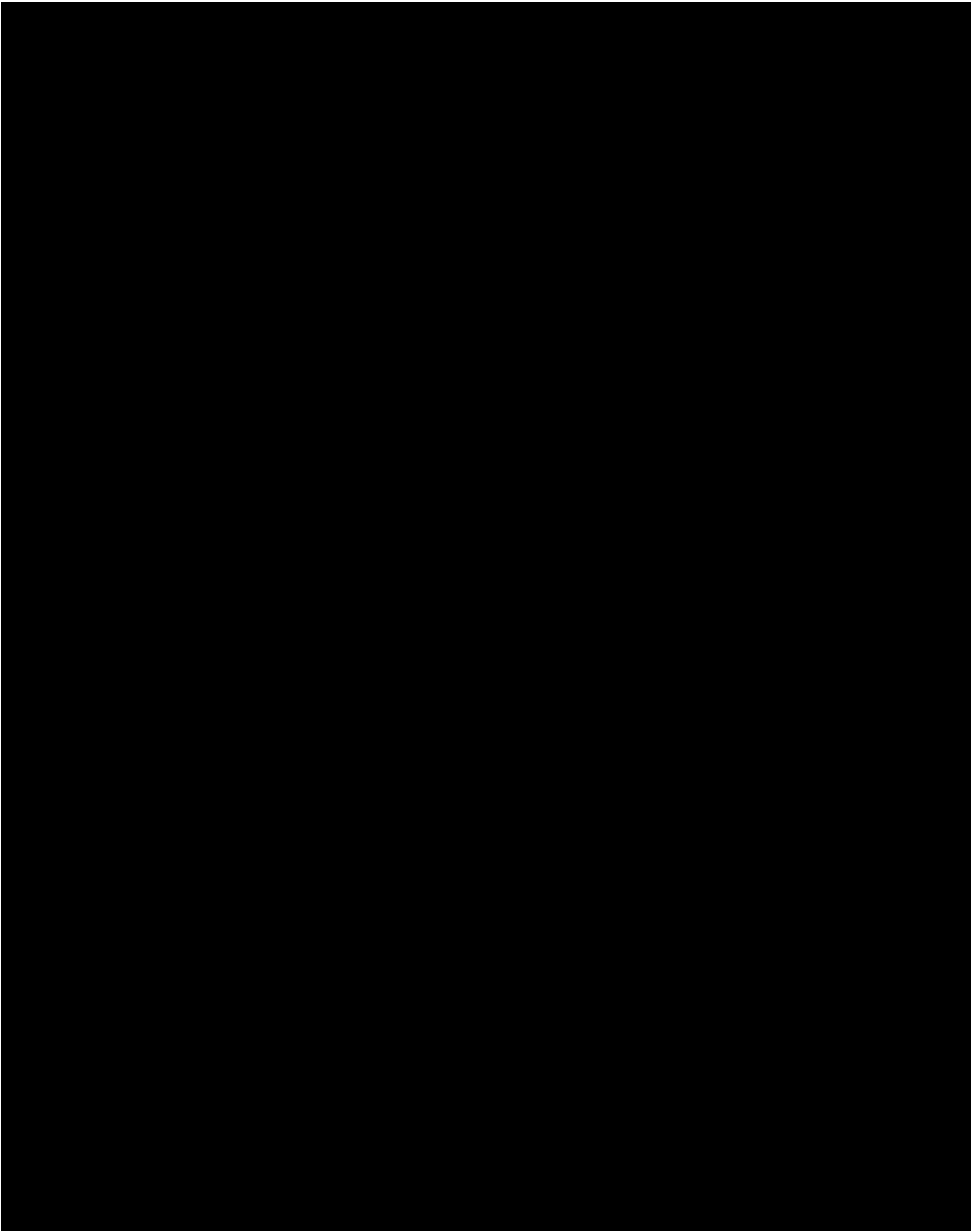
[REDACTED]

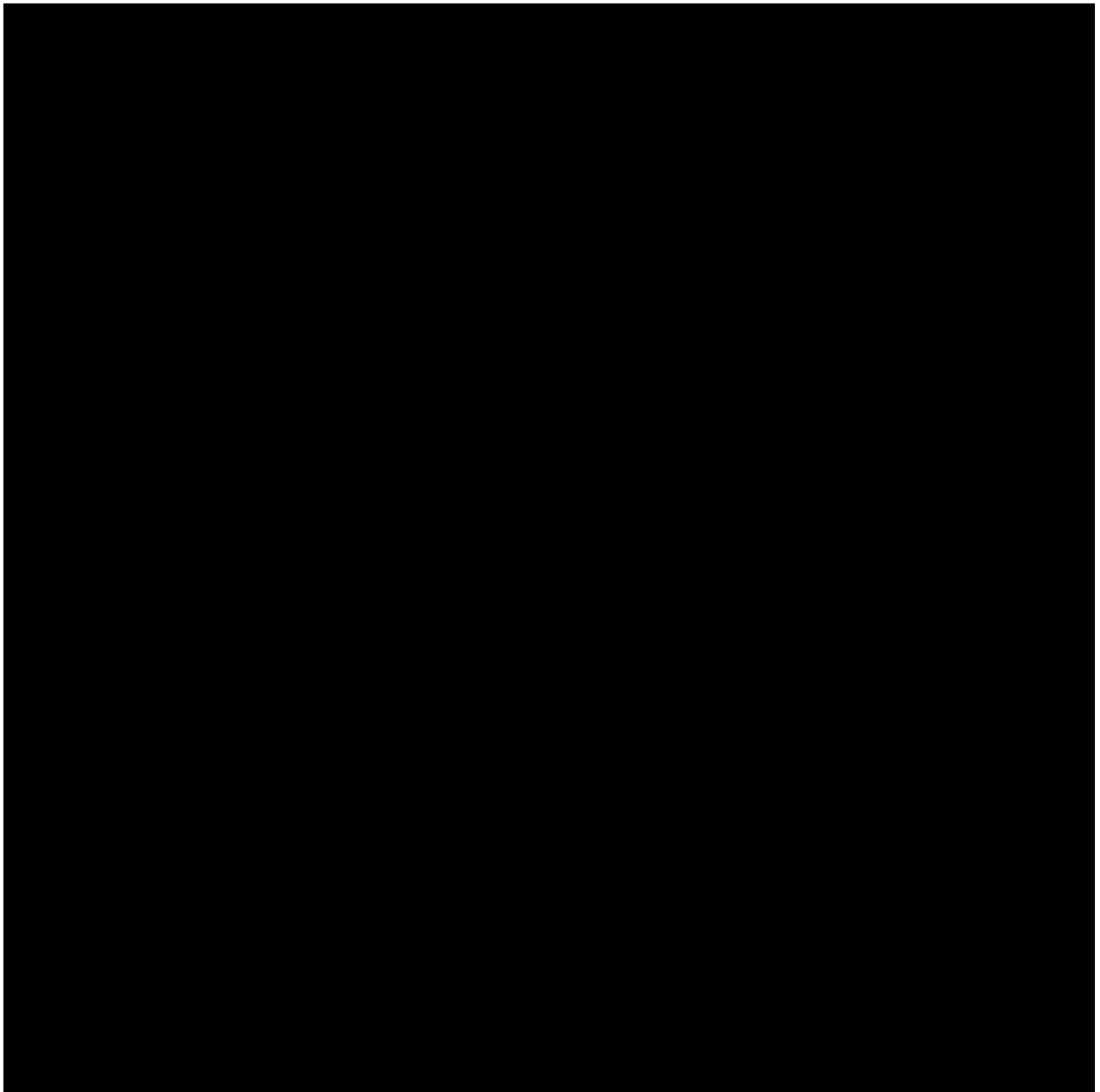
[REDACTED]

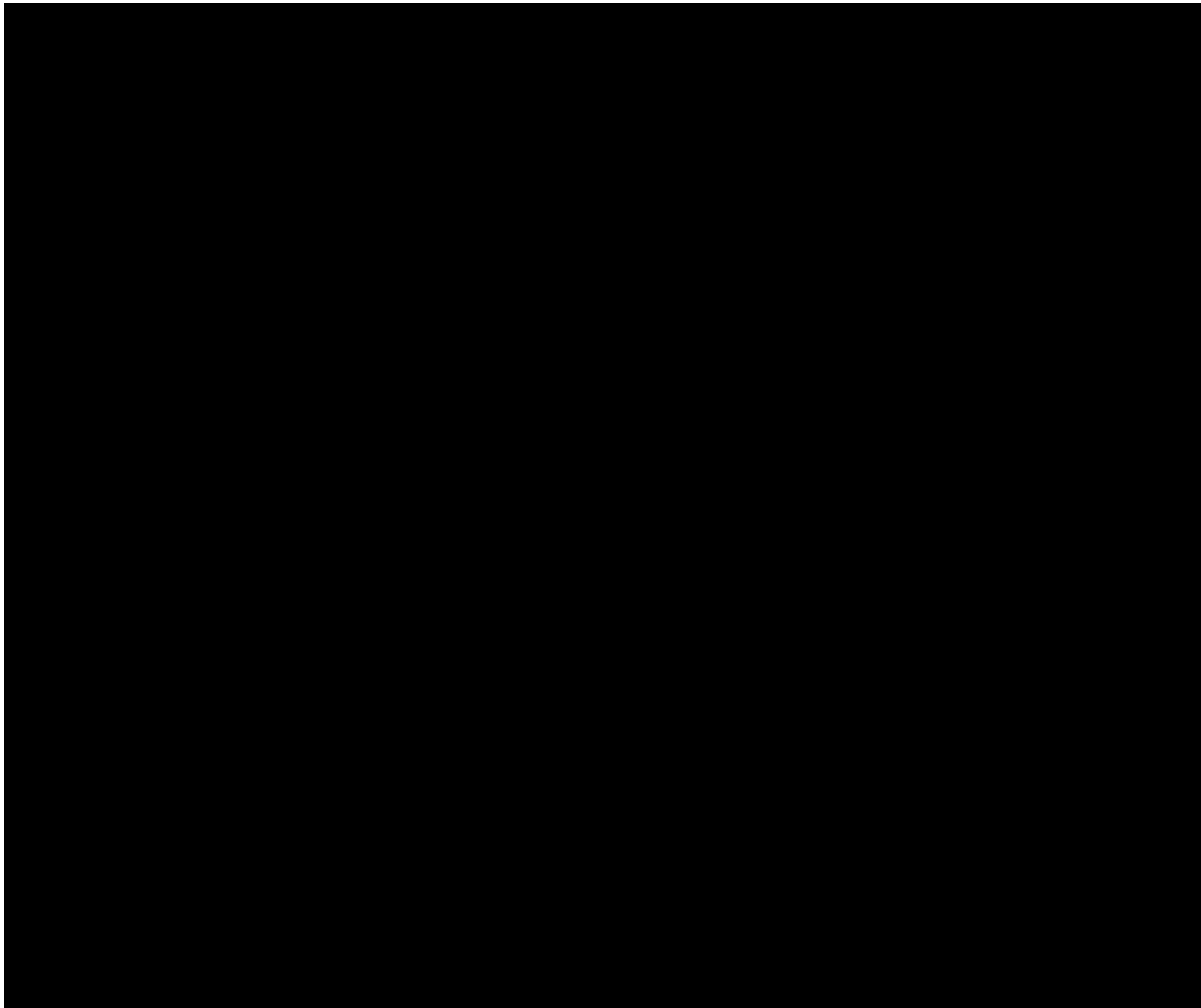
[REDACTED]

[REDACTED]

[REDACTED]







Health and Safety Strategy

[REDACTED]

[REDACTED] During the operational phase, safe systems of work such as risk assessments, method statements, lifting plans, and a permit-to-work system will be developed and implemented before work begins. The safe systems of work will be based on regulatory HSE requirements, Project requirements, and best practice, and adopt international standards to the extent possible and beneficial.

Risk Management Strategy

To ensure the Project’s long-term success, the O&M plan will deploy a risk management strategy with a focus on personnel safety, environmental impact, and asset integrity. The local Project team will manage and mitigate risks with support from teams of specialists working across the Shareholder Companies’ global portfolio and dedicated to sharing best practice.

11.2 SITE CONTROL

Please provide documentation to demonstrate site control for all marine terminals and other waterfront facilities that will be used for O&M.

- i. If available, evidence that the bidder or the equipment/service provider have right(s) to use a marine terminal and/or waterfront facility for O&M of the offshore wind energy project (e.g., by virtue of ownership or land development rights obtained from the owner).
- ii. If not available, describe the status of acquisition of real property rights for necessary marine terminal and/or waterfront facilities, any options in place for the exercise of these rights and describe the plan for securing the necessary real property rights, including the proposed timeline. Include these plans and the timeline in the overall project schedule.
- iii. Identify any joint use of existing or proposed real property rights for marine terminal or waterfront facilities.

Marine Terminal Facilities

[REDACTED]

The Project will execute the above logistics strategy using facilities already being developed for Vineyard Wind 1 and Park City Wind. With a combination of an SOV base in Bridgeport and a CTV base in Martha's Vineyard, the Project has mature plans to secure all necessary marine terminals for O&M.

[REDACTED]

[REDACTED]

[REDACTED]

11.3 O&M FUNDING MECHANISM

Describe in detail the proposed O&M funding mechanism and funding levels to support planned and unplanned O&M requirements.

[REDACTED]

[REDACTED]

[REDACTED]

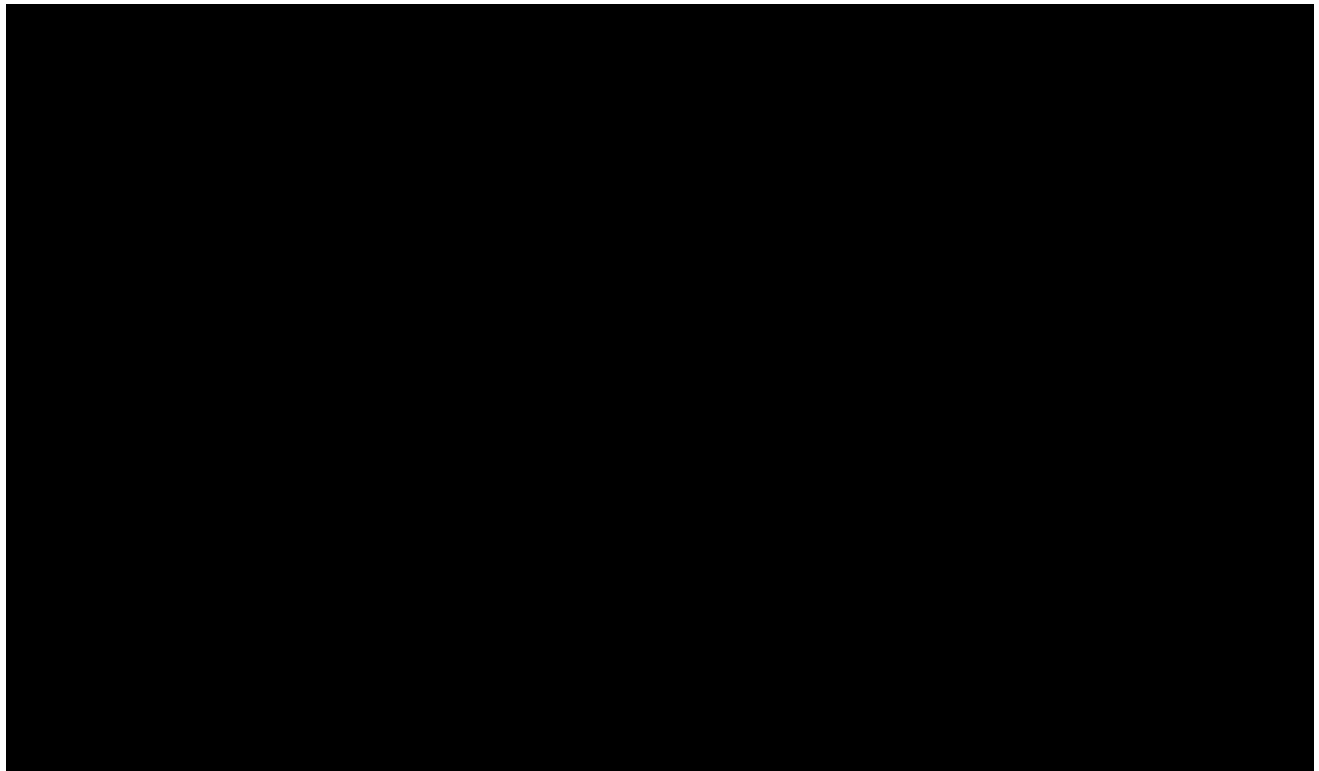
[REDACTED] As a result, we are highly confident in our estimate of the funding levels required for the Project's O&M.

11.4 WARRANTIES AND GUARANTEES

Describe the terms (or expected terms) of the warranties and/or guarantees on major equipment that the bidder is utilizing or proposing to utilize.

As part of equipment supply agreements, Vineyard Wind will negotiate industry-standard warranty periods on all major Project components. The warranties will be those that are typically available for offshore wind projects and aligned with industry best practice. The anticipated details of the warranties are summarized in the tables that follow.

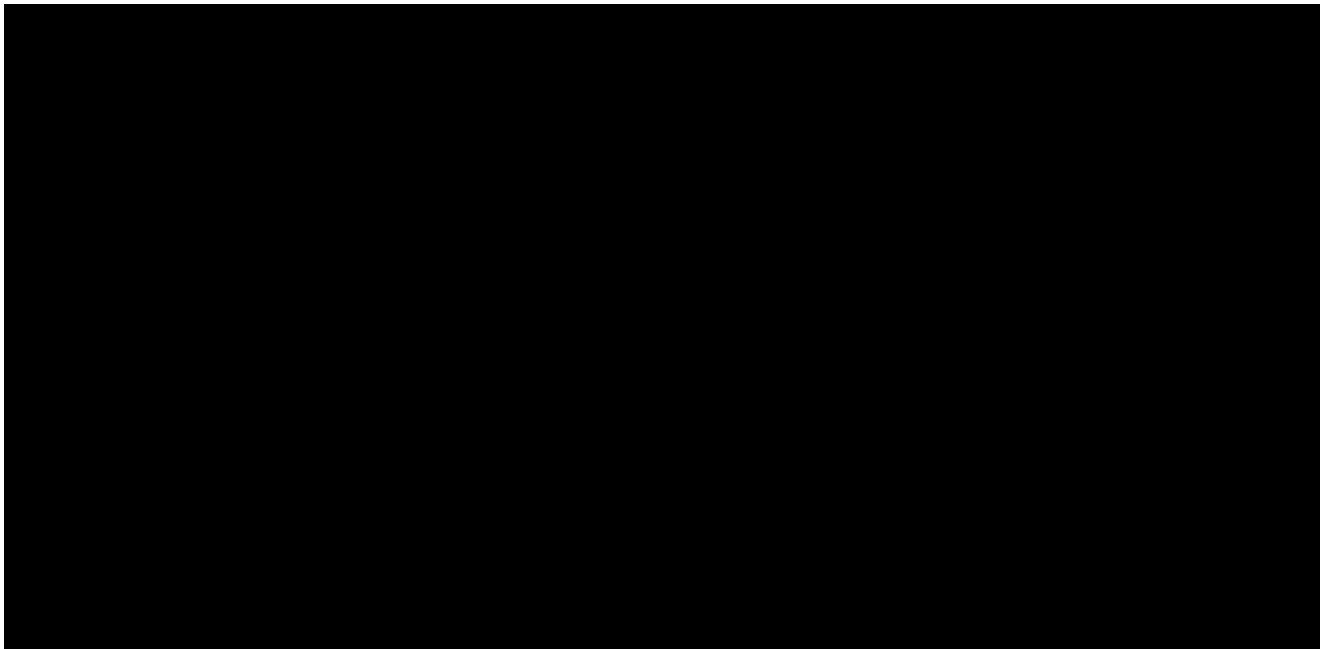
Wind Turbine Generators



Balance of Plant (BOP)

Table 11.4-2 below outlines the warranties and coverages we anticipate securing for BOP components.





11.5 O&M AGREEMENTS

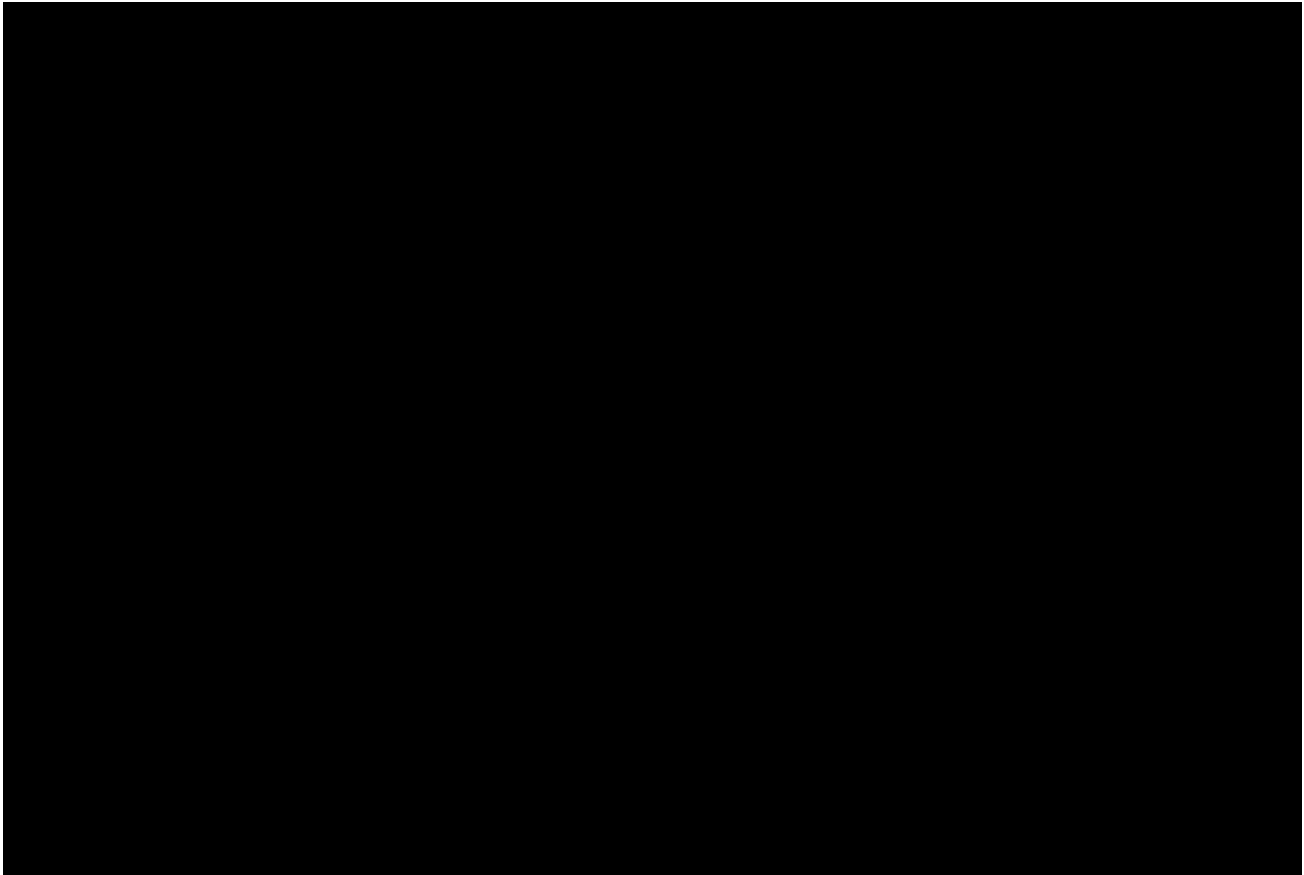
Describe the status of the project sponsor in securing any O&M agreements or contracts. Include a discussion of the sponsor's plan for securing a medium-term or long-term O&M contract, including the expected provider of O&M services.

[Redacted text block]

[Redacted text block]

[Redacted text block]

Table 11.5-1 lists the key O&M agreements that will be secured prior to FC.



Wind Turbine Generators

Vineyard Wind will enter into a full-service agreement with the WTG OEM prior to the commencement of the operational phase. The service agreement will be procured simultaneously with the WTG supply agreement.



Balance of Plant



All required maintenance contracts will be in place in advance of the commencement of operations.

11.6 O&M EXPERIENCE

Provide examples of the bidder's experience with O&M services for other similar projects.

As described in Section 12, Vineyard Wind, the Vineyard Wind team, Shareholder Companies, and affiliates have extensive O&M experience with multiple offshore wind projects. Both Shareholder Companies are also actively developing new offshore wind projects that will use WTGs similar in size and capacity as those under consideration for the Project. This expertise, including technical know-how, will be used in support of the Project. The experience gained in Vineyard Wind 1 for the operations phase, as well as the ongoing experience from operating it, will also be leveraged to the benefit of the Project.

Copenhagen Infrastructure Partners

CIP's offshore wind team is one of the world's most knowledgeable and experienced. Many of the individuals on the team were leaders in developing offshore wind technology and practices in the early days of the sector, helping to transform offshore wind into the significant energy resource it is today. CIP is also the world's only offshore wind developer to have projects in development on four continents: North America, Europe, Asia, and Australia. Globally, CIP's senior partners have been involved in the development and operation of a significant number of offshore wind projects, including the:

- 402 MW Veja Mate² in the German North Sea; and
- 588 MW Beatrice in the UK North Sea.

Additionally, CIP owns other similar projects, including the:

- 900 MW DolWin3 offshore converter station in the German North Sea;
- 273 MW Borea onshore wind project in the UK;
- 58 MW SAGE solar project in Utah, US; and
- 60 MW Lostock waste-to-energy plant in the UK.

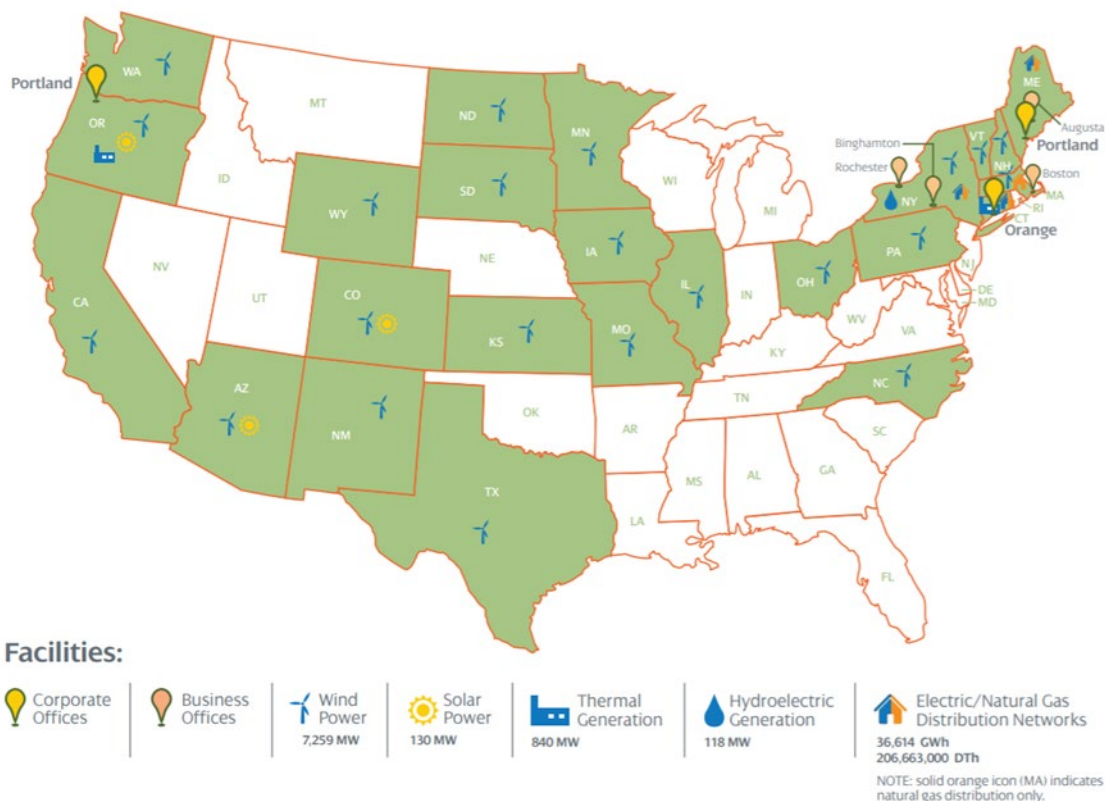
CIP is also currently developing offshore wind projects in the US, Taiwan, Canada, South Korea, Japan, and Australia, including O&M preparation activities similar to the activities described above. Finally, CIP also successfully operates a portfolio of onshore wind projects in Texas and the UK.



Avangrid Renewables

Avangrid Renewables has more than 8,300 MW of owned and controlled renewable generation capacity, primarily wind and solar, across 24 states (see Figure 11.6-1). Avangrid Renewables has won and is currently in the permitting process for the Kitty Hawk offshore wind project proposed in North Carolina (up to 2,500 MW). Through owning and operating four onshore wind projects in the ISO-NE region, Avangrid Renewables has over seven years of experience, as a Lead Market Participant and is a registered Designated Entity in ISO-NE.

Figure 11.6-1 Avangrid Renewables Operating Assets



Iberdrola

Avangrid Renewables' ultimate shareholder company, Iberdrola S.A. (Iberdrola), is a Forbes Global 2000 company (see Section 12). Iberdrola is the world's largest wind utility with a market capitalization of \$78 billion and has significant experience operating onshore and offshore projects on multiple continents. More specifically, Iberdrola is currently:

- an owner/operator of more than 300 operating onshore wind projects around the world with a total capacity of over 18,400 MW;
- progressing over a dozen offshore wind projects totaling 9,700 MW through different stages of development;

- the long-term shareholder in Siemens Gamesa Renewable Energy—the global leader offshore wind OEM; and
- the holder of 3,000 MW of corporate Power Purchase Agreement deals, completed in the past 24 months, with Google, Amazon, Nike, and others.

Offshore wind projects that Iberdrola is currently developing, constructing, and operating include the:

- up to 1,200 MW East Anglia THREE offshore wind project in the UK, which has been permitted and is now pending FC. Iberdrola is the owner of this project.
- largest offshore wind cluster in the German Baltic Sea comprised of the operational 350 MW Wikinger project and two planned developments, the 476 MW Baltic Eagle and 10 MW Wikinger Süd projects, both of which have won a competitive auction and are heading towards FC.
- 496 MW St. Brieuc wind project off the coast of Brittany in France, which will begin construction in early 2022 and be commissioned by the end of the same year. Iberdrola is 70% owner of this project.
- 714 MW East Anglia ONE wind project in the UK North Sea, which has been fully operational since July 2020.
- 389 MW West of the Duddon Sands wind project in the Irish Sea. Iberdrola is 50% owner of this project.

Iberdrola is also pursuing several development opportunities globally, including the further development of the East Anglia Zone in the UK (East Anglia ONE North [up to 800 MW] and East Anglia TWO projects [up to 900 MW]) Baltic Sea area in Germany (Windanker project [up to 250 MW]).

SECTION 12

PROJECT MANAGEMENT/EXPERIENCE

12.0 OVERVIEW

With the Vineyard Wind 1 project, Vineyard Wind is leading the US offshore wind industry as the first and only developer to obtain permitting approval at the federal and state levels, conclude procurement and contracting for all major contract packages, finalize interconnection agreements, to successfully implement a financing plan, and begin onshore construction activities for a commercial-scale offshore wind project. Our understanding of what is required to develop, permit, finance, and construct offshore wind projects is unparalleled in the US.

[REDACTED]

[REDACTED]

[REDACTED] The team includes and is supported by a suite of consultants, partners, and personnel who possess the experience, skills, and local knowledge required to deliver the Project. [REDACTED]

[REDACTED]

Finally, the Project's success is further assured based on the global offshore wind expertise and management capabilities of Vineyard Wind's Shareholder Companies—Copenhagen Infrastructure Partners P/S (CIP) and Avangrid Renewables LLC (Avangrid Renewables). Combined, Vineyard Wind, the Shareholder Companies, and their affiliates have experience across 35 offshore wind projects totaling almost 20,000 megawatts (MW) of capacity in Australia, Europe, Southeast Asia, and the US.

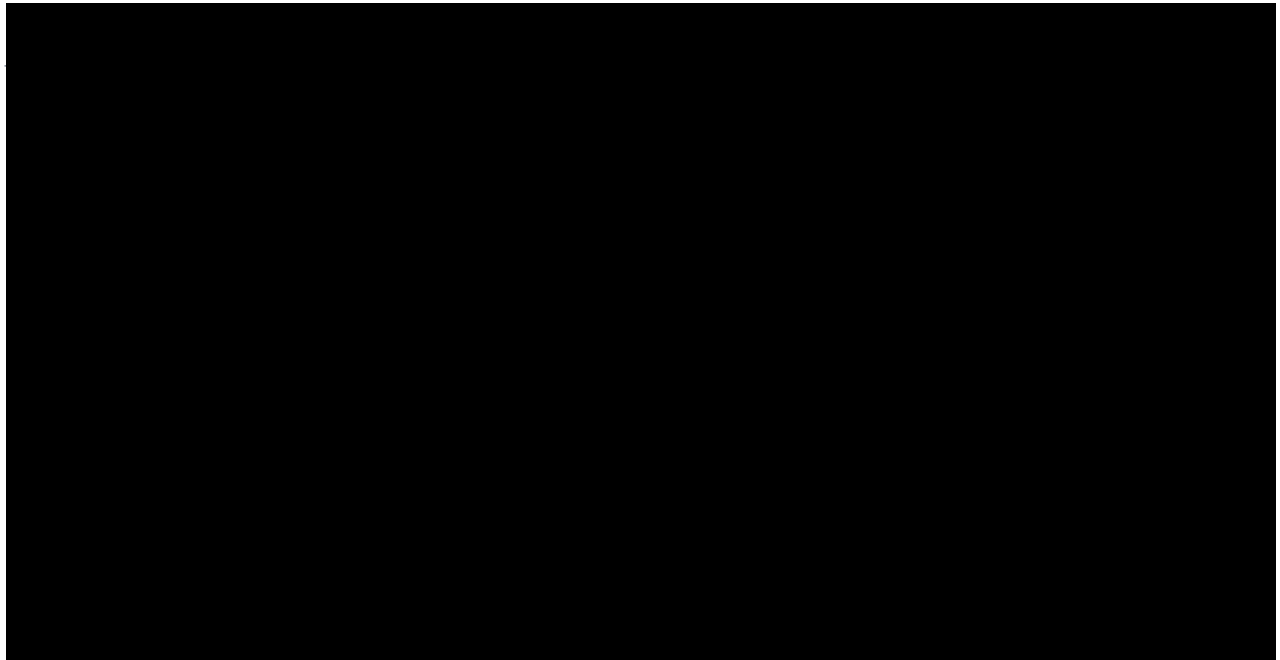
¹ One full-time equivalent job is the equivalent of one person working full time for one year (2,080 hours). Thus, two half-time employees would equal one full-time equivalent.

² Park City Wind is an 804 MW project that Vineyard Wind is developing in the northern portion of Lease Area OCS-A 0534 (and potentially a portion of Lease Area OCS-A 0501). Park City Wind constitutes Phase 1 of Vineyard Wind South (see Section 7).

12.1 ORGANIZATIONAL CHART

Provide an organizational chart for the project that lists the project participants and identifies the corporate structure, including general and limited partners.

Vineyard Wind LLC, a Delaware limited liability company registered in Massachusetts, was established in 2009 and is a 50/50 joint venture of CIP (through two investment funds: CI II and CI III) and Avangrid Renewables, a subsidiary of Avangrid Inc. (Avangrid; see Figure 12.1-1). Avangrid is 81.5% owned by Iberdrola S.A. (Iberdrola), a corporation organized under the laws of the Kingdom of Spain. The remaining outstanding shares of Avangrid are publicly traded on the New York Stock Exchange.



Vineyard Wind is the current owner of the Project through the business entity ownership structure depicted in Figure 12.1-1. [REDACTED]



Key consultants and service providers supporting the Project are depicted in Figure 12.1-2 and further described in Table 12.2-2. Project partners and consultants involved in the Project's economic development, workforce training, supply chain, and research initiatives are discussed in Section 13.

12.2 PROJECT EXPERIENCE

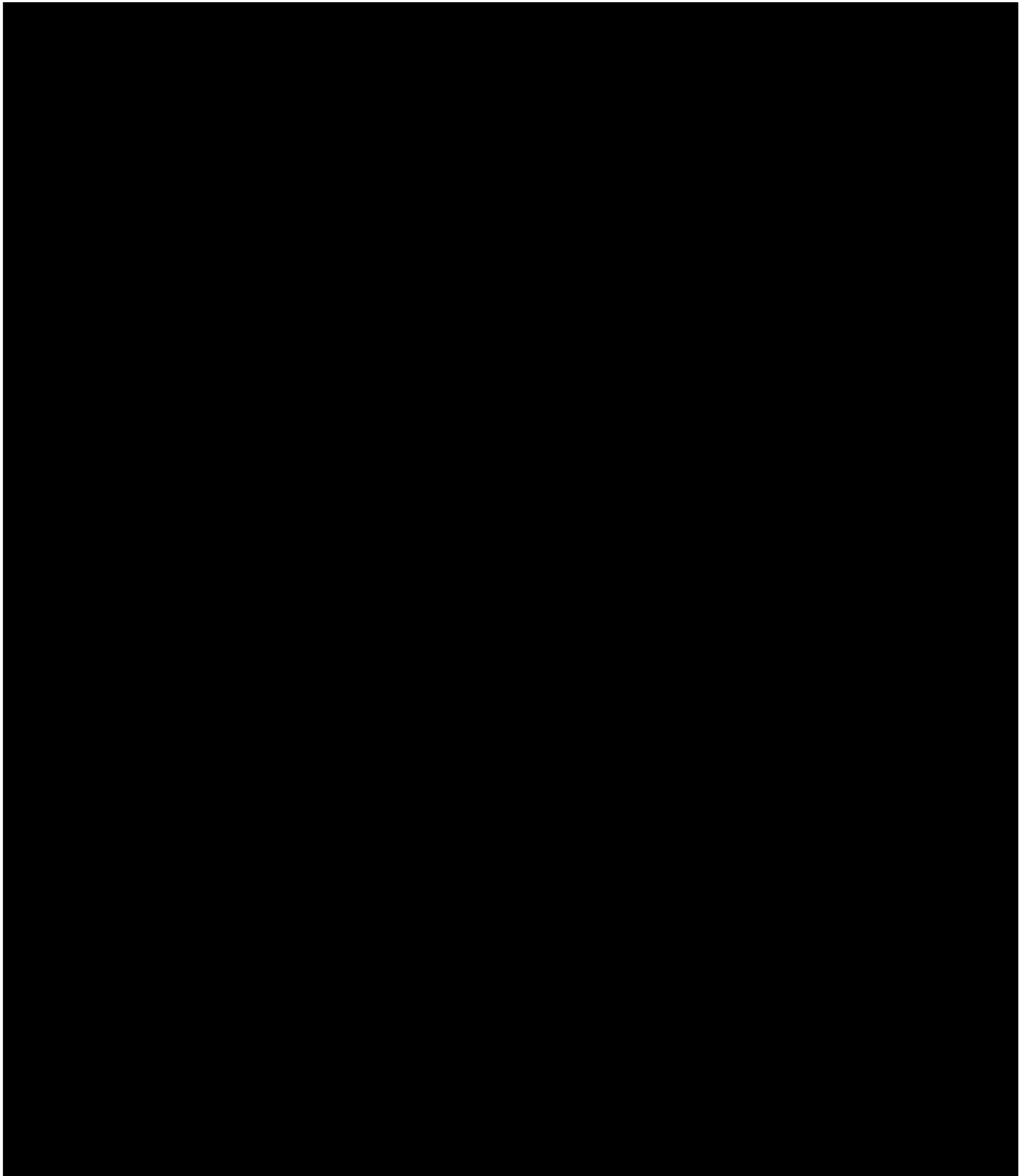
Provide statements that list the specific experience of the bidder and each of the project participants (including, when applicable, the bidder, partners, and proposed contractors), in developing, financing, owning, and operating generating and delivery facilities, other projects of similar type, size and technology, and any evidence that the project participants have worked jointly on other projects.

Vineyard Wind

Vineyard Wind's team of US and European industry experts has a long track record of developing offshore and onshore wind projects across the globe. This is complemented by experienced personnel provided by the Shareholder Companies; local staff with expertise in US offshore wind, permitting, and local infrastructure; and expert consultants that ensure a well-rounded team with the skillset required to develop and operate offshore wind projects.

Vineyard Wind's corporate structure allows the company to draw heavily on the Shareholder Companies' and affiliates' resources and experience developing, permitting, financing, constructing, and/or operating almost 20,000 MW of offshore wind capacity across 35 projects in the US, Europe, Australia, and Southeast Asia. The Shareholder Companies and/or affiliates also have global experience with offshore wind projects of similar size, distance from shore, and/or water depth as the Project. Furthermore, the technology that will be used for the Project is similar to that of Vineyard Wind 1 and Park City Wind and follows a similar design as offshore wind projects developed, constructed, and operated by the Shareholder Companies globally.

Table 12.2-1 provides an overview of the combined Vineyard Wind, Shareholder Company, and affiliate team member experience in offshore wind, including Vineyard Wind 1. With this project, Vineyard Wind is the only team in the US to bring a commercial-scale offshore wind project to completion in the federal and state permitting process, conclude procurement and contracting for all major contract packages, finalize interconnection agreements, achieve financial close, and begin onshore construction activities.

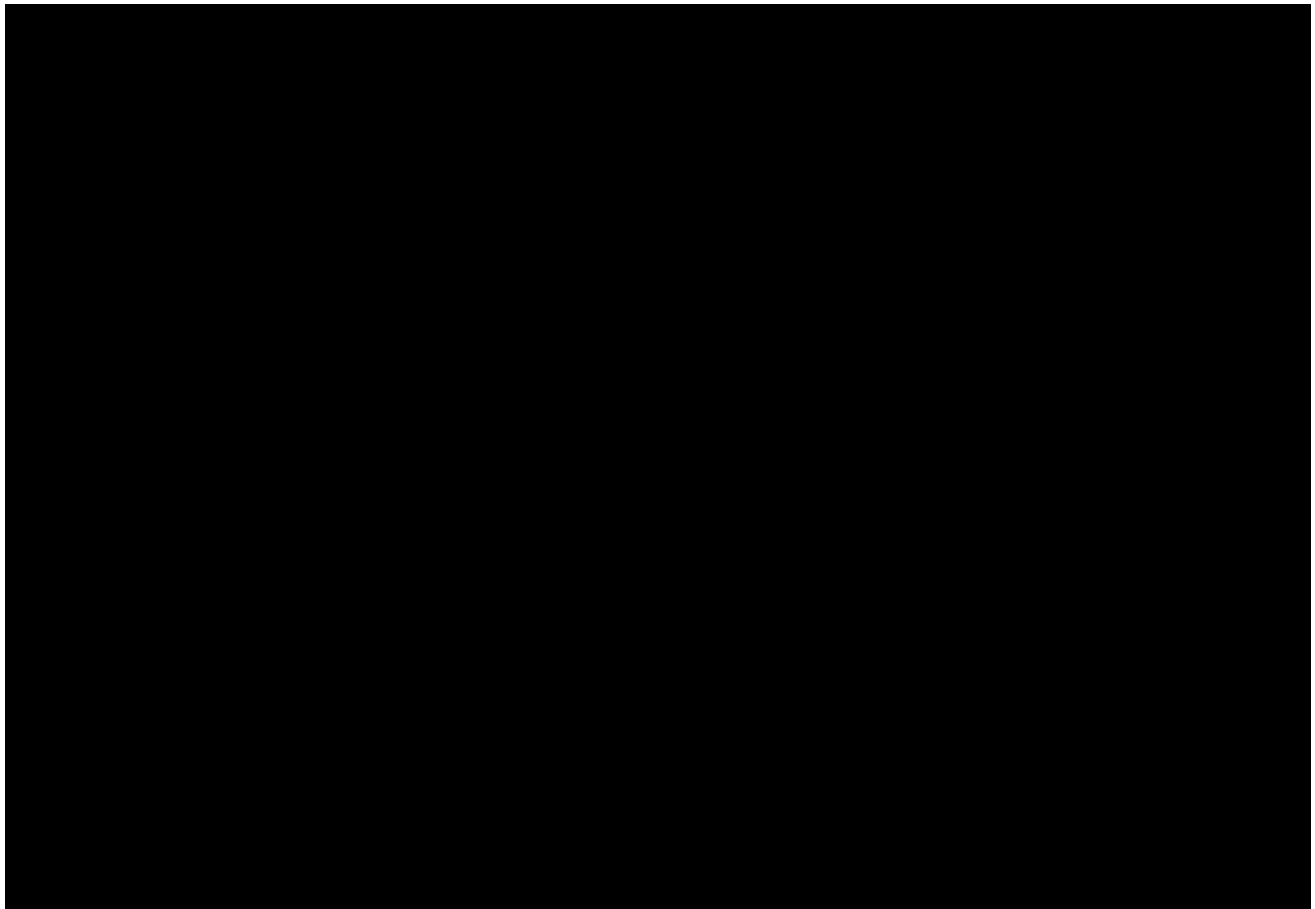


Copenhagen Infrastructure Partners

CIP is a fund management company focused on energy infrastructure including offshore wind, onshore wind, solar photovoltaics (PV), biomass and energy from waste, transmission and distribution, reserve capacity and storage, and other energy assets like Power-to-X. CIP manages eight funds and has approximately \$19 billion (EUR 16 billion) under management. CIP was founded in 2012 by senior executives from the energy industry in cooperation with PensionDanmark and, as of today, has ~200 employees and offices in Copenhagen, Hamburg, New York, Tokyo, Utrecht, and London.

CIP's offshore wind team is one of the world's most knowledgeable and experienced. Many of the individuals on the team were leaders in developing offshore wind technology and practices in the early days of the sector, helping to transform offshore wind into the significant energy resource that it is today. CIP is also the world's only offshore wind developer to have projects in development on four continents: North America, Europe, Asia, and Australia. An overview of CIP's portfolio of onshore and offshore wind projects is provided in Figure 12.2-1 below.

CIP pursues an active role in all of its projects. By being an active investor or investor-developer, CIP can be in control of the projects included in each of its funds and take immediate actions, as needed. To obtain this active role, CIP has strong representation on the Board of Directors of each project company, taking part in every major decision.



[REDACTED]

CIP has a particular focus on offshore wind project investment. It was under CIP's initiative that Copenhagen Offshore Partners A/S was established in 2015. Copenhagen Offshore Partners is an experienced provider of project development, construction management, and operational management services to offshore wind projects. Their ~139 employees are specialists in a broad range of competencies within project management, early and late-stage development, engineering, construction, procurement, operational management, as well as business development and project financing. CIP has the overall responsibility for all project investment decisions (i.e., financing, structuring, potential partnerships, etc.) whereas Copenhagen Offshore Partners leads the project development and construction phases for offshore wind projects on behalf of CIP's funds.

Copenhagen Offshore Partners has been integral to the development of Vineyard Wind's projects, with its co-founder, Lars Thaaning Pedersen, being appointed as the Chief Executive Officer (CEO) of Vineyard Wind. A significant proportion of Vineyard Wind's human resources are being supplied by Copenhagen Offshore Partners, including the Chief Development Officer (CDO), Director of Environmental Affairs, Project Director for Vineyard Wind 1, Engineering, Procurement, and Construction (EPC) Director for Vineyard Wind 1, and external consultants sourced from CIP's and Copenhagen Offshore Partners' industrial network.

Collectively, the individuals on the CIP and Copenhagen Offshore Partners teams have negotiated contracts and transactions with a combined value of more than \$35 billion from 2001 - 2012.

Recent Project Experience

One recent and notable offshore wind achievement includes the delivery of the Veja Mate project in record time. This CIP project was completed four months ahead of schedule despite the installation of 67 foundations and 6 MW wind turbine generators (WTGs) under challenging conditions almost 60 miles from shore and in water depths up to 135 feet. During the process, the team set several world records, including the first use of the world's largest installation vessel (*Seajacks Scylla*) and the installation of a 1,300-US ton monopile—the largest monopile foundation ever installed. [REDACTED]

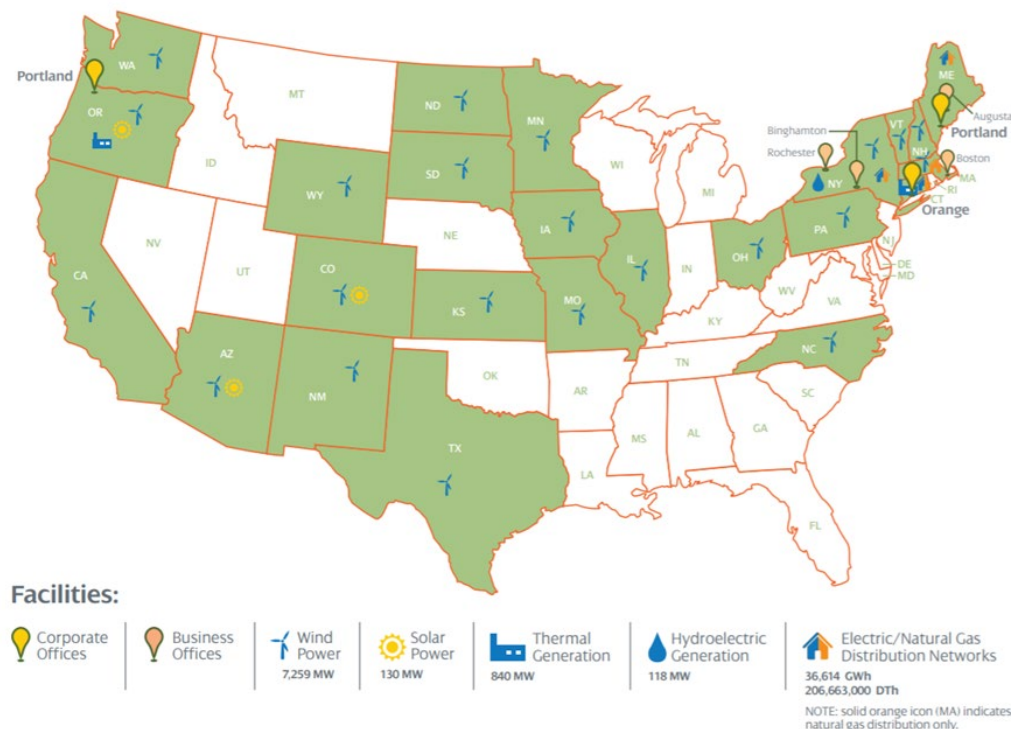
Also, in early 2020, CIP reached FC and started construction on the Changfang & Xidao offshore wind project in Taiwan. [REDACTED]

Avangrid Renewables

Avangrid Renewables is the third largest developer of onshore wind projects in the US and strives to lead the transformation to a sustainable, competitive, and clean energy future. The company has more than 8,300 MW of owned and controlled wind and solar generation across 24 states. The company has a team of 60+ locally-based offshore wind employees supporting its US projects, with plans to recruit significantly more, as well as a US offshore wind hub in Boston, Massachusetts.

The map provided in Figure 12.2-2 shows Avangrid Renewables' wind, solar, thermal generation, hydroelectric generation, and electric/natural gas distribution networks across the US. The geographic diversity of Avangrid Renewables' project portfolio allows the company to optimize lessons learned across different regions, markets, and operating conditions and maximize each project's generation capabilities. Avangrid Renewables has completed four onshore wind projects in New England and has extensive experience operating wind projects in ISO New England (ISO-NE) as a Lead Market Participant. Attachment 12.2-1 provides an overview of Avangrid Renewables' onshore wind projects.

Figure 12.2-2 Avangrid Renewables' Assets (as of April 2020)



Avangrid Renewables has also secured an offshore lease (Lease Area OCS-A 0508) for the 122,000-acre Kitty Hawk Offshore Wind Project, which represents ~2,500 MW of potential offshore wind capacity. The company has commenced offshore wind development activities in this lease area and submitted a Site Assessment Plan and Construction and Operations Plan to the Bureau of Ocean Energy Management (BOEM). On July 30, 2021, BOEM published a Notice of Intent to prepare an Environmental Impact Statement for the Kitty Hawk Offshore Wind Project.

Avangrid Renewables is a wholly-owned subsidiary of Avangrid, whose majority shareholder is Iberdrola, a 170-year-old company and global energy leader. This allows Avangrid Renewables to benefit from the experience of Iberdrola Group affiliates, such as Avangrid Networks, ScottishPower Renewable Energy Ltd. (ScottishPower Renewables), and Iberdrola Renovables SAS (Iberdrola Renovables).³ These affiliates have substantial expertise in offshore and onshore wind development, transmission project development, finance, construction, and operations.

Iberdrola is the world's leading producer of wind power and one of the biggest electric utilities globally in terms of market capitalization. Iberdrola Group's offshore business has 700+ directly employed individuals that possess skills and experience in the full spectrum of offshore wind requirements: permitting and development, transmission, finance, construction, and operations and maintenance (O&M). The company's offshore wind strategy is focused on developing operational hubs in key regions, which include the US, with a current emphasis on the Atlantic Coast, Europe, and Asia. Iberdrola has three operational projects in the UK and Europe and an additional two under construction.

The company's first offshore wind project, West on Duddon Sands, was a joint venture between Iberdrola's subsidiary Scottish Power and Ørsted. This project featured 108 3.6 MW Siemens WTGs with a total capacity of 389 MW. This project has been fully operational since 2014. Wikingen followed shortly after as Iberdrola's first solo project. Wikingen is a 350 MW project based in the German Baltic Sea and features 70 Adwen 5 MW WTGs. This project became fully operational in 2017. East Anglia ONE became fully operational in July 2020 and is the company's largest project completed to date with 102 Siemens Gamesa 7 MW WTGs and an installed capacity of 714 MW. Iberdrola recently started construction of the 496 MW Saint-Brieuc project off the coast of France along with the Baltic Eagle project in the German Baltic Sea.

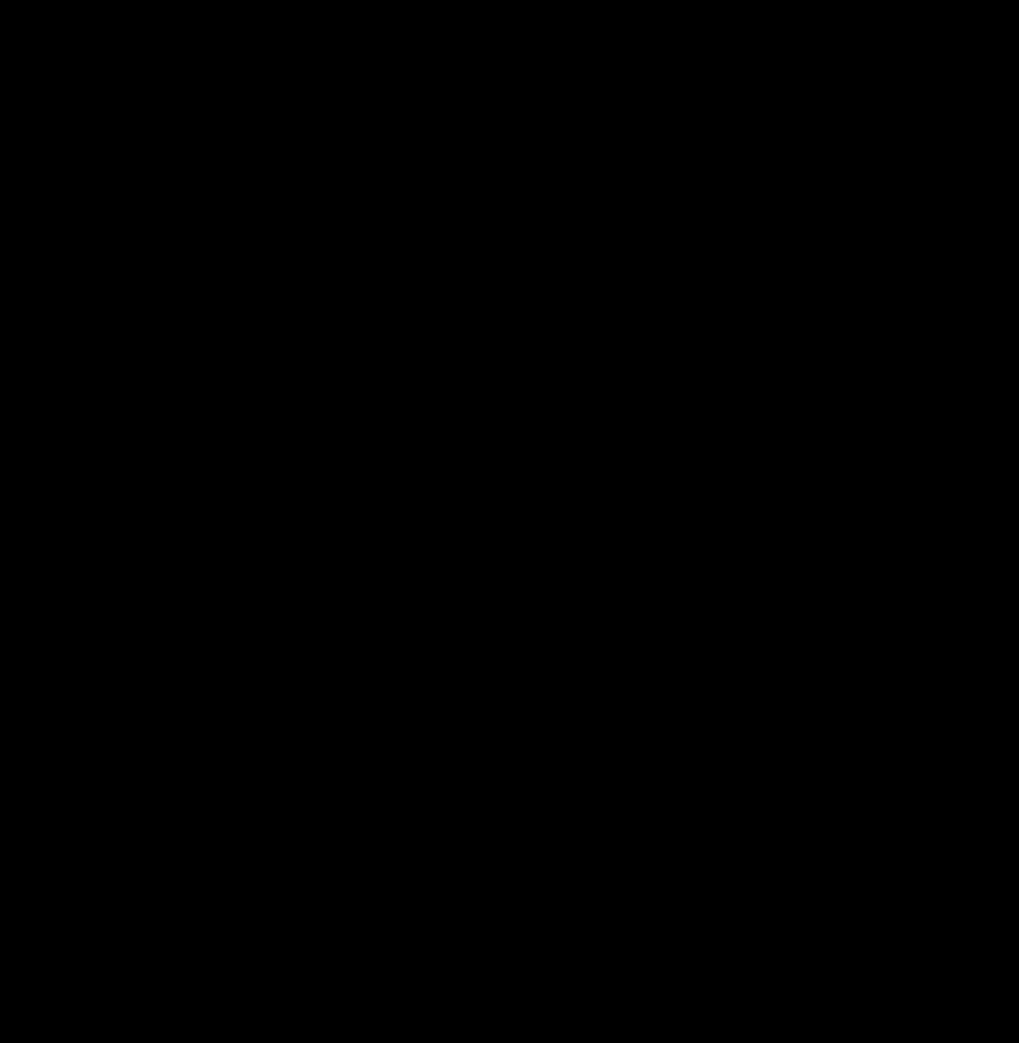
Avangrid Renewables and Iberdrola have played key roles in the development of Vineyard Wind's projects and seconded key leaders into the Vineyard Wind joint venture, including the Deputy CEO, Chief Corporate Officer, Chief Financial Officer, and the Deputy EPC Director for Vineyard Wind 1, as well as provided expert support from the wider Iberdrola Group's offshore business.

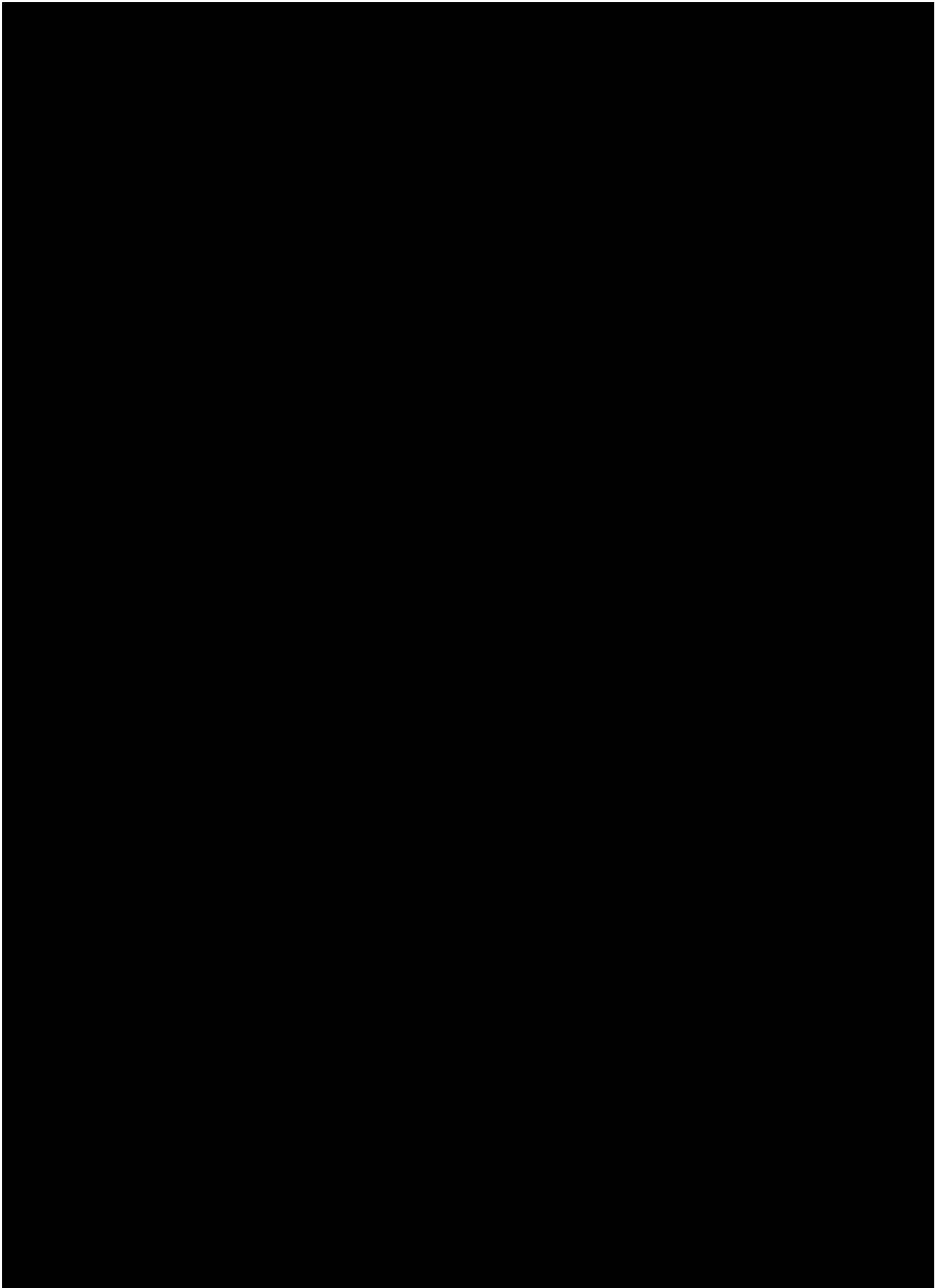
³ See: <https://www.iberdrola.com/corporate-governance/structure>

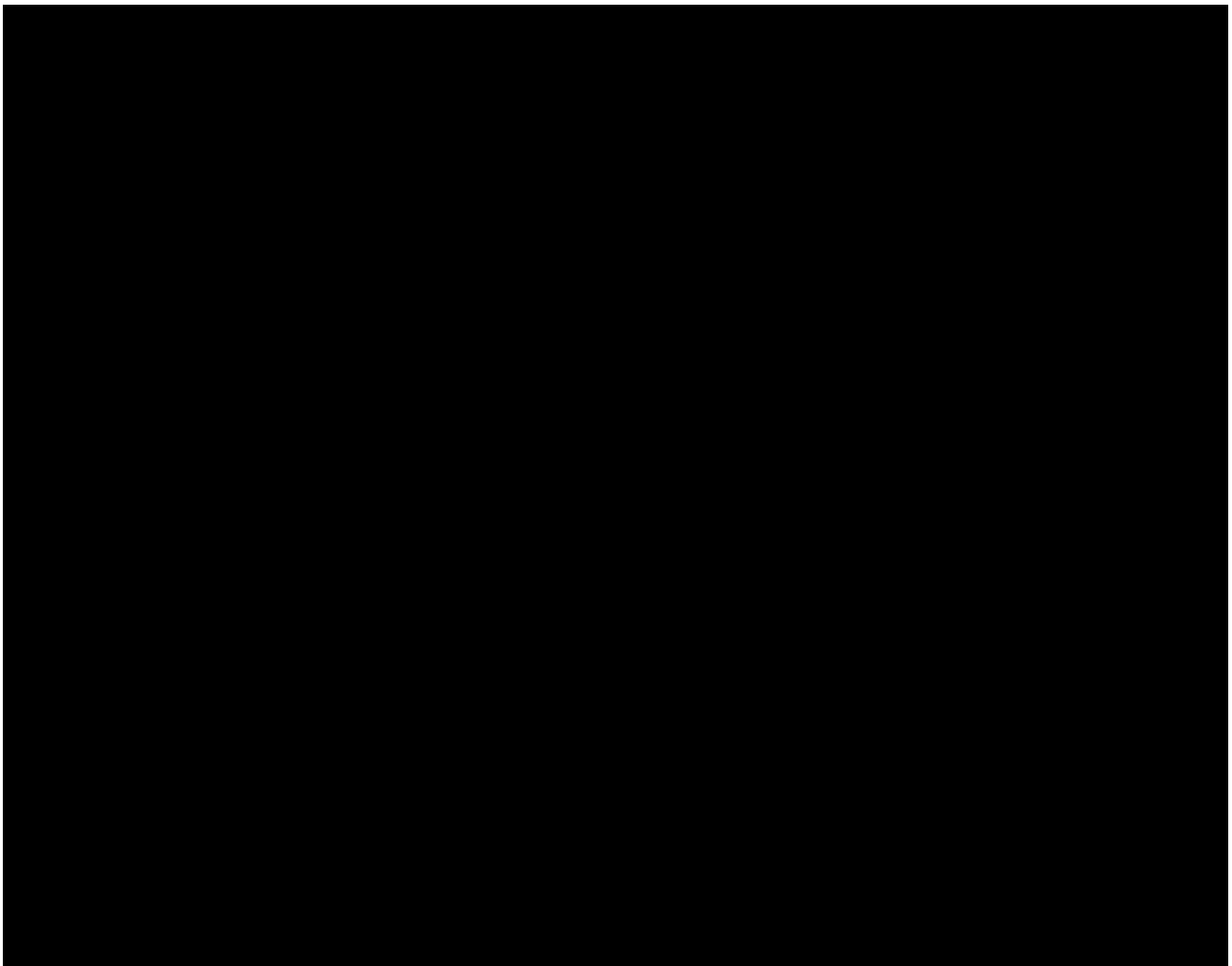
Project Partners

Vineyard Wind works with a number of partners and expert consultants to support our offshore wind project development efforts. Key partners and consultants for Project are listed in Table 12.2-2. [REDACTED]

12.2-2. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]



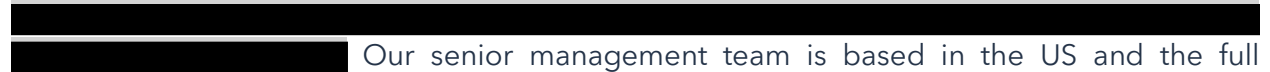


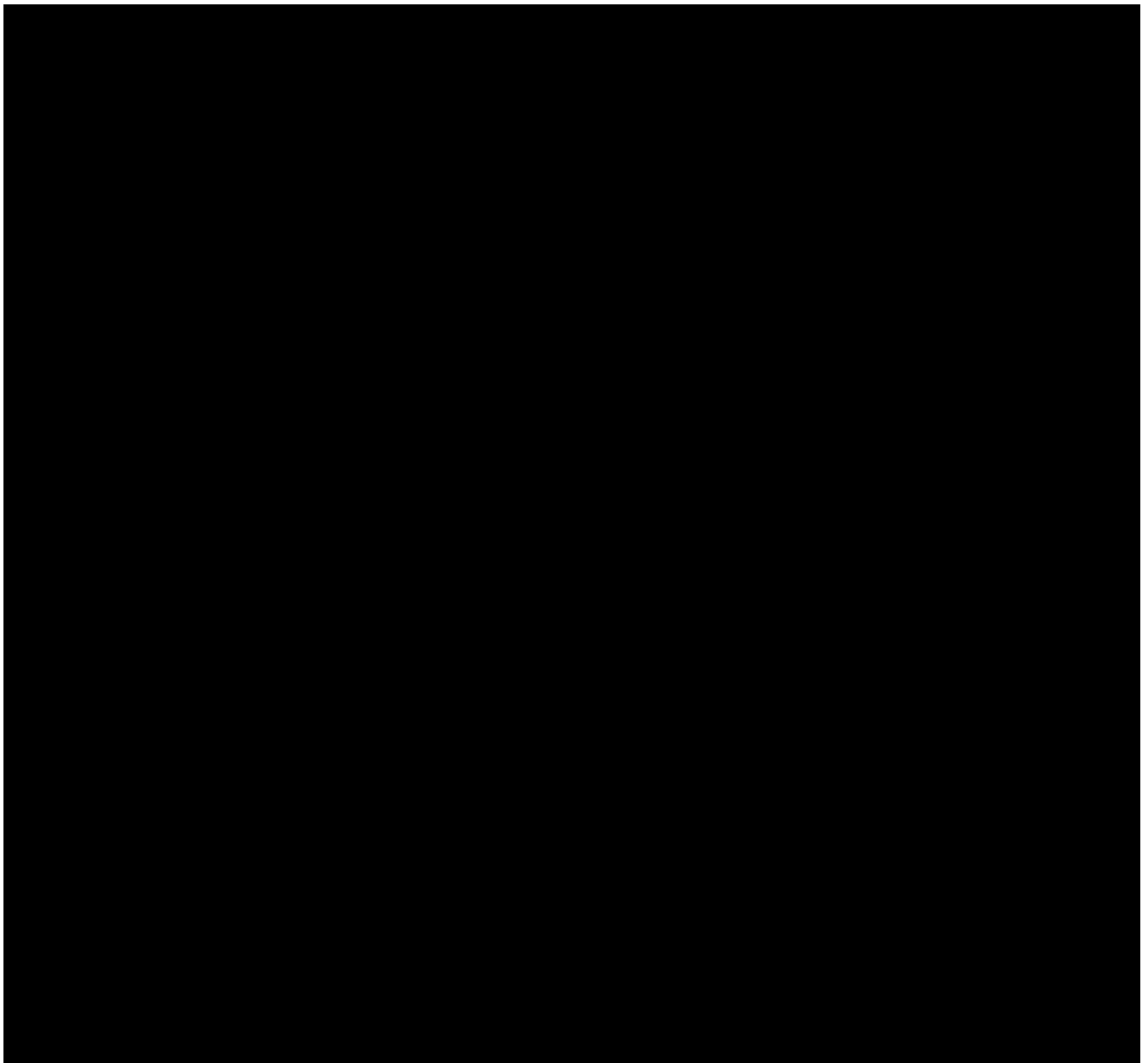


12.3 VINEYARD WIND KEY PERSONNEL

Provide a management chart that lists the key personnel dedicated to this project and provide resumes of the key personnel. Key personnel of the bidder's development team having substantial project management responsibilities must have:

- i. Successfully developed and/or operated one or more projects of similar size or complexity or requiring similar skill sets; and
- ii. Experience in financing power generation projects (or have the financial means to finance the project on the bidder's balance sheet).

 Our senior management team is based in the US and the full resources of the Shareholder Companies are available to support them in successfully executing the Project. Biographical details of Board of Manager members, Executive Committee members, officers, and other key personnel are provided below.

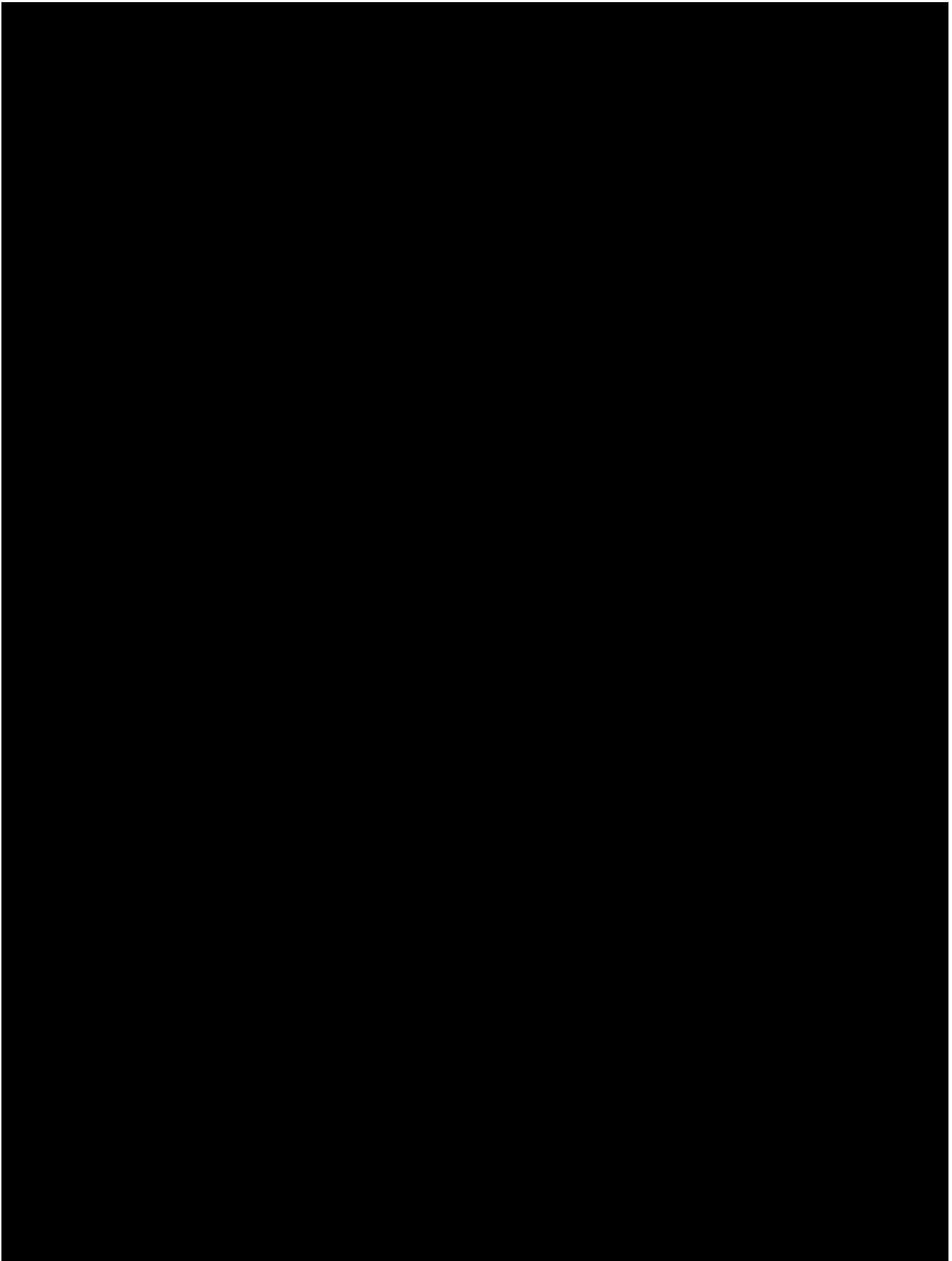


Board of Managers

Vineyard Wind's Board of Managers is comprised of four independent representatives appointed by the Shareholder Companies. Together, the Board of Managers has over 60 years of combined experience in renewable investment, energy infrastructure, and the onshore and offshore wind sectors.

[Redacted]

[Redacted]
[Redacted]
[Redacted]
[Redacted]
[Redacted]





Officers of Vineyard Wind

Lars Thaaning Pedersen, CEO of Vineyard Wind and Co-founder of Copenhagen Offshore Partners.

Lars co-founded Copenhagen Offshore Partners, a leading offshore wind development and construction management company working exclusively with CIP, in 2015. Copenhagen Offshore Partners is currently involved in the development of more than 6,000 MW of offshore wind projects in the US, Canada, Taiwan, and Australia. In summer 2017, Copenhagen Offshore Partners completed the construction of the 402 MW Veja Mate project in the German North Sea four months ahead of schedule and under budget (see Section 12.2). Lars has been working in the energy sector since 2004 and with offshore wind since 2008. Prior to joining Vineyard Wind in 2016, he held executive positions at Ørsted and has been involved in more than 10 offshore wind projects in Europe, including managing six offshore wind joint ventures. Lars has significant experience in the development, construction, and operation of offshore wind projects and has been instrumental in bringing new WTG technology to the market, such as the Siemens 3.6 MW-120 in 2009 and the 6 MW Siemens Direct Drive WTG in 2012. He also headed the development of the in-house Operations and Maintenance and Asset Management business units while at Ørsted. Lars holds a master's degree in Mechanical Engineering from the Technical University of Denmark. His resume is included in Attachment 12.3-1.

Sy Oytan, Deputy CEO of Vineyard Wind.

Sy has 25 years of experience in the development and construction of international onshore and offshore wind projects around the world, including the US, Asia, and Europe. During his career, he led the development, delivery, and construction of 6,500 MW of onshore and offshore wind energy projects. Sy led a range of offshore wind port and supply chain development initiatives for the State of New Jersey with a \$400 million strategic investment plan. He has an international background with living and working experience in the US, Norway, Germany, Denmark, Turkey, and Singapore. He has held a variety of leadership positions at Arup, the New Jersey Economic Development Authority, Siemens Gamesa, and Schlumberger. Sy is a Mechanical Engineer with a master's degree in Industrial Management from Clemson University. His resume is included in Attachment 12.3-1.

Rachel Pachter, CDO of Vineyard Wind.

Rachel was previously Vineyard Wind's Vice President of Permitting (2016 - 2019), dedicated solely to Vineyard Wind projects. Rachel has more than 18 years of experience in offshore wind development, particularly in permitting and regulatory compliance, environmental and site investigation, and federal, state, and local regulations. In addition to overseeing permitting efforts for Vineyard Wind 1, she has developed geophysical, geotechnical, and avian surveys and conducted community outreach and public relations. To date, Rachel is the only person to successfully manage and complete permitting of not one, but two commercial-scale offshore wind projects located in US federal waters (Cape Wind and Vineyard Wind 1). Rachel advised and planned all environmental and permitting aspects of development for Vineyard Wind 1 and managed the first phase of offshore geophysical and geotechnical site investigations for that project. Previously, Rachel was the Permitting and Environmental Manager at Energy Management Inc./Cape Wind Associates, where she worked for nearly 14 years. Rachel has a bachelor's degree in Geology, Cum Laude, from the University of Alaska at Fairbanks and received the Geology and Geophysics Award for outstanding scholastic achievement. Her resume is included in Attachment 12.3-1.

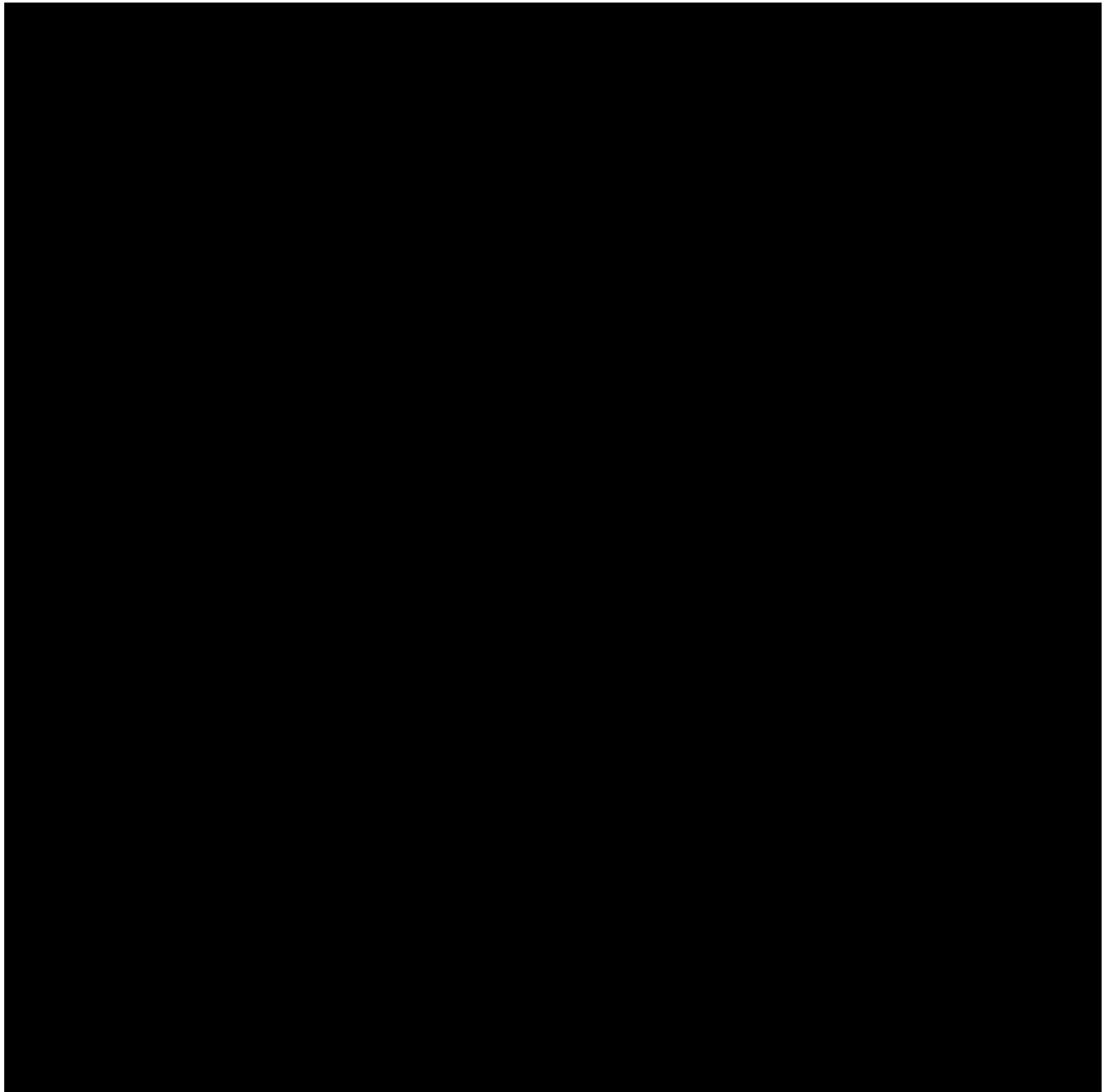
Klaus Møller, Project Director of Vineyard Wind 1.

Klaus has more than 12 years of experience in offshore wind. He has a successful track record of leading the development and construction of 2,900 MW of large-scale offshore wind projects, including serving as Program Director for the Zhong Neng (Taiwan), and UK offshore wind projects including Race Bank, Burbo Bank Extension, and Gunfleet Sands 3. Klaus holds a Graduate Diploma in Business Administration from Copenhagen Business School (Denmark), as well as a Master of Law from Aarhus University (Denmark), and a Higher Commercial Examination Program Degree (HHX) from Randers Business School (Denmark). His resume is included in Attachment 12.3-1.

Jennifer Simon Lento, General Counsel and Corporate Secretary of Vineyard Wind 1.

Jennifer has been practicing law in the renewable energy and environmental sectors for more than 15 years. After 10 years with the energy and environmental practice groups of several large and mid-sized law firms in Boston, southern New Jersey, and Philadelphia, Jennifer most recently served as counsel for a private equity fund focused on the acquisition, development, and financing of distributed solar energy facilities. Jennifer received her JD degree at the Rutgers School of Law and holds a bachelor's degree in Liberal Arts from Sarah Lawrence College. Her resume is included in Attachment 12.3-1.

Vineyard Wind Management and Development Personnel





Development Team

Geri Edens, Acting Director of Permitting and Counsel for Vineyard Wind.

Geri has almost 30 years of experience permitting large-scale energy projects, working closely with multiple federal agencies on National Environmental Policy Act (NEPA) reviews and related permitting under numerous federal statutes. She has litigated numerous NEPA cases, representing project proponents as intervenors defending the adequacy of the environmental reviews in federal court. For more than a decade, Geri represented Cape Wind Associates, where she assisted the company through the federal review process for its offshore wind project and successfully defended multiple challenges to the project's permits and approvals. Prior to launching her solo practice in 2020 and working directly with Vineyard Wind, she was a partner at a major international law firm.

Matthew Robertson, Director of Environmental Affairs at Vineyard Wind.

Matthew is presently managing all environmental surveys, activities, and initiatives as part of the overall development process for Vineyard Wind's lease areas, including cross-industry and regional collaboration. He is a trained biologist with substantial experience permitting energy projects along the US East Coast, including in New York, Massachusetts, Rhode Island, New Jersey, Virginia, Maryland, and South Carolina, and he has led permitting activities for Vineyard Wind 1. Notably, Matthew conducted the third-party oversight, on behalf of the federal and state regulating agencies, for the construction of the Block Island Wind Farm and associated sea2shore transmission line. He has also prepared numerous environmental impact statements and environmental studies for BOEM. Matthew has a bachelor's degree in Biological Sciences with a minor in Evolution and Ecology and a focus in Ornithology from the University of Connecticut in Storrs.

Cynthia Pyć, Senior Manager of Environmental Affairs at Vineyard Wind.

Cynthia is engaged in a variety of activities within the offshore wind environmental affairs arena, including environmental surveys, permitting, community outreach, and engineering support. Cynthia leads the science, technology, policy, and environmental aspects of project permitting and development for Vineyard Wind's projects. For more than a decade, Cynthia has worked on studies related to the effect of industrial sound on aquatic wildlife in a variety of Atlantic Ocean environments and for multiple wind energy projects and developers. Her other areas of expertise include long-term and baseline environmental monitoring studies, oil spill response, community and tribal consultation, environmental impact assessment, and regulatory permitting with BOEM and the National Oceanic and Atmospheric Administration.

Cynthia has published papers on passive and active acoustics as well as science policy. She holds a bachelor's degree in Zoology and a master's degree in Resources and the Environment, both from the University of Calgary, Canada.

Chris Rodstrom, Grid Connection Technical Design and Permitting Manager at Vineyard Wind.

Chris has more than 20 years of permitting and project management experience. He previously worked at Eversource Energy where he oversaw the siting, permitting, and construction of electric utility transmission and substation projects and natural gas transmission projects. He also worked at Clean Energy Collective, where he managed the siting, permitting, and construction of large-scale ground-mounted solar projects. Throughout his career, Chris has worked on a range of energy projects including the Walpole to Holbrook Reliability Project, the K Street Substation-Boston expansion, the Chelsea BPS Substation Upgrade, the Needham to Baker Reliability Project, and the Woburn to Mystic Transmission Line. Early in his career, he worked in commercial high voltage alternating current construction on Long Island and in New York City with the AD Winston Corporation. Chris holds a bachelor's degree in Environmental Studies from Clark University and a master's degree in Environmental Management from Yale University.

Nathaniel Mayo, Vineyard Wind's Director of Public Affairs.

Nathaniel oversees stakeholder engagement and local policy efforts, heading outreach and coordination efforts with various community groups at the neighborhood, municipal, regional, and state levels. He also serves as part of the permitting, government affairs, and communications teams. Nathaniel is a 12th generation Cape Cod native with over a decade of experience in public policy and community engagement on Cape Cod, having worked on environmental, energy, and fisheries issues. He previously worked for US Congressman William Delahunt and served as legislative director to former Cape and Islands State Senator Robert O'Leary, working on issues including environmental protection, fisheries, zoning, and regional planning. He currently serves as Vice-Chair of the Conservation Commission in Provincetown, Massachusetts. Nathaniel earned a bachelor's degree in Sociology from Brandeis University and holds a master's degree in Environmental Policy and Planning from Tufts University.

Jennifer Cullen, Manager of Workforce and Supply Chain Development at Vineyard Wind.

Jennifer is responsible for implementing offshore wind workforce development programs to ensure a locally trained and qualified workforce and domestic supply chain for offshore wind. Previously, she spent over 10 years in the non-profit sector, advocating for policies to promote clean energy and clean water in communities throughout the US. Jen is originally from Cape Cod and currently resides in the Town of Barnstable. She has extensive experience working to build support for offshore wind in the community. Jen holds a master's degree in Communications from Boston University and a dual bachelor's degree in Political Science and French from the University of Vermont.

Elizabeth Marsjanik, Manager of Environmental Affairs at Vineyard Wind.

Elizabeth has more than a decade of experience in environmental permitting, project management, and environmental compliance. Elizabeth is currently supporting the development of Vineyard Wind 1 through environmental permitting and compliance management. Prior to joining Vineyard Wind, she served as a project manager at an environmental consulting firm where she supported environmental permitting and compliance for multiple Fortune 500 energy sector clients. Elizabeth is a graduate of the University of Rhode Island with a bachelor's degree in Marine Biology and Marine Affairs with a focus on Invertebrate Biology and Marine Ecology.

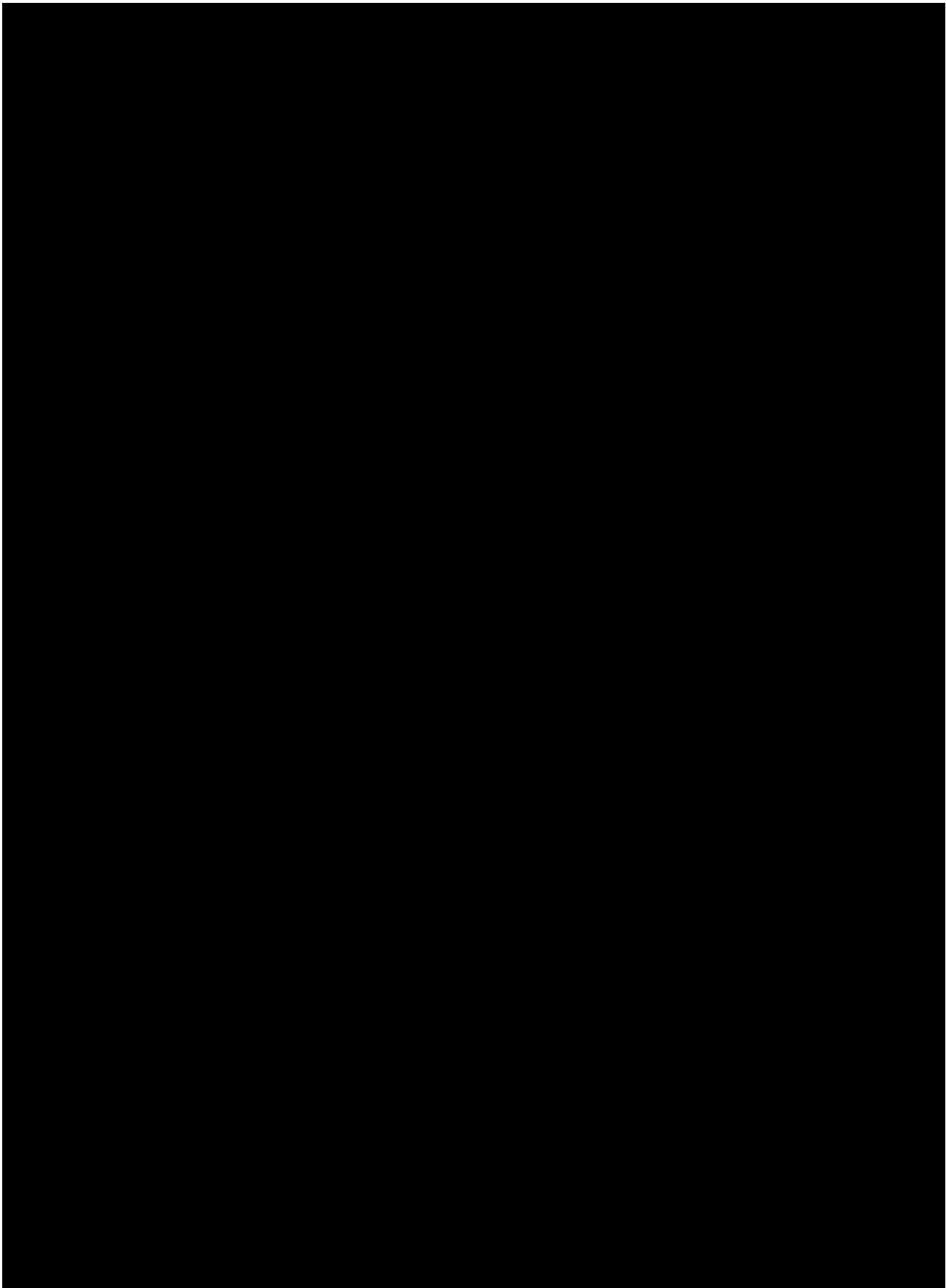
Jeannot Smith, Vineyard Wind's Marine Operations Officer and retired US Coast Guard senior officer.

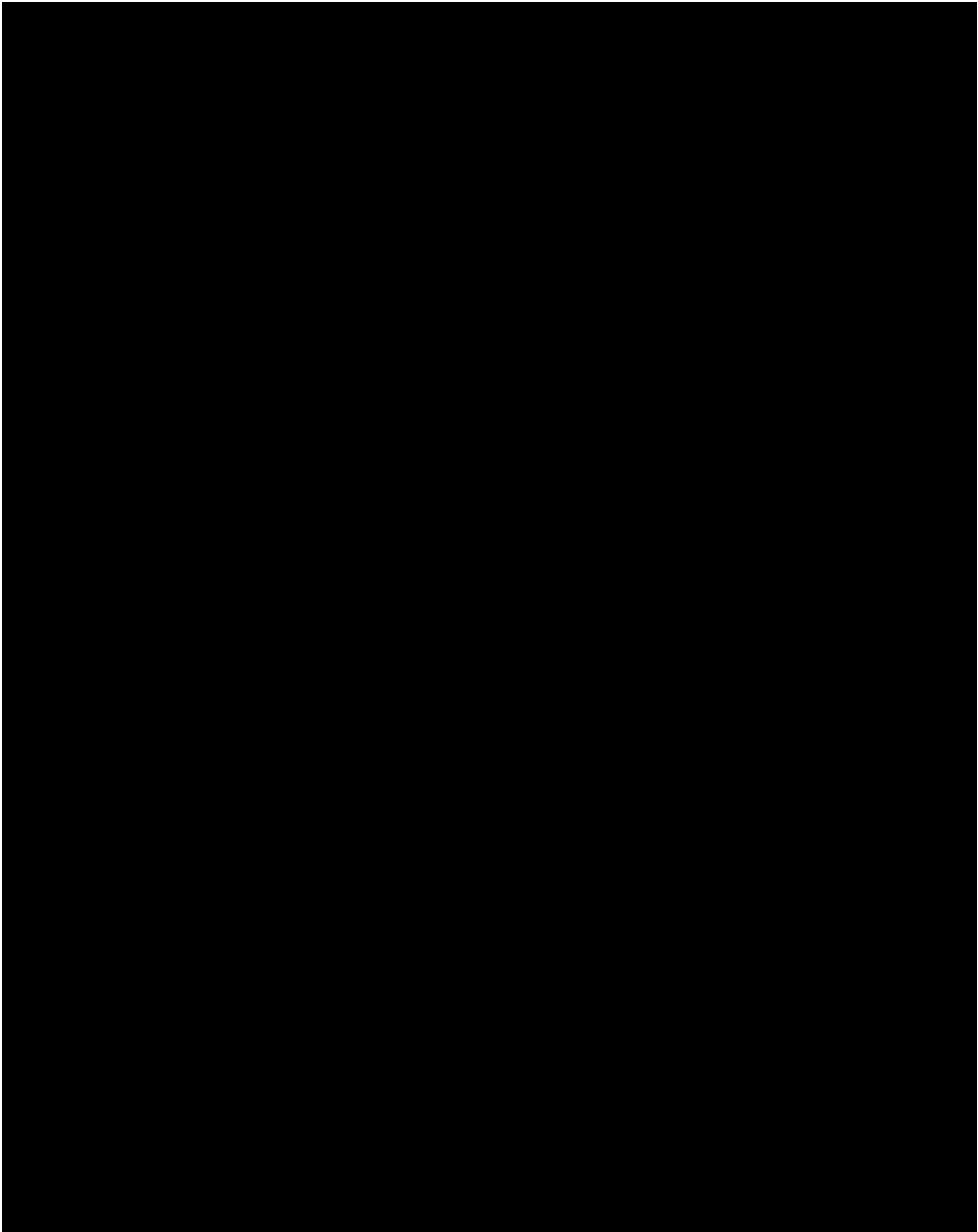
Jeannot has spent eight years in the Cape and Island region working with maritime partners in industry, fisheries, and law enforcement. During his career with the US Coast Guard, he worked throughout the US focusing on interagency cooperation in Maritime Search and Rescue, Oil Spill Response, and Disaster Relief efforts. In his last assignment, he served as the Deputy Sector Commander for Sector Southeastern New England based out of Woods Hole, Massachusetts. Jeannot has a bachelor's degree from Macalester College and a master's degree in Marine Affairs and Coastal Zone Management from Dalhousie University (Canada).

Project Management Office and Project Origination

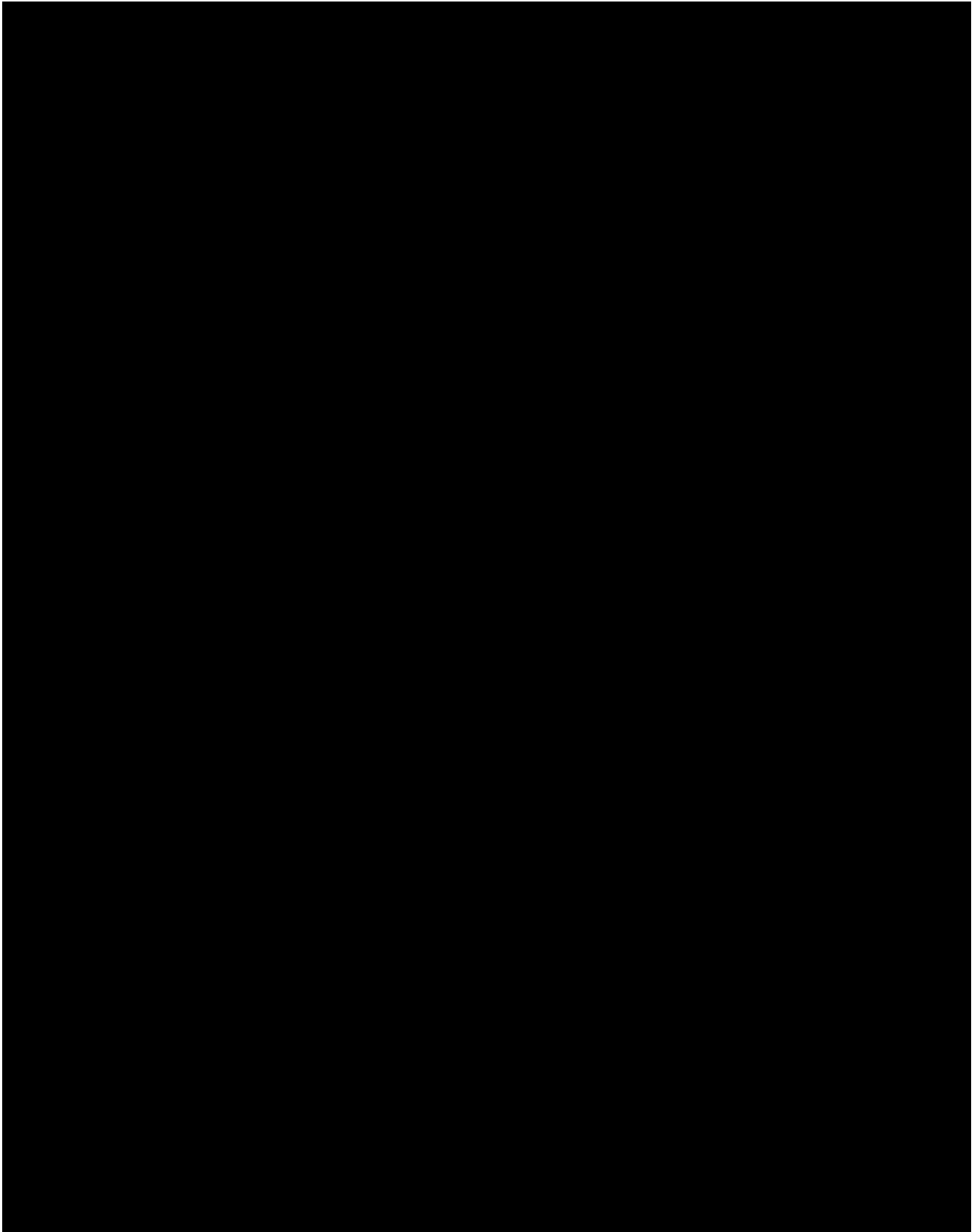
Jordan Shoesmith, Bid Director at Vineyard Wind and Senior Manager of Business Development at Copenhagen Offshore Partners.

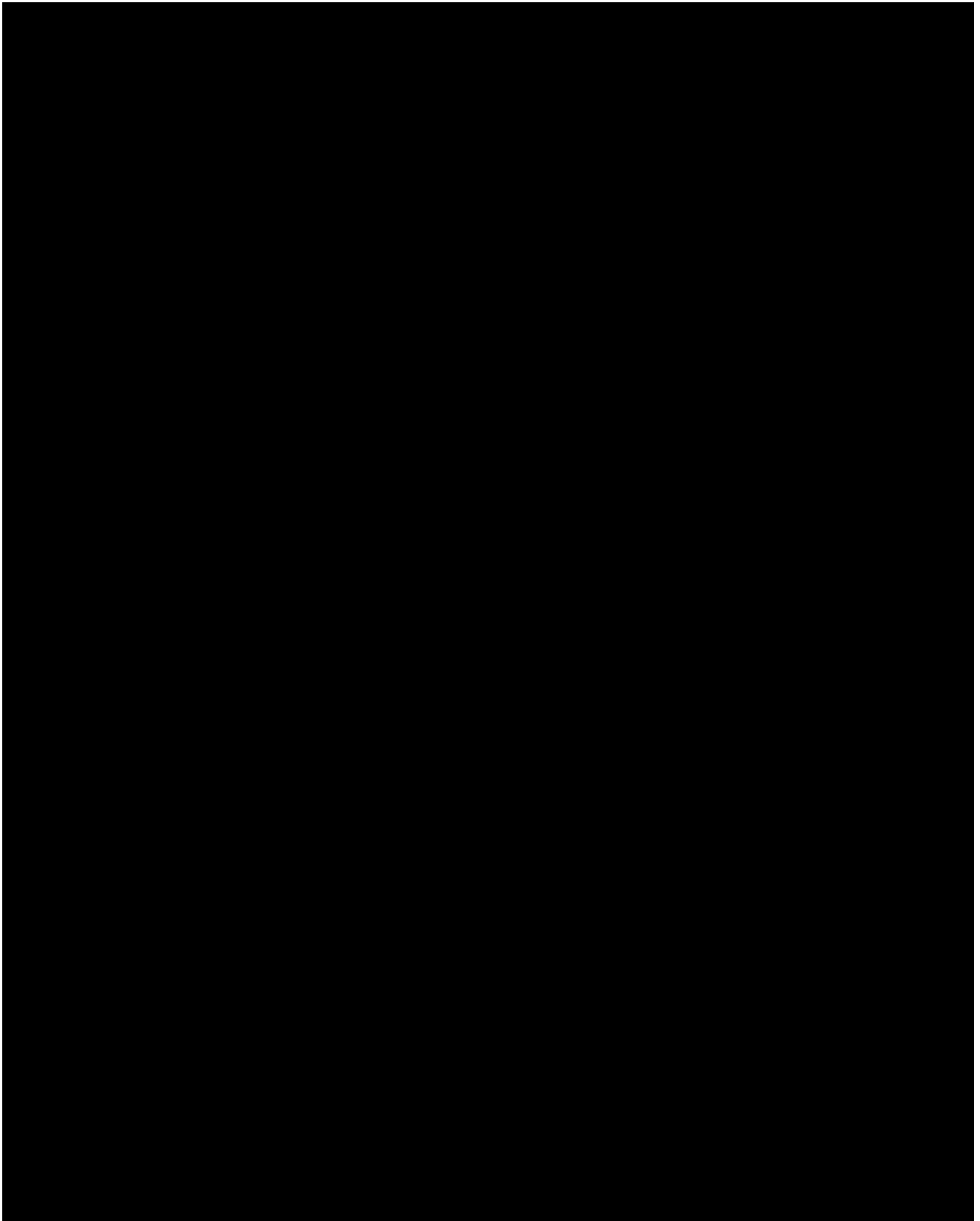






Project Delivery Teams





12.4 PROJECTS AND REFERENCES

Provide a listing of all projects the project sponsor has successfully developed or that are currently under construction. Provide the following information as part of the response:

- i. Name of the project
- ii. Location of the project
- iii. Project type, size and technology
- iv. Distance from shore and mean water depth of project
- v. Commercial operation date

- vi. Estimated and actual capacity factor of the project for the past three years
- vii. Availability factor of the project for the past three years
- viii. References, including the names and current addresses and telephone numbers of individuals to contact for each reference.

Relevant Projects

Vineyard Wind, the Shareholder Companies, and affiliates have extensive onshore and offshore wind project development experience in the US and globally. This includes experience in established and emerging offshore wind markets and pioneering new technologies and approaches.

Vineyard Wind is one of the leading offshore wind developers in the US. Our project, Vineyard Wind 1, is the nation's first commercial-scale offshore wind project to complete the permitting process, conclude procurement and contracting for all major packages, achieve financial close, and start onshore construction activities. The Shareholder Companies worked in close cooperation to bring Vineyard Wind 1 to FC and achieve this critical milestone.

The Shareholder Companies, through Vineyard Wind, are also jointly developing Park City Wind, which was awarded PPAs with Connecticut electric distribution companies in 2019 in connection with the Notice of Request for Proposals for Offshore Wind Facilities issued August 16, 2019 by the Connecticut Department of Energy and Environmental Protection pursuant to Section 1 of Public Act 19-71, *An Act Concerning the Procurement of Energy Derived From Offshore Wind*.

Additional relevant project information about the Shareholder Companies' US offshore wind projects is provided in Table 12-4.1. Attachment 12.4-1 provides a summary of CIP's relevant onshore and offshore wind projects. Attachment 12.4-2 provides a summary of Avangrid Renewables' and affiliates' relevant onshore and offshore wind projects. The offshore wind projects listed in these attachments are similar to the Project in complexity and technology used and several of the Projects are similar in scale.

Table 12.4-1 US Offshore Wind Project Experience

Project Name and Location	Capacity (MW)	Technology Type	Mean Water Depth	Distance to Nearest Shore ¹	Distance to Nearest Mainland	Commercial Operation Date	Estimated Capacity Factor
Vineyard Wind 1 Lease Area OCS-A 0501	800	13 MW GE Haliade-X	~139 feet	14 miles	27 miles	2024	██████
Park City Wind² Lease Area OCS-A 0534	804	Not applicable (N/A)	~161 feet	20 miles	33 miles	2026	██████

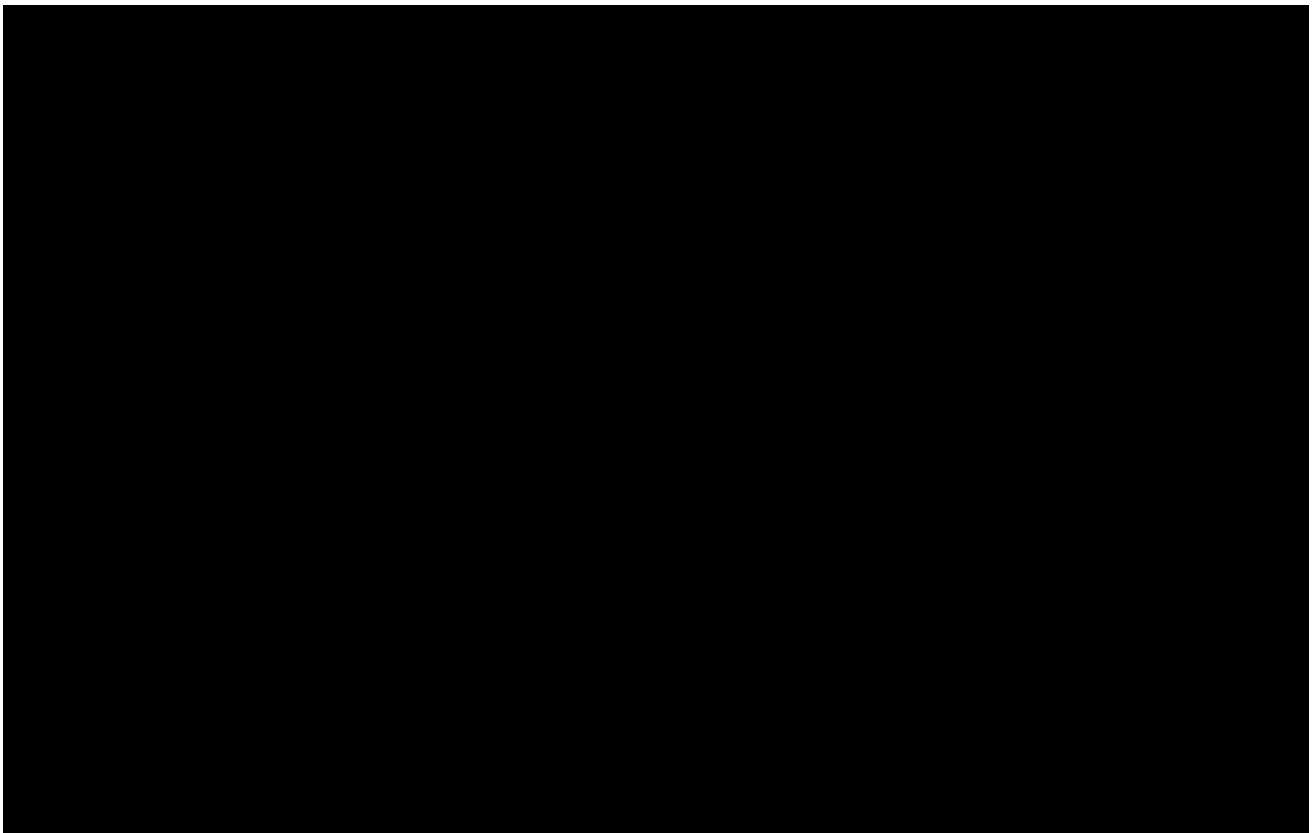
Table 12.4-1 US Offshore Wind Project Experience (Continued)

Project Name and Location	Capacity (MW)	Technology Type	Mean Water Depth	Distance to Nearest Shore ¹	Distance to Nearest Mainland	Commercial Operation Date	Estimated Capacity Factor
Kitty Hawk Wind Lease Area OCS-A 0508	~2,500	N/A	██████	28 miles	28 miles	2026	████

Note:

1. The distance is relative to the islands of Martha's Vineyard or Nantucket and excludes Nomans Land. Park City Wind is located in Lease Area OCS-A 0534 and potentially a portion of Lease Area OCS-A 0501, depending on the final size of Vineyard Wind 1.

Portfolio References



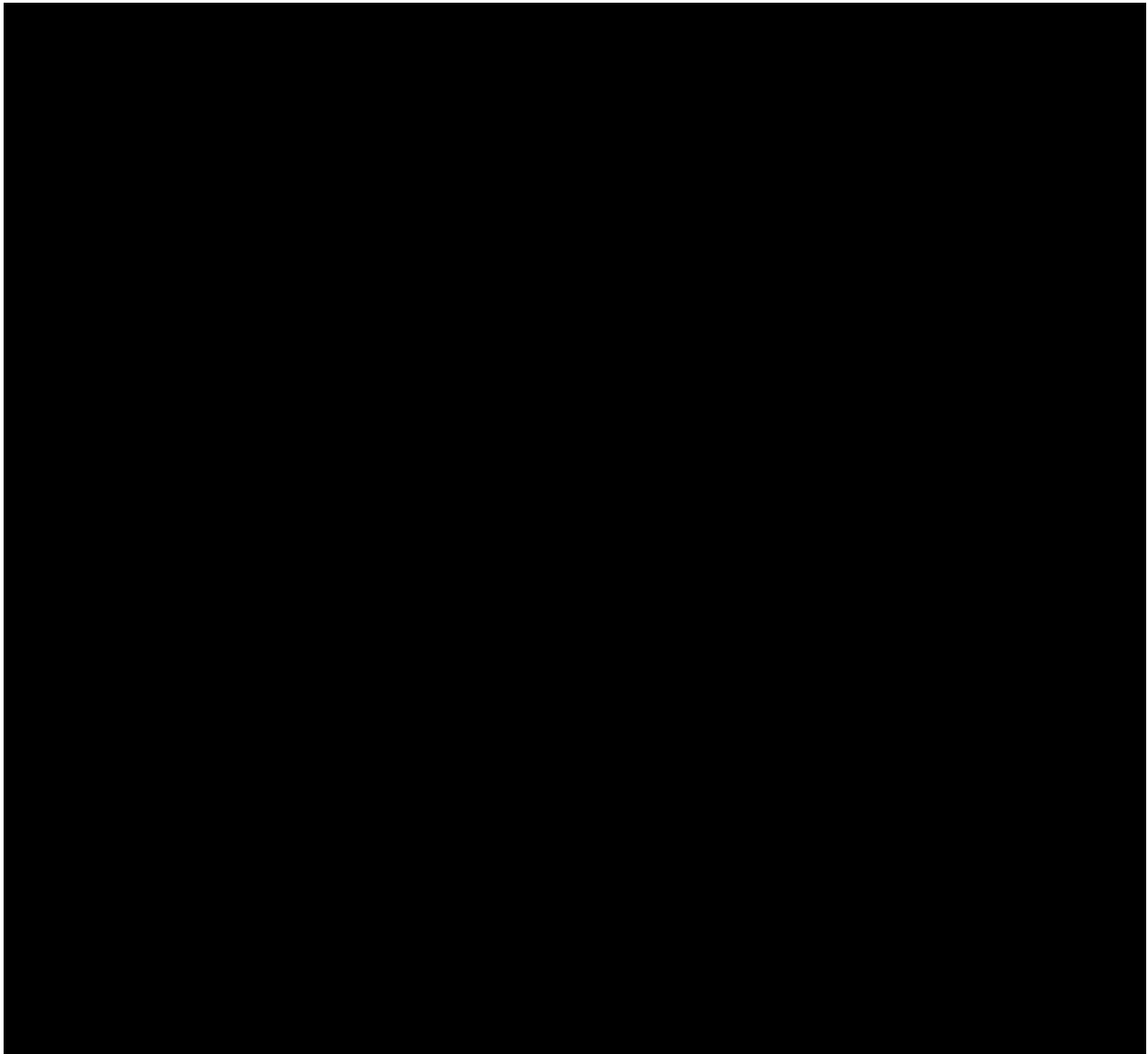
12.5 PROJECT TEAM

With regard to the bidder's project team, identify and describe the entity responsible for the following, as applicable:

- i. Construction Period Lender
- ii. Operating Period Lender and/or Tax Equity Provider
- iii. Financial Advisor

- iv. Environmental Consultant
- v. Facility Operator and Manager
- vi. Owner's Engineer
- vii. Transmission/Delivery Consultant
- viii. Legal Counsel

Vineyard Wind and the Shareholder Companies have extensive contacts and access to the firms required to satisfy the financing, environmental assessment, operation, engineering, transmission, and legal counsel requirements of the Project.





SECTION 13

DEMONSTRATED, VERIFIABLE COMMITMENT TO CREATE AND FOSTER EMPLOYMENT AND ECONOMIC DEVELOPMENT AND OTHER DIRECT BENEFITS

13.0 OVERVIEW

Realizing the Economic Promise of Offshore Wind

[REDACTED]

[REDACTED]

Through its supply chain partnerships and economic benefit initiatives, the Project will:

[REDACTED]

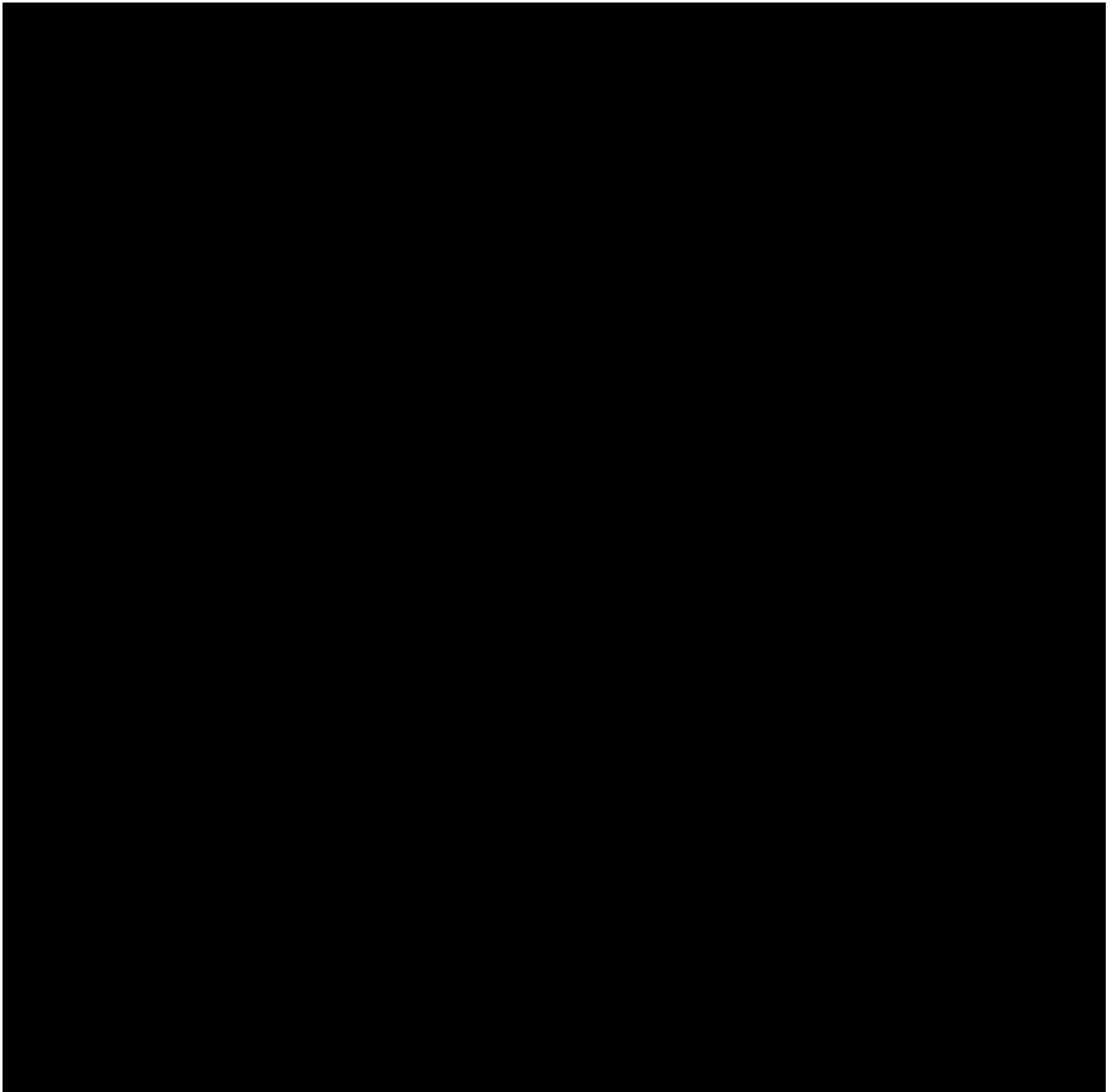
[REDACTED]

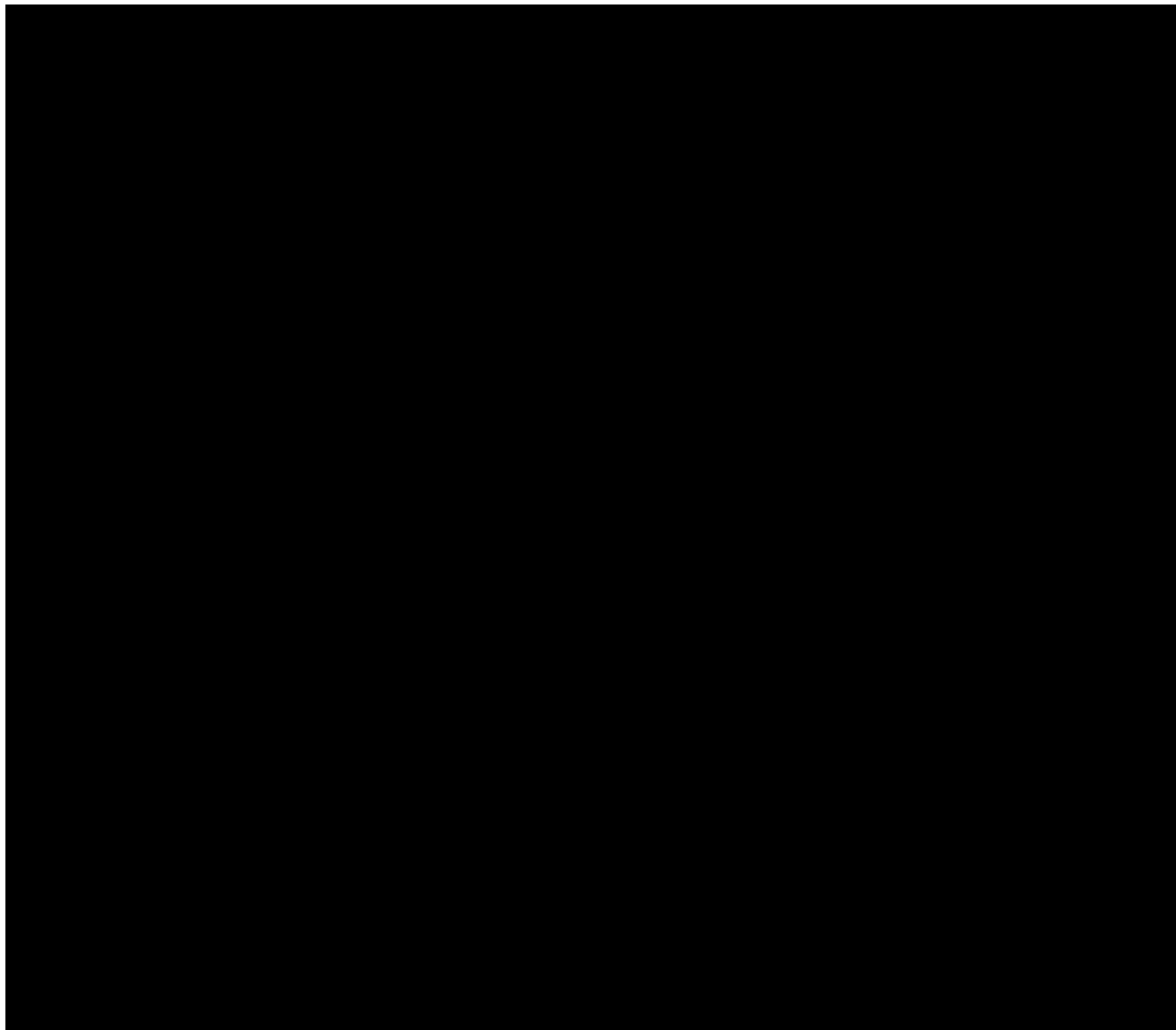
[REDACTED]

[REDACTED]

- **Build a diverse and inclusive offshore wind-ready workforce** [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
- **Integrate local and diverse businesses into the offshore wind supply chain** [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
- [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
- **Commit to negotiate a Project Labor Agreement (PLA) and pay prevailing wages** [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
- **Provide direct benefits to Low-income Ratepayers** [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

To achieve the above, Vineyard Wind has developed meaningful partnerships and economic benefit initiatives, as described in Table 13.0-1 and Table 13.0-2.





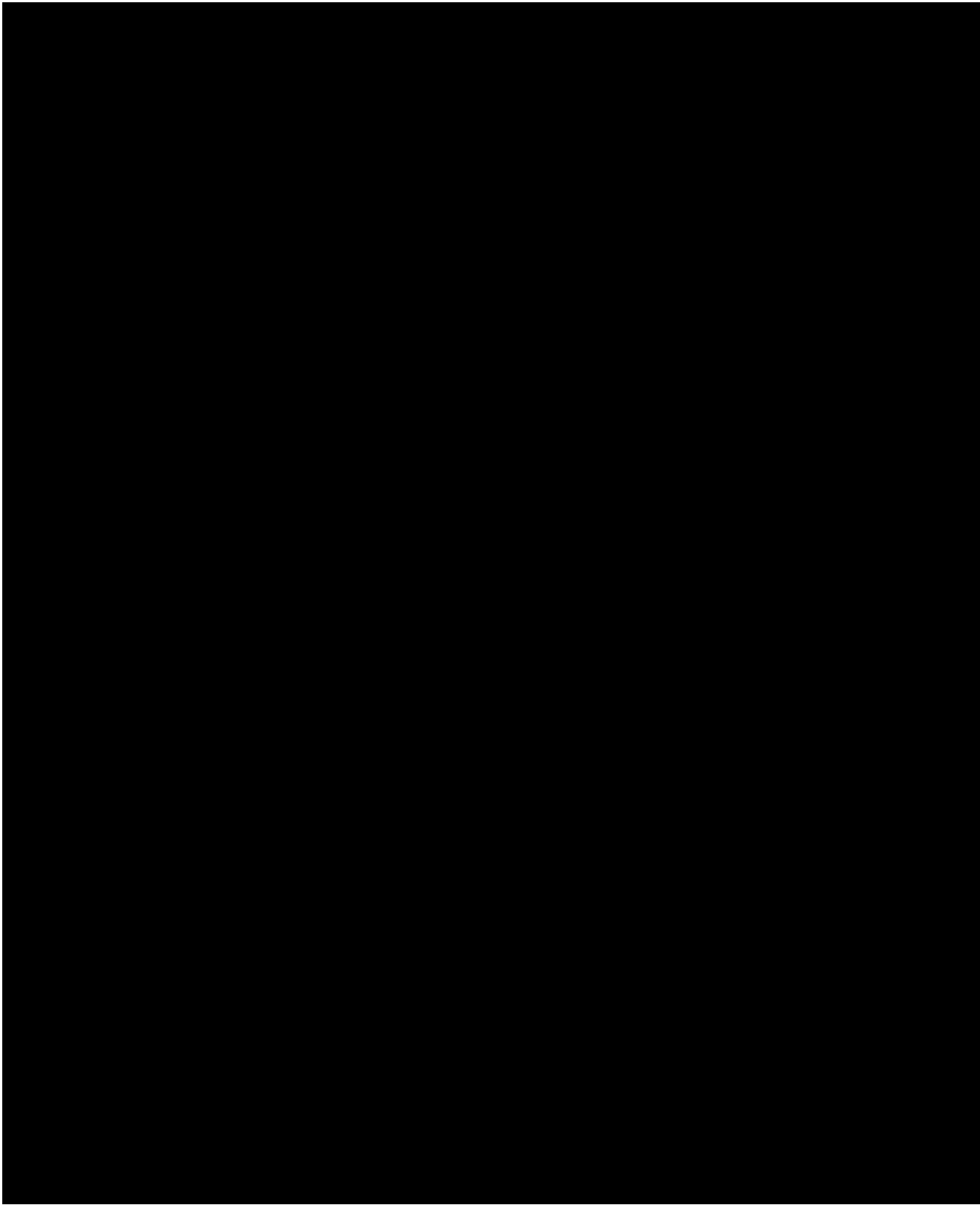
Economic Benefits Summary

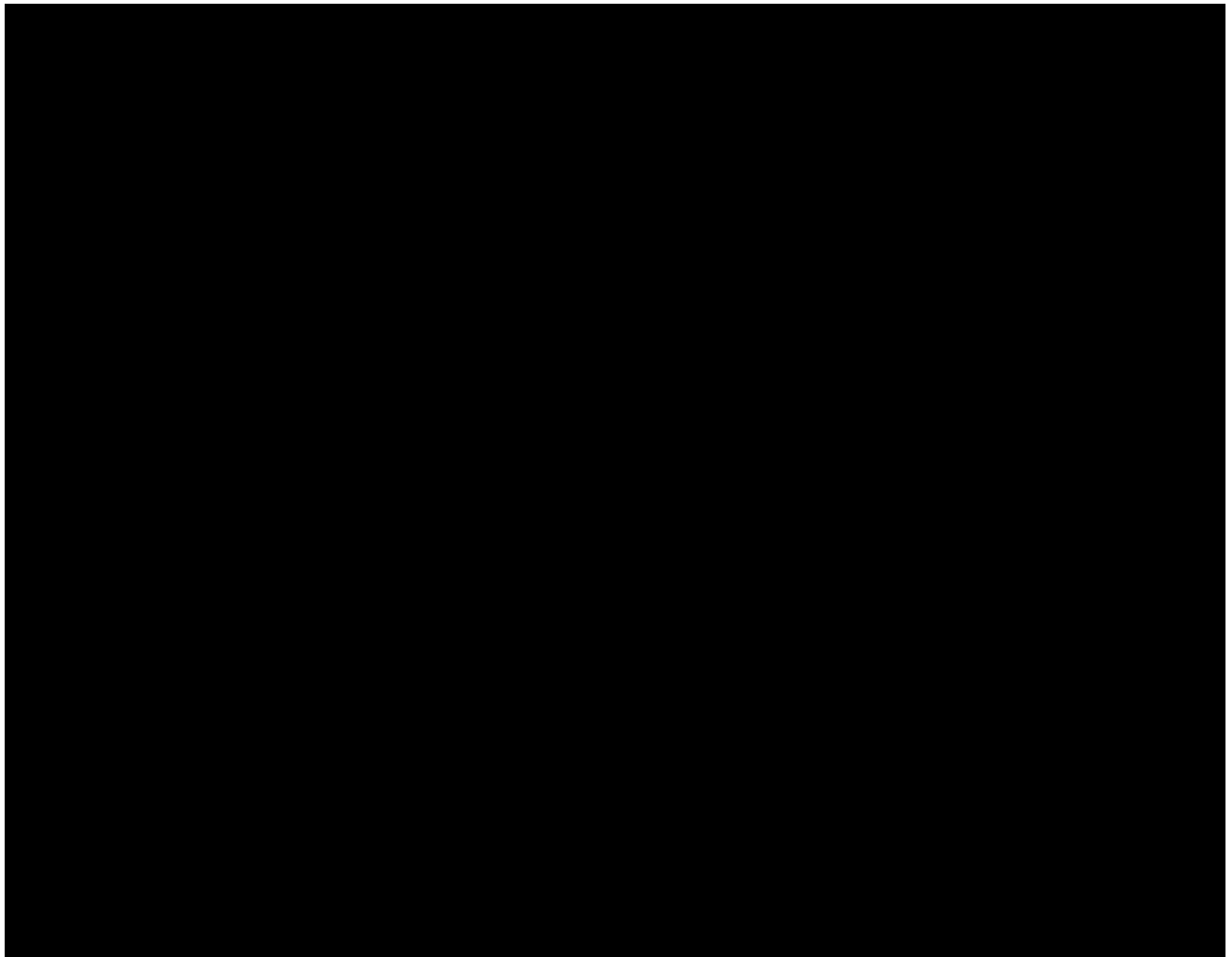
The Project will create short-term and long-term employment as well as substantial investment and expenditure in the Commonwealth [REDACTED]

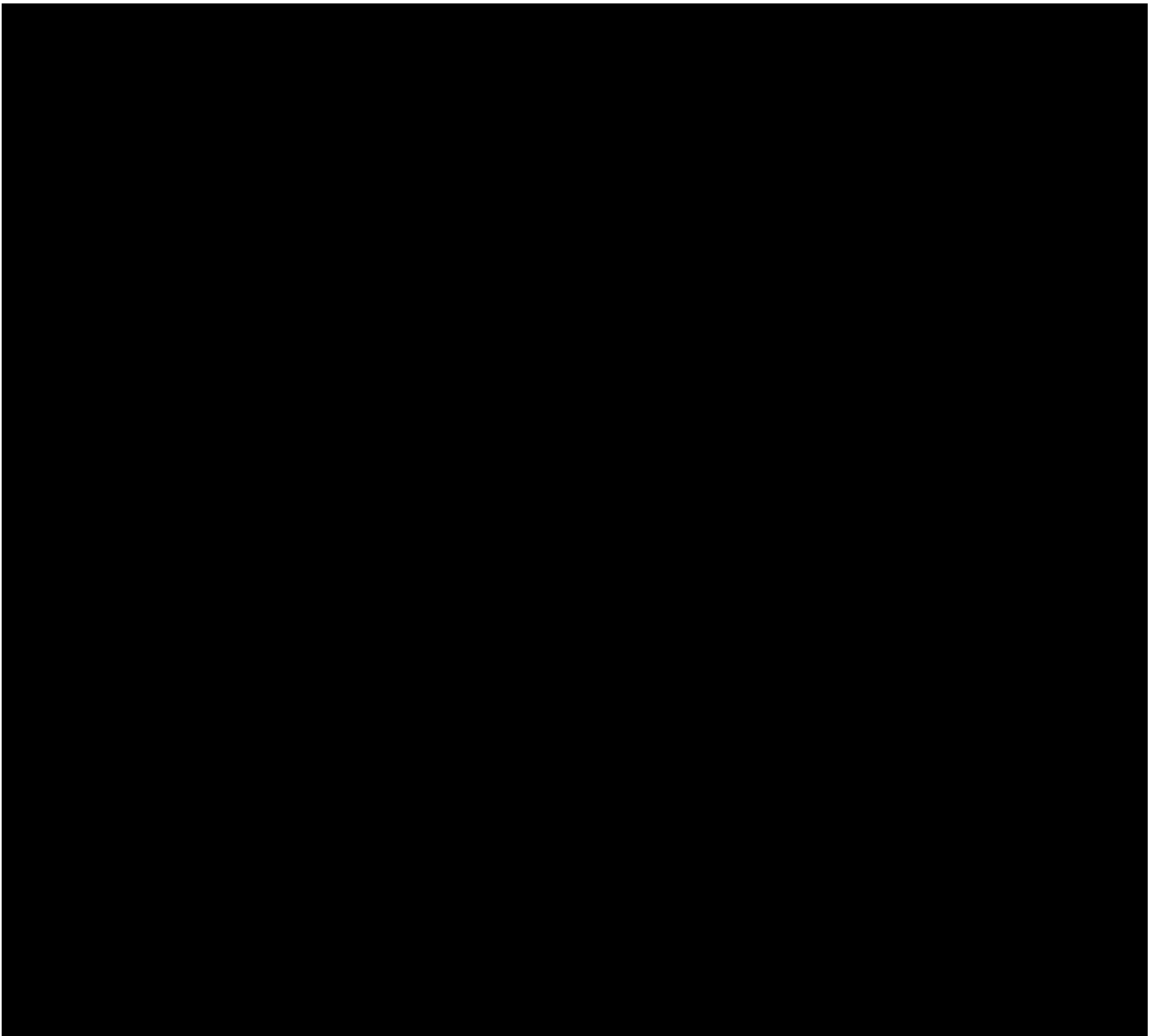
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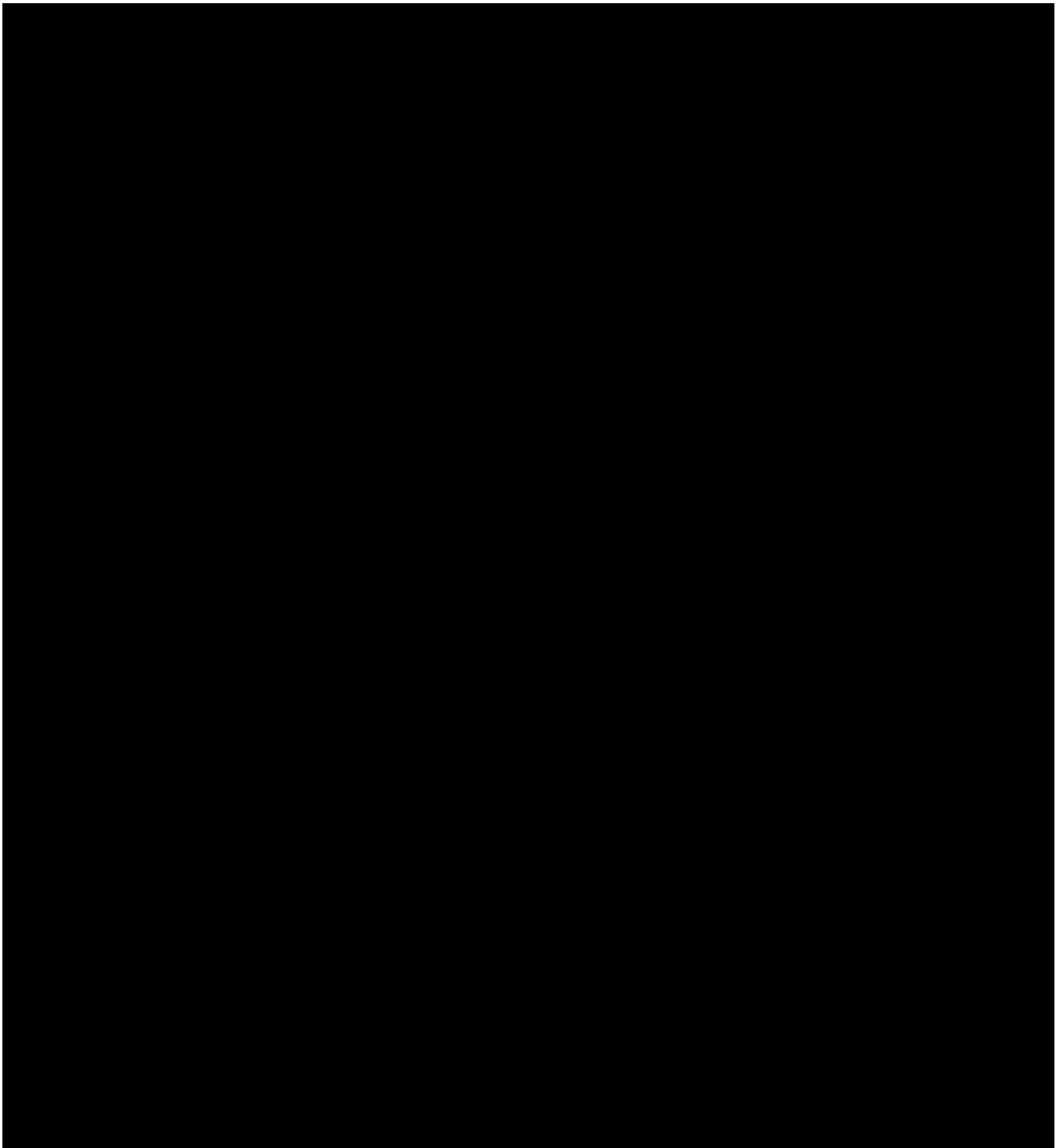
[REDACTED] This is shown in Table 13.0-3 and Table 13.0-4. [REDACTED]

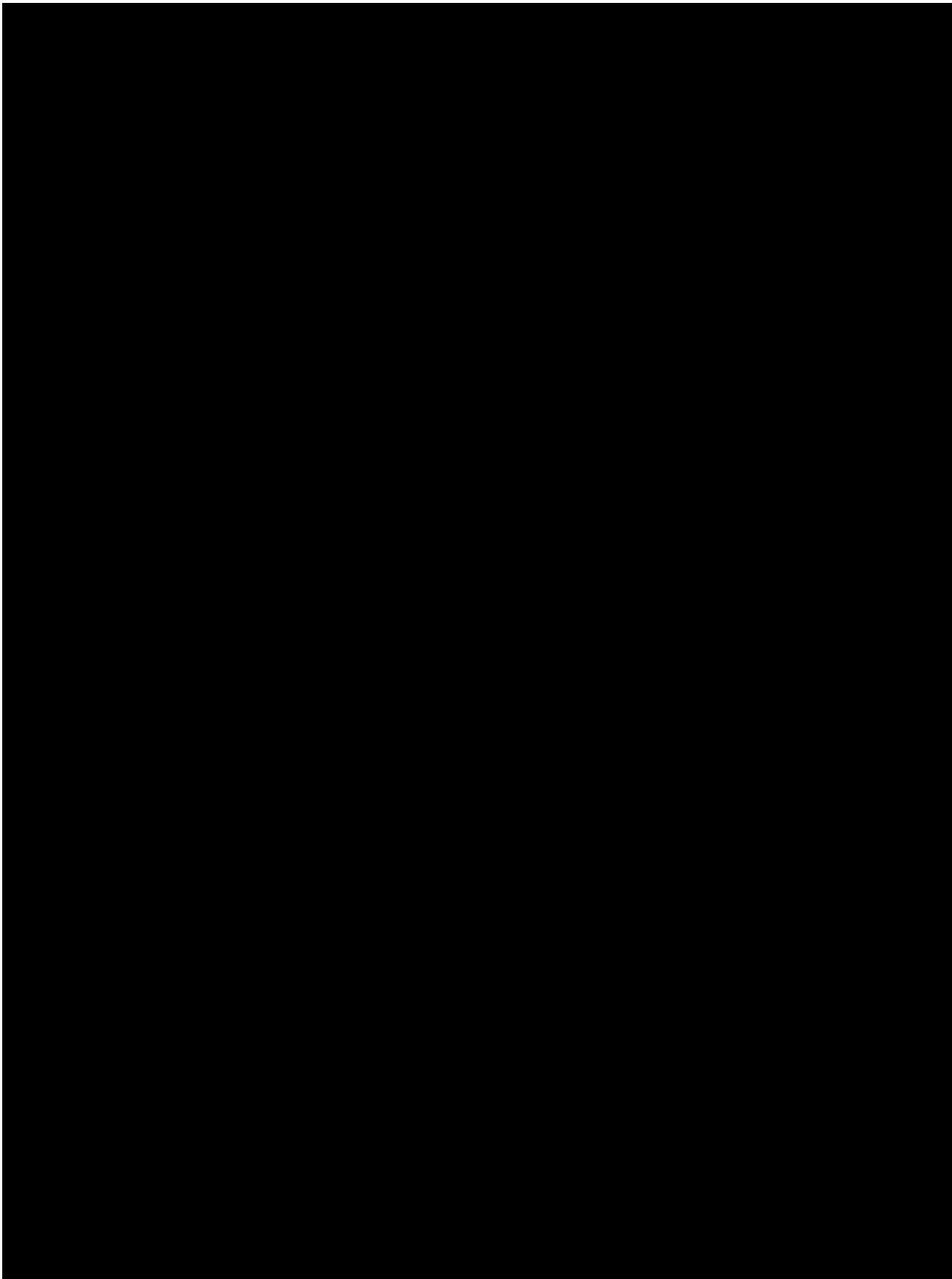
[REDACTED]

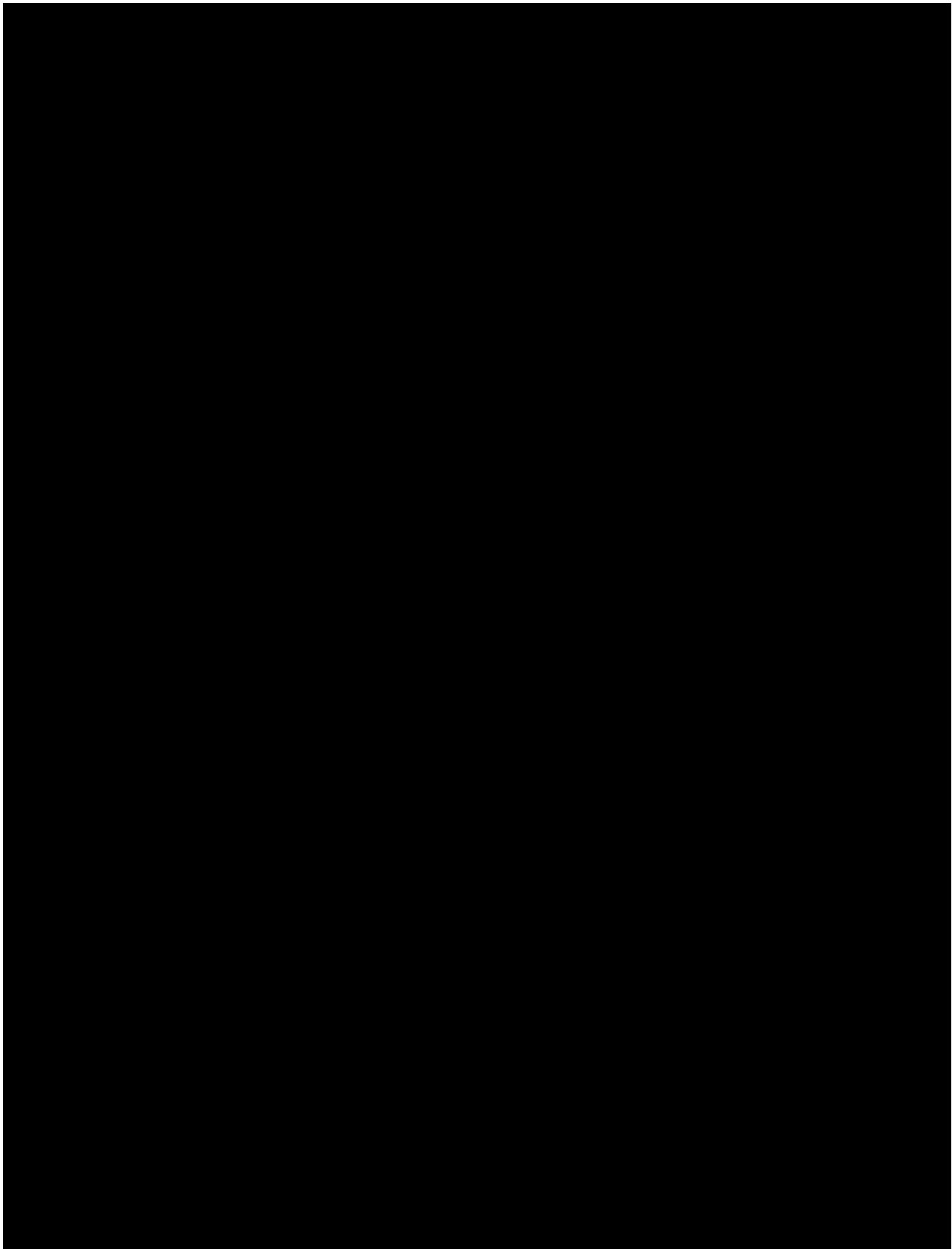


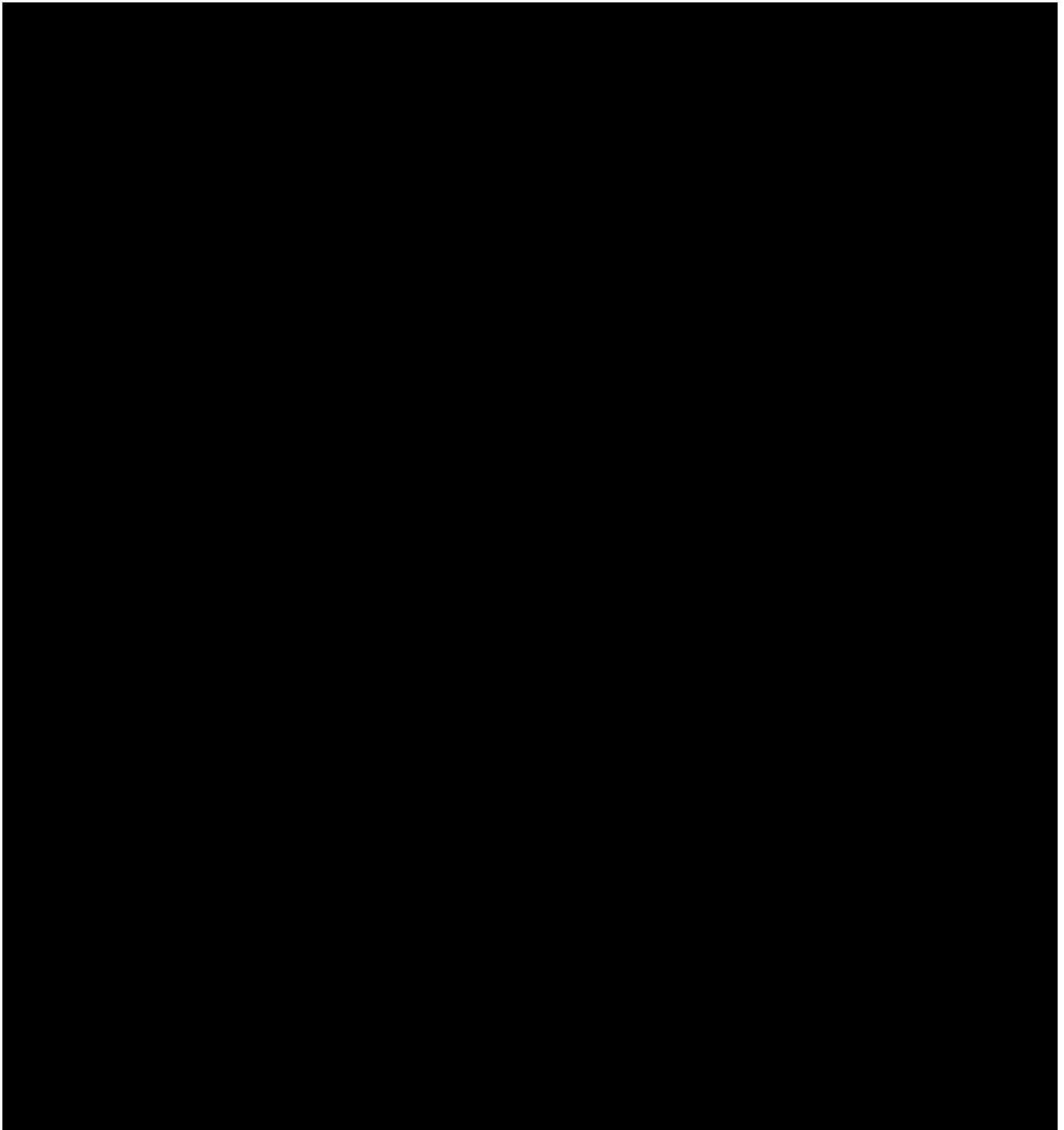


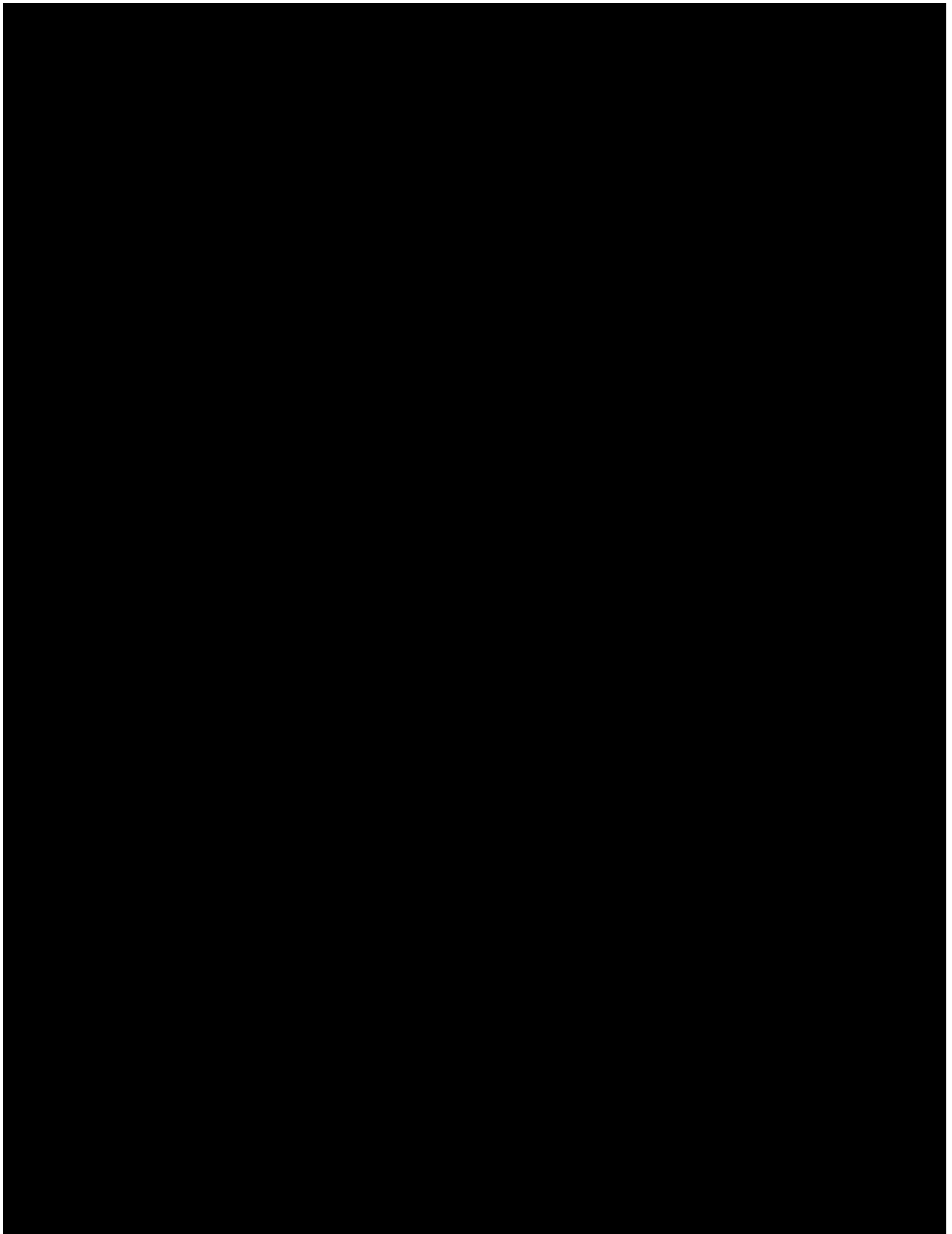


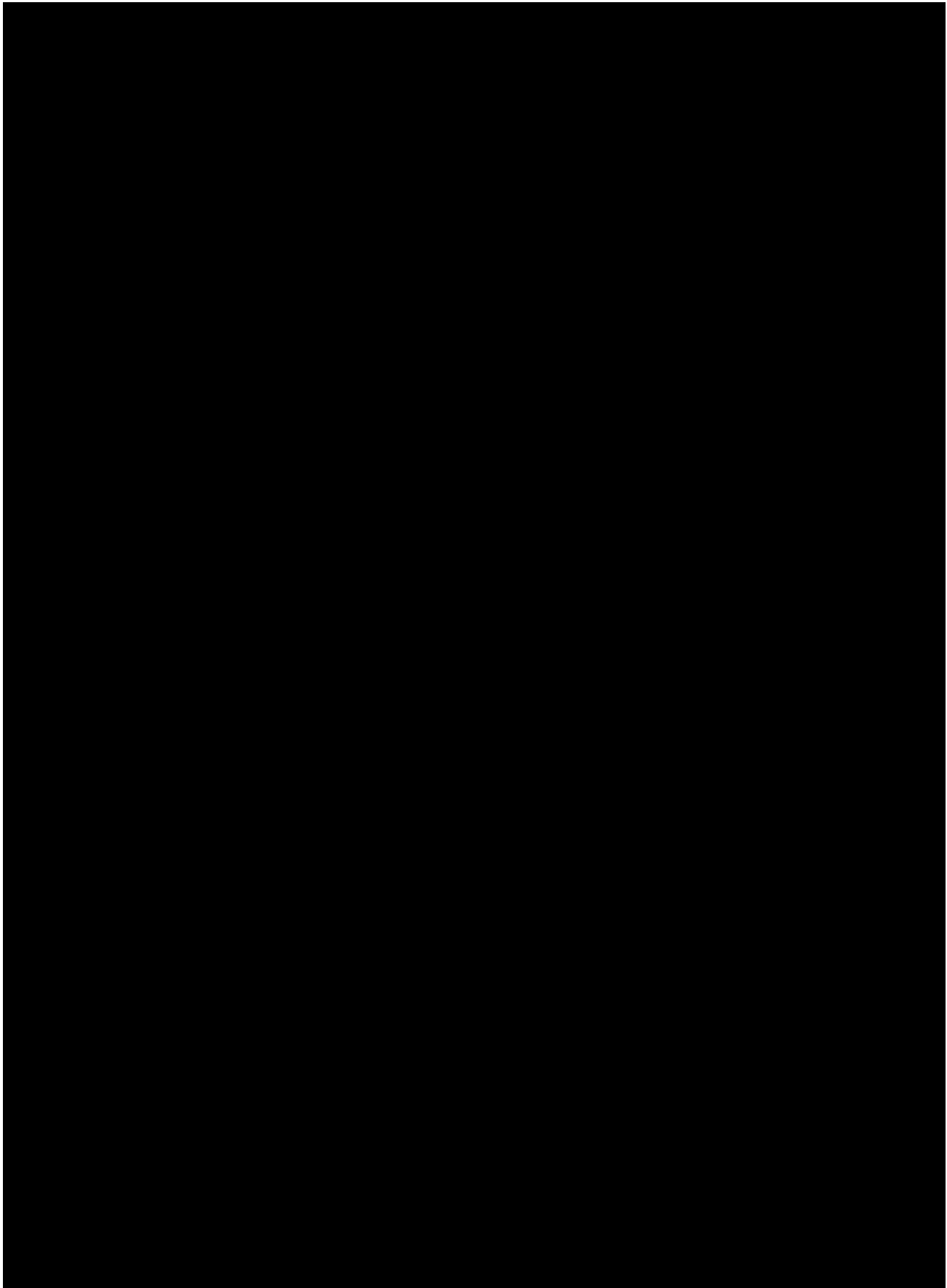


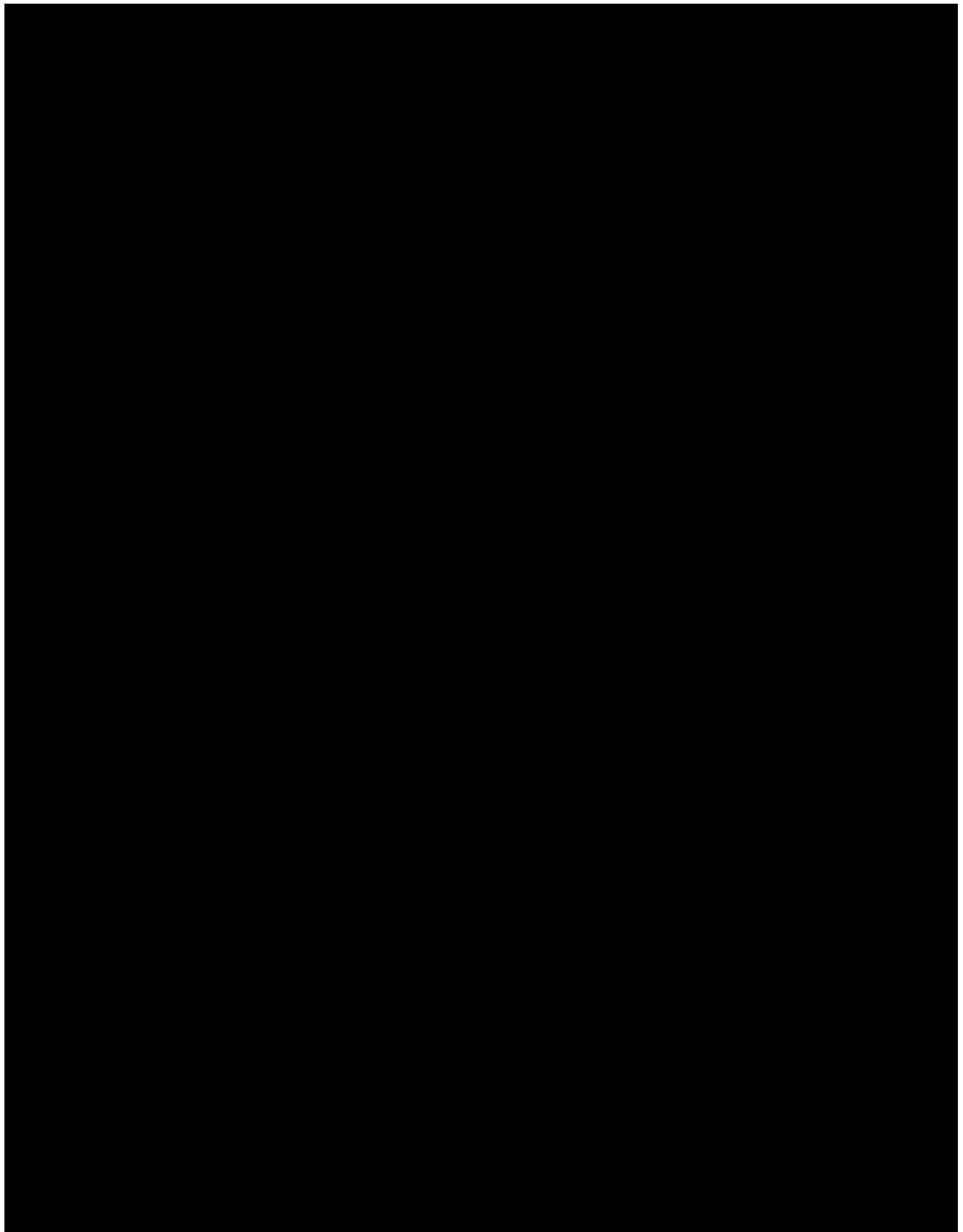




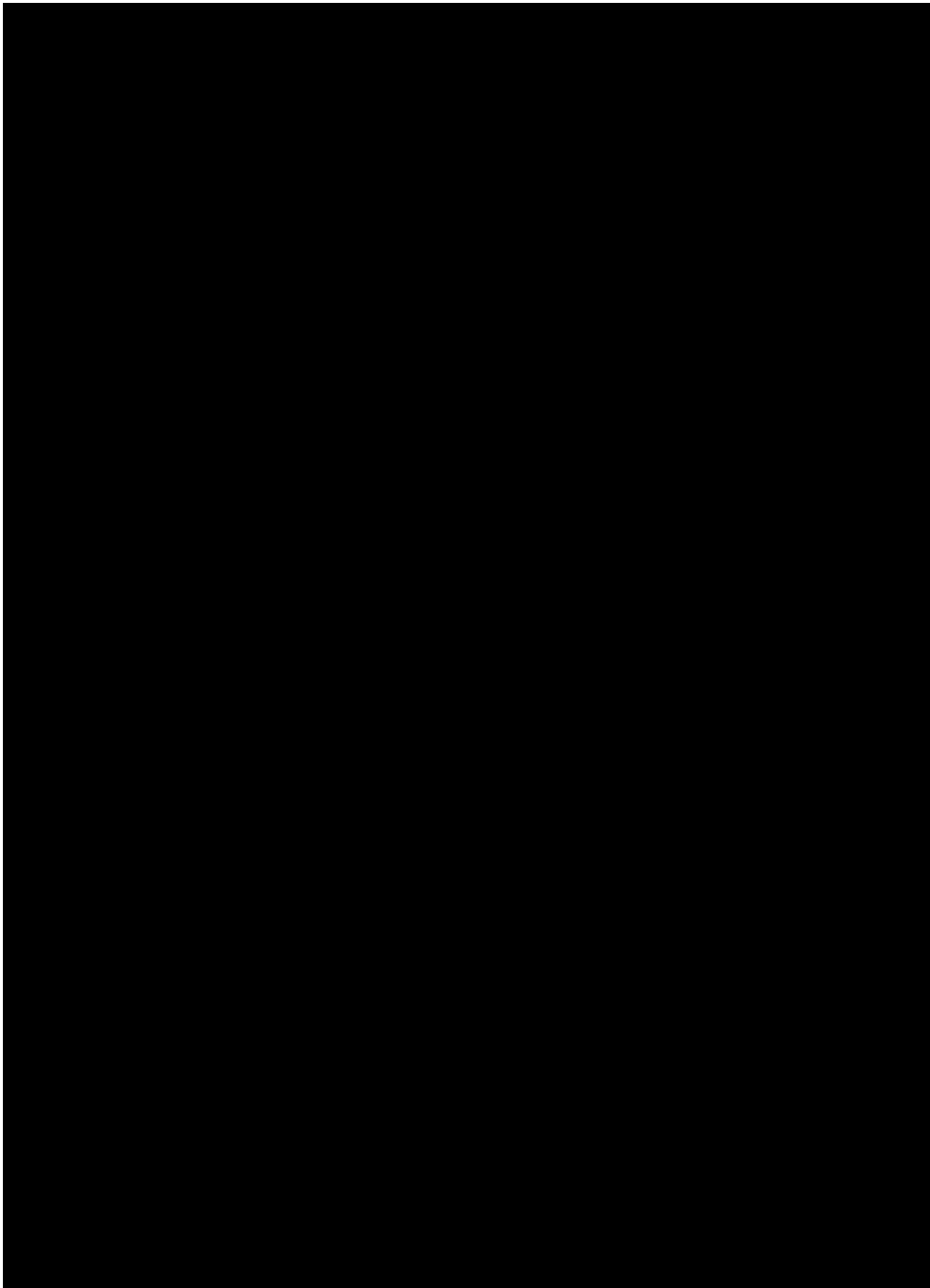


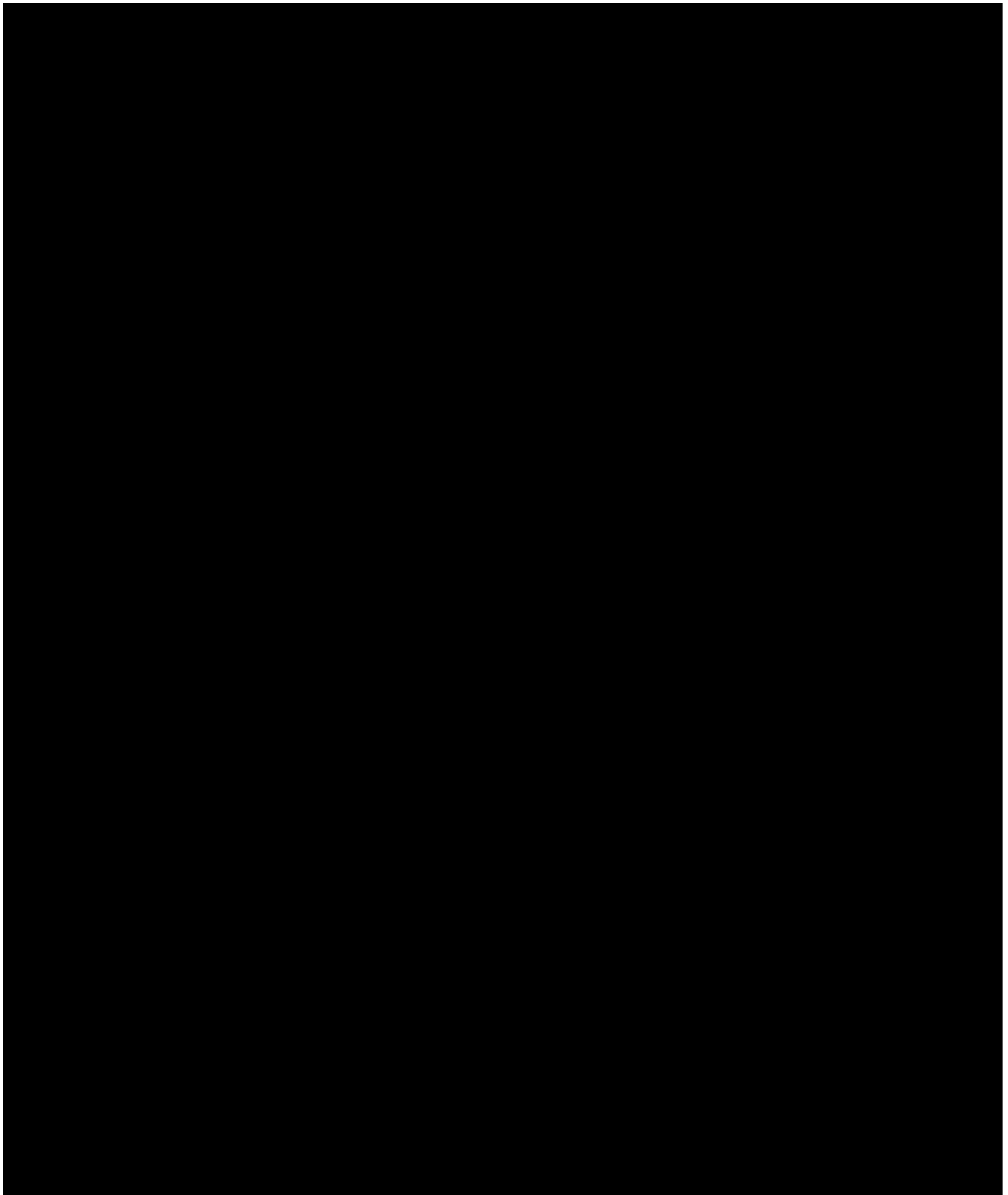




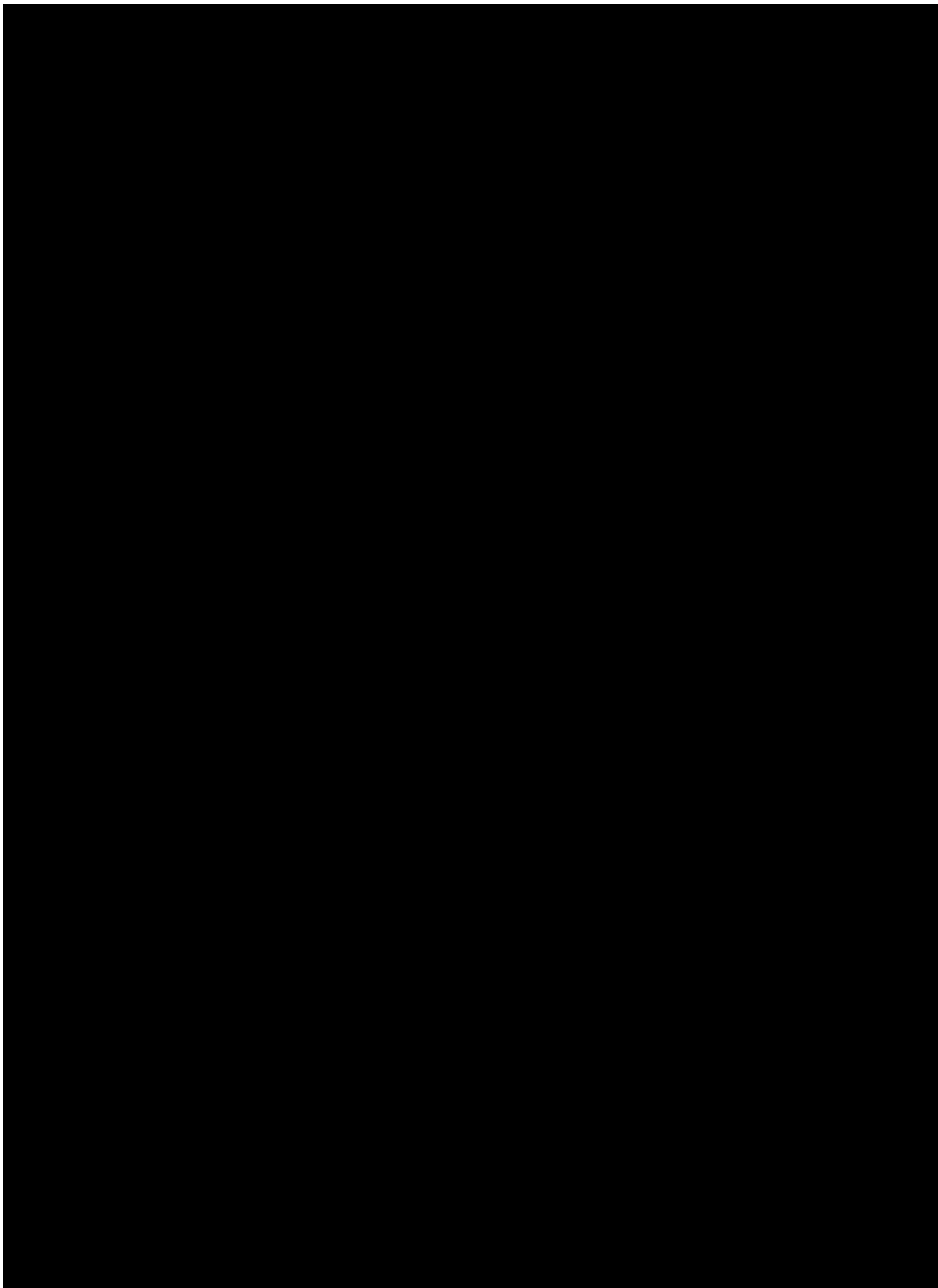


³ See: <https://www.semcomaritime.com/news/office-gdynia-poland>





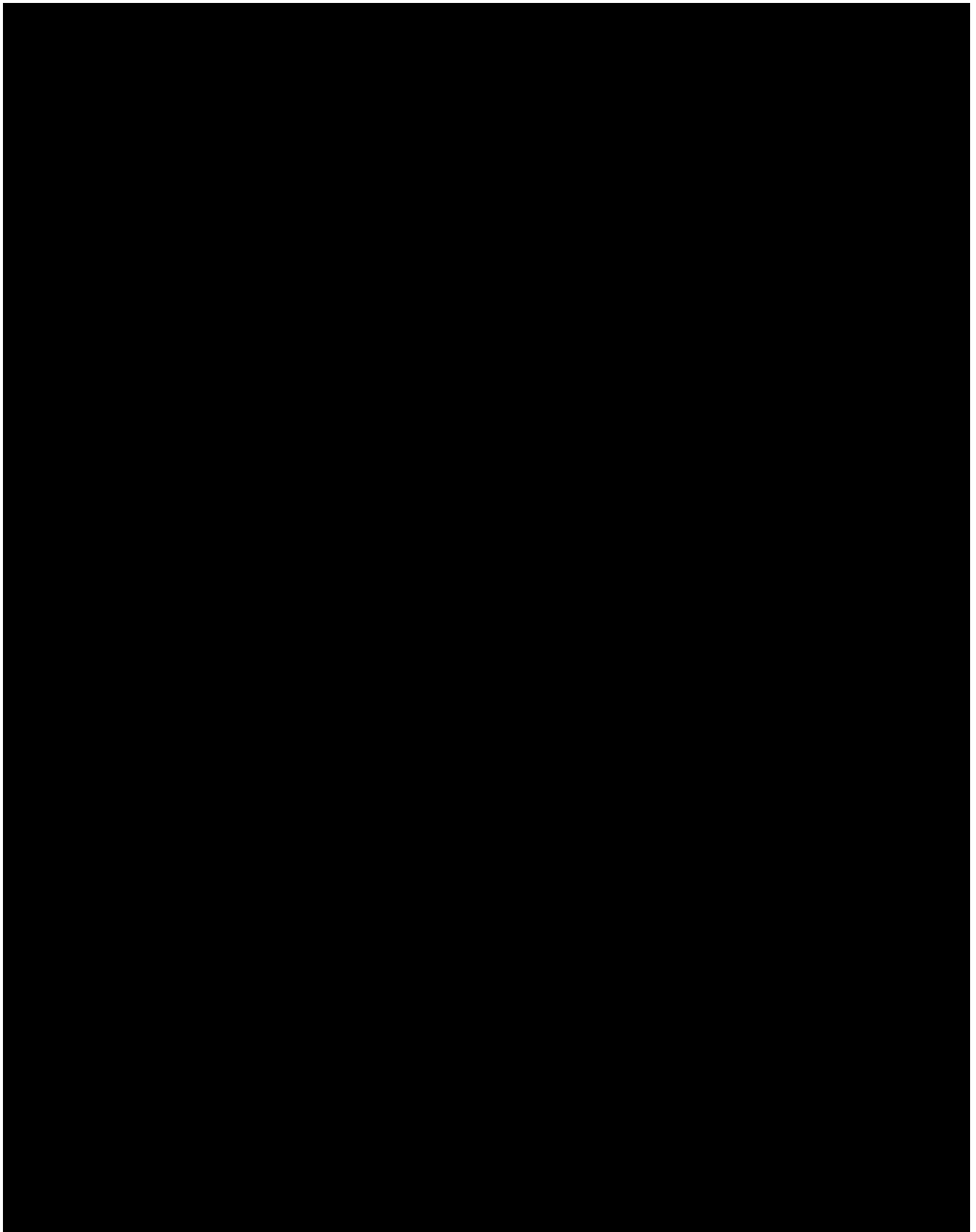
⁵ "Vineyard Wind South" is Vineyard Wind's proposal to develop offshore renewable wind energy facilities in Lease Area OCS-A 0534 in two phases. Phase 1 is known as the 804 MW Park City Wind project. Phase 2 will occupy the remainder of Lease Area OCS-A 0534 that is not developed for Park City Wind. The Project will be developed during Phase 2 of Vineyard Wind South.

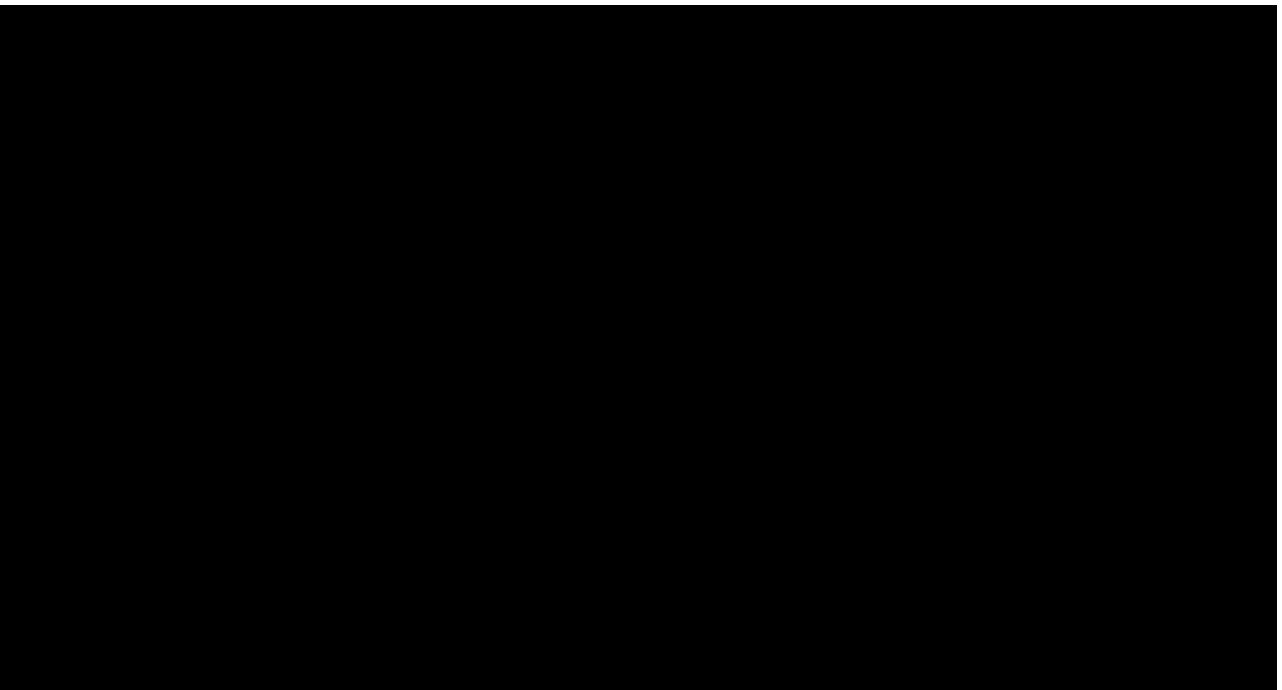




Commitment to Negotiate a Project Labor Agreement

Vineyard Wind is the only offshore wind developer to successfully execute a PLA for the construction of an offshore wind project (see Attachment 13.0-5). Vineyard Wind spent more than three years negotiating with the Southeastern Massachusetts Building Trades Council to finalize the industry's first offshore wind PLA, which commits nearly 500 union jobs to southeastern Massachusetts for the Vineyard Wind 1 project. The PLA was signed on July 16, 2021 (see Figure 13.0-9).

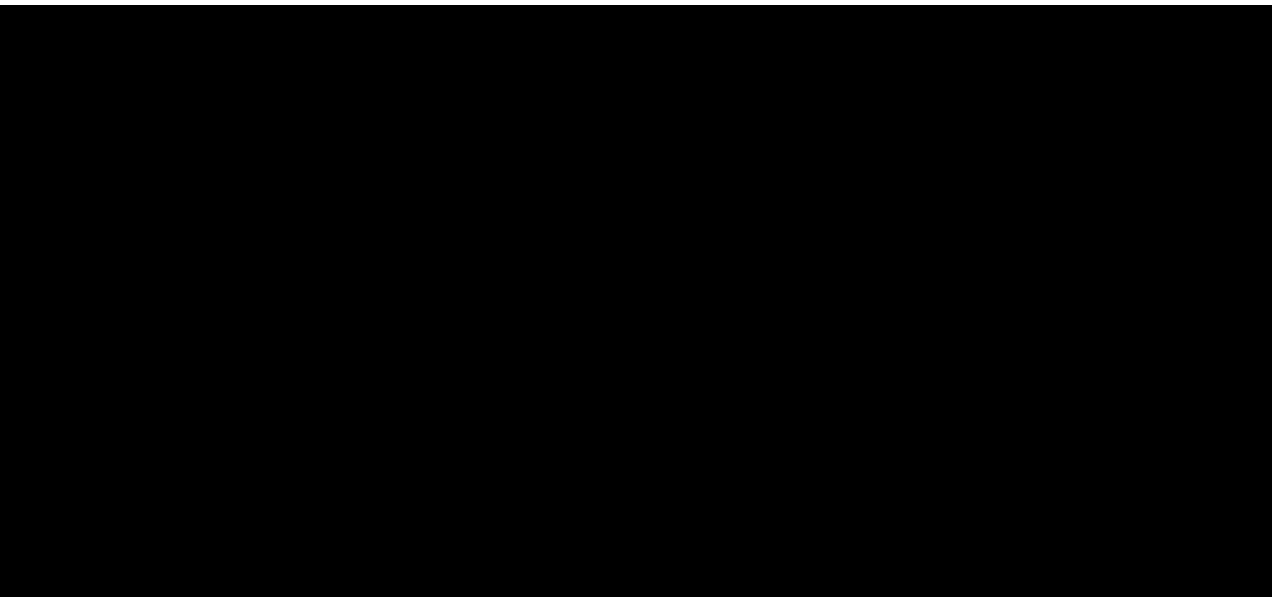


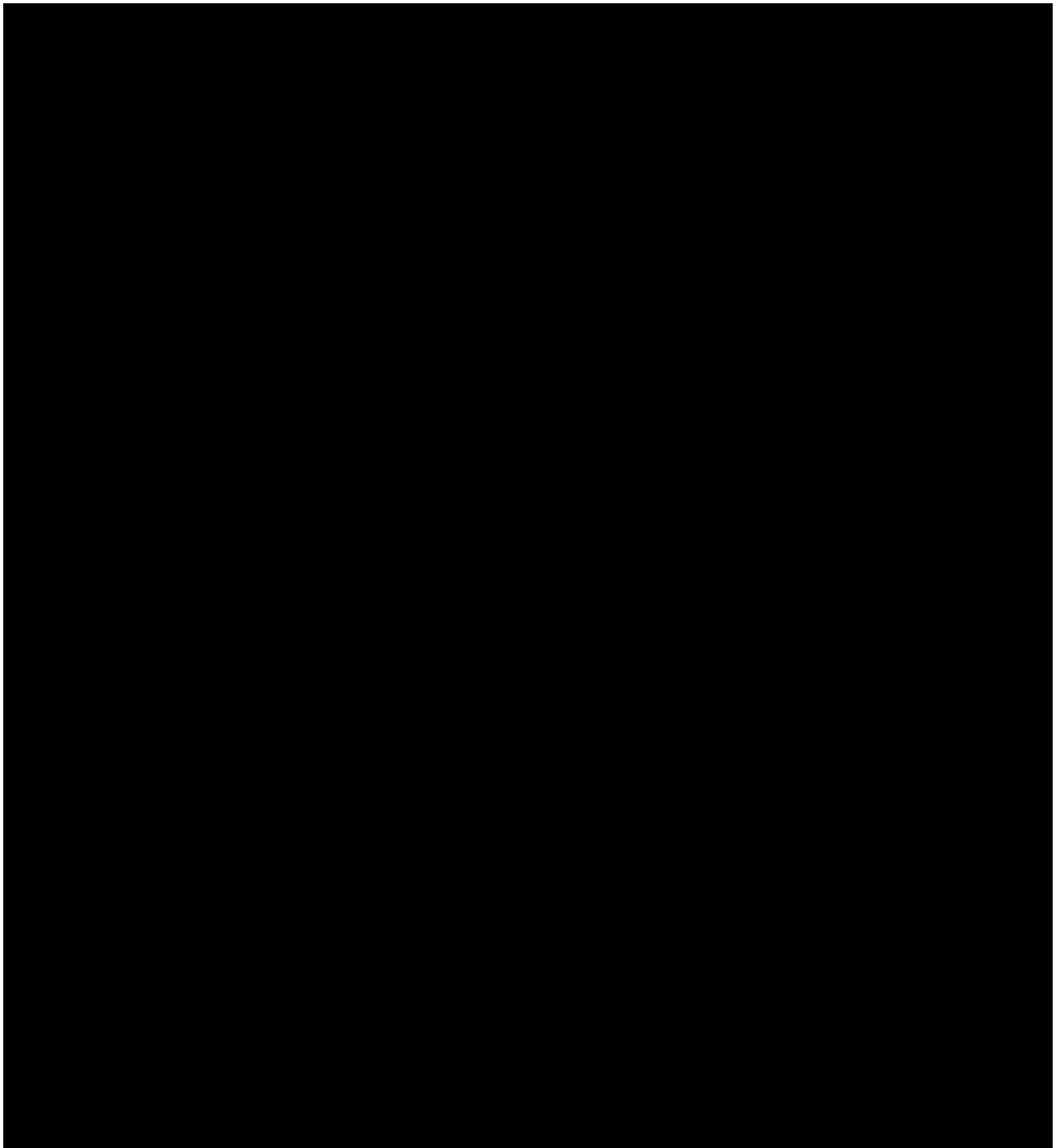


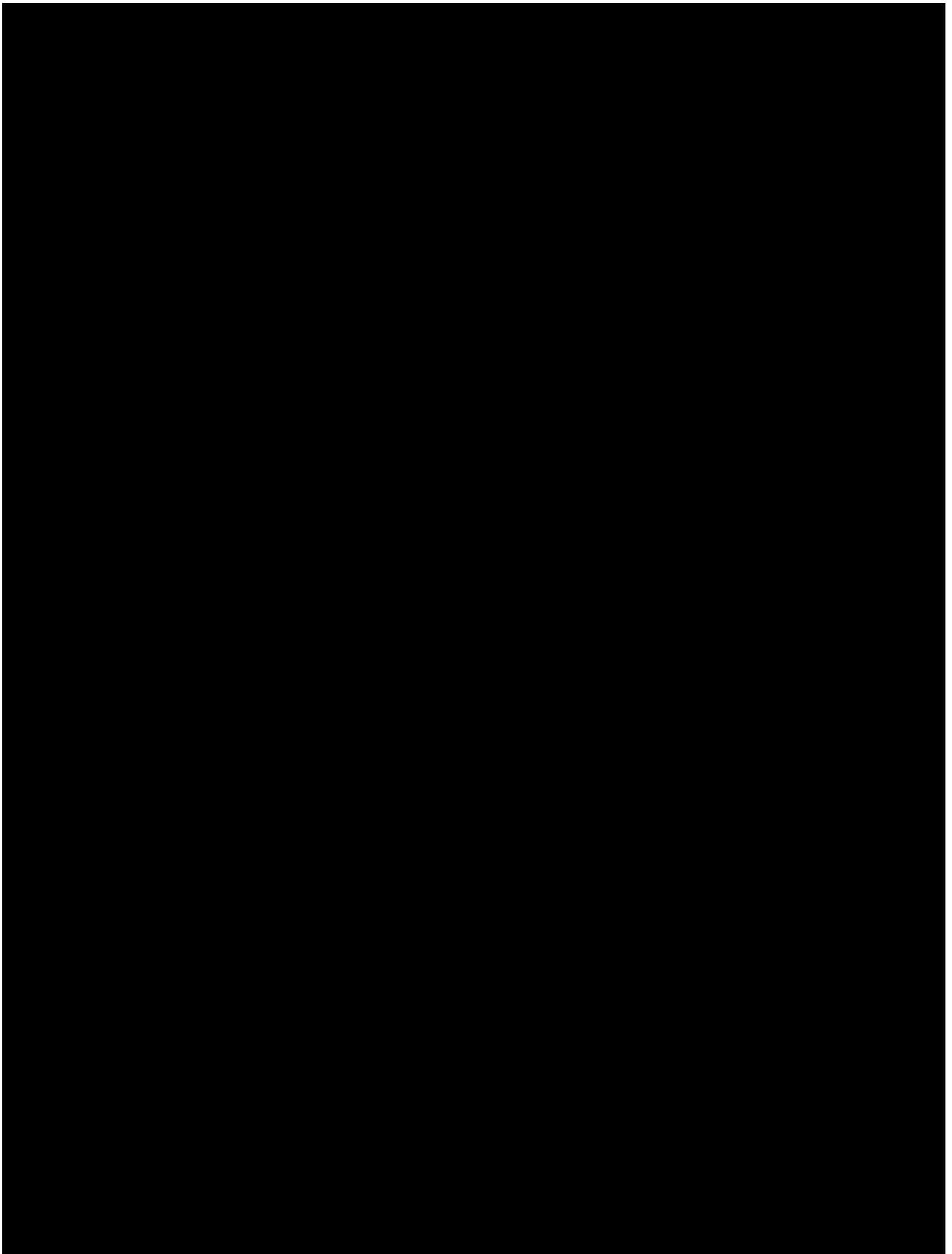
13.1 JOB CREATION

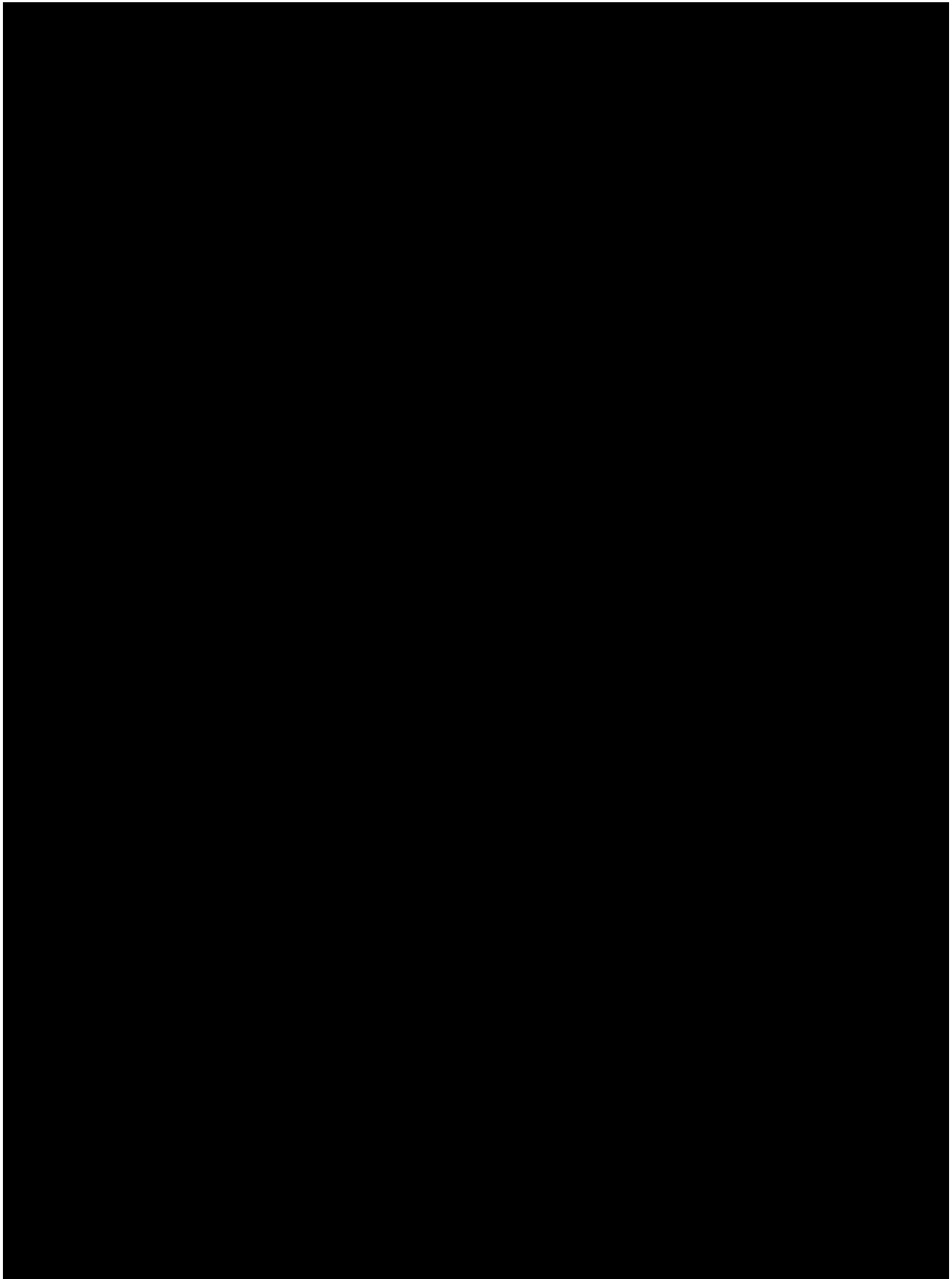
Please provide an estimate of the number of jobs to be created directly during project development and construction, and during operations, and a general description of the types of jobs created, duration of employment, estimated annual compensation, the employer(s) for such jobs, and the location. Employment impacts should be broken out by state and the region as a whole and highlight any impacts in economically distressed areas. Please treat the development, construction, and operation and maintenance periods separately in your response. All information provided must be measurable.

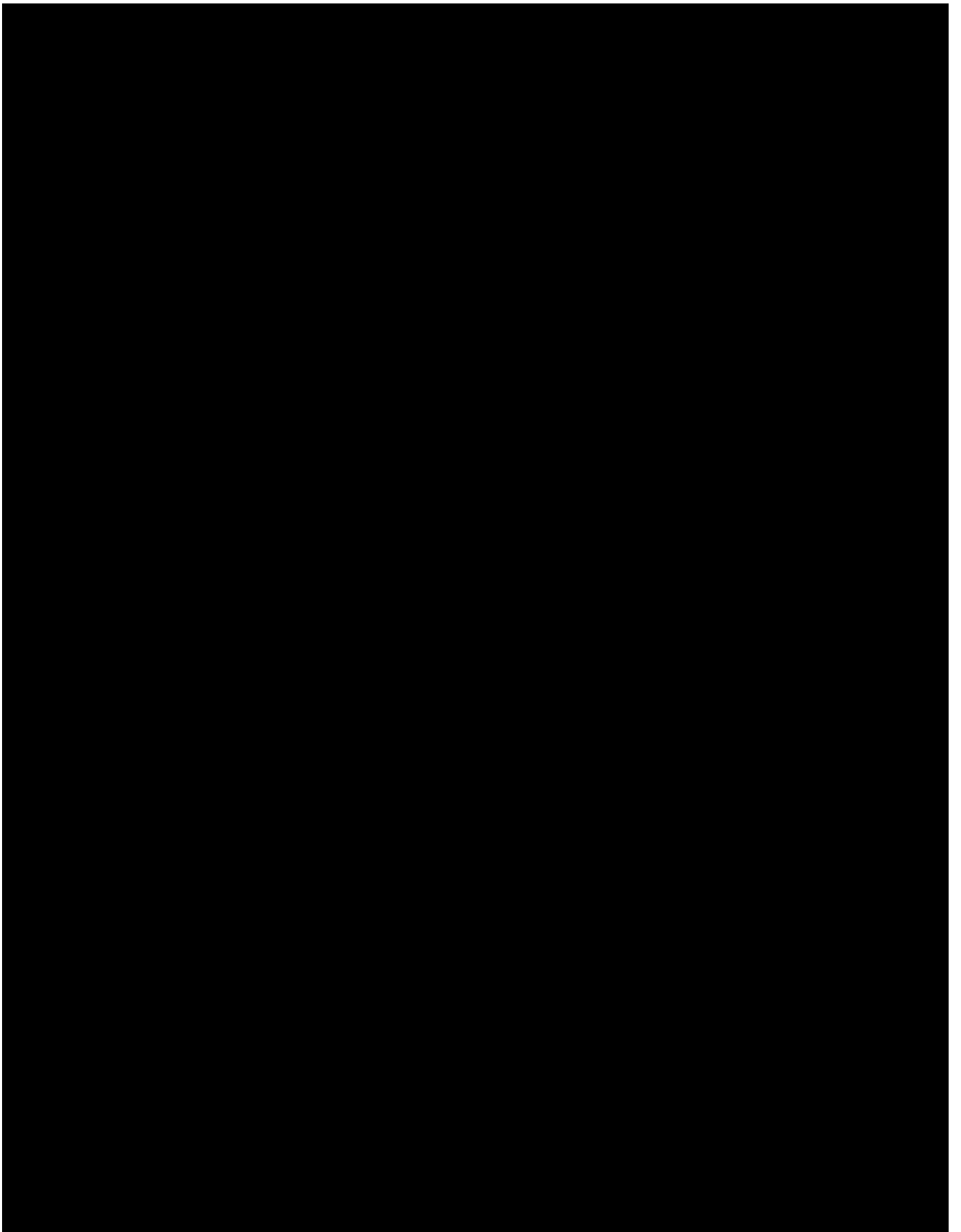
Please describe the status of any contractual commitments with respect to direct job creation and provide any pertinent agreements that have been executed.

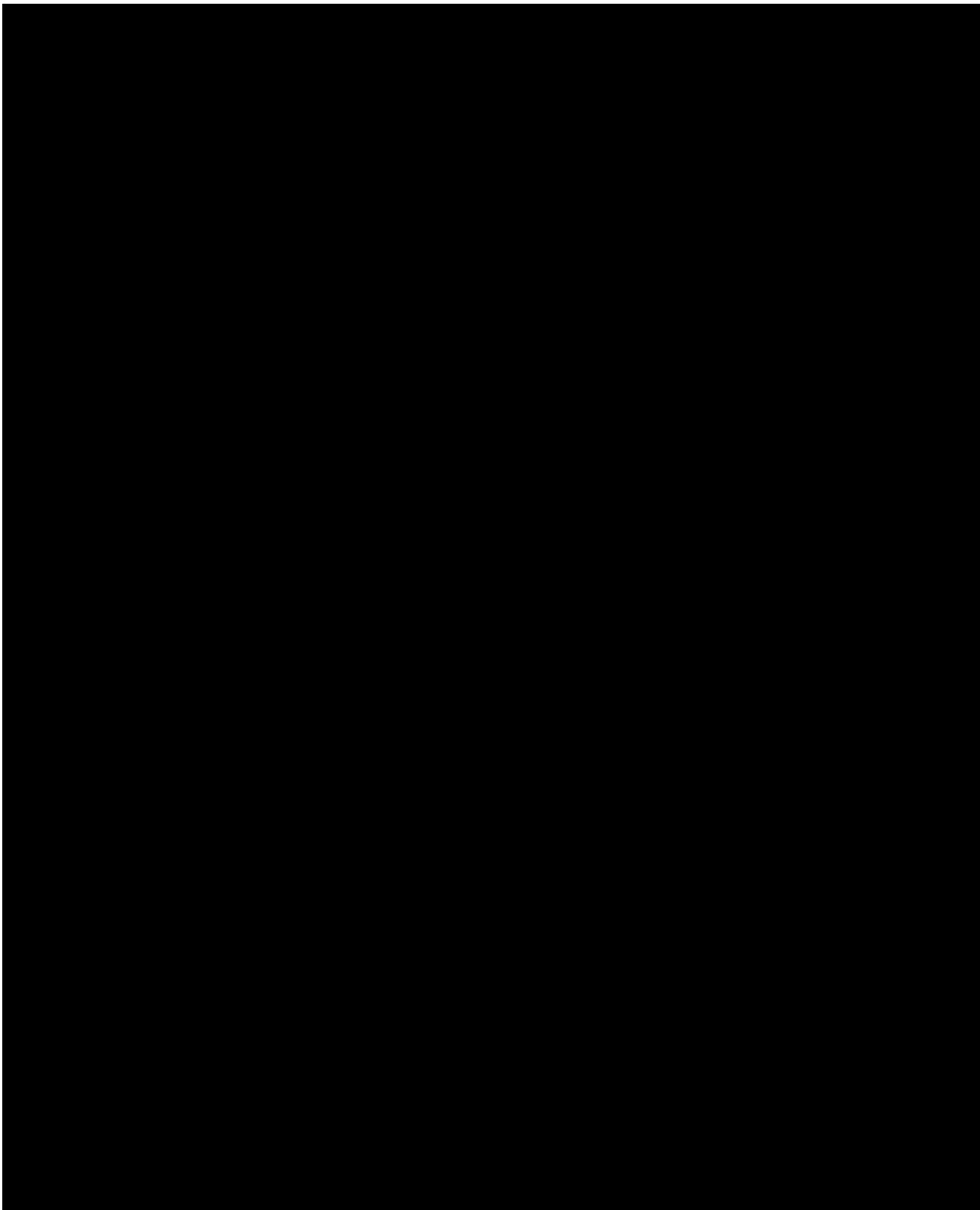


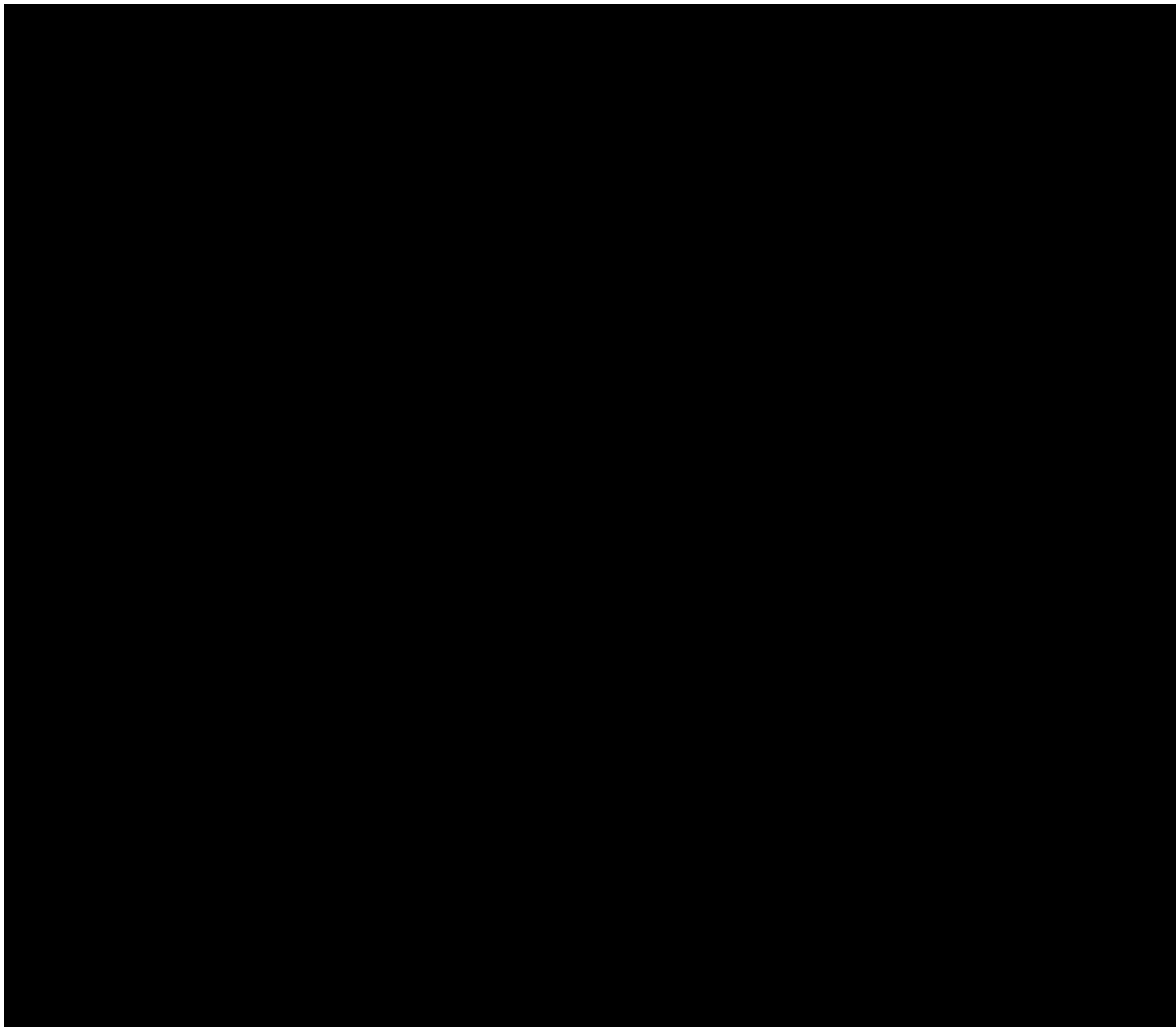










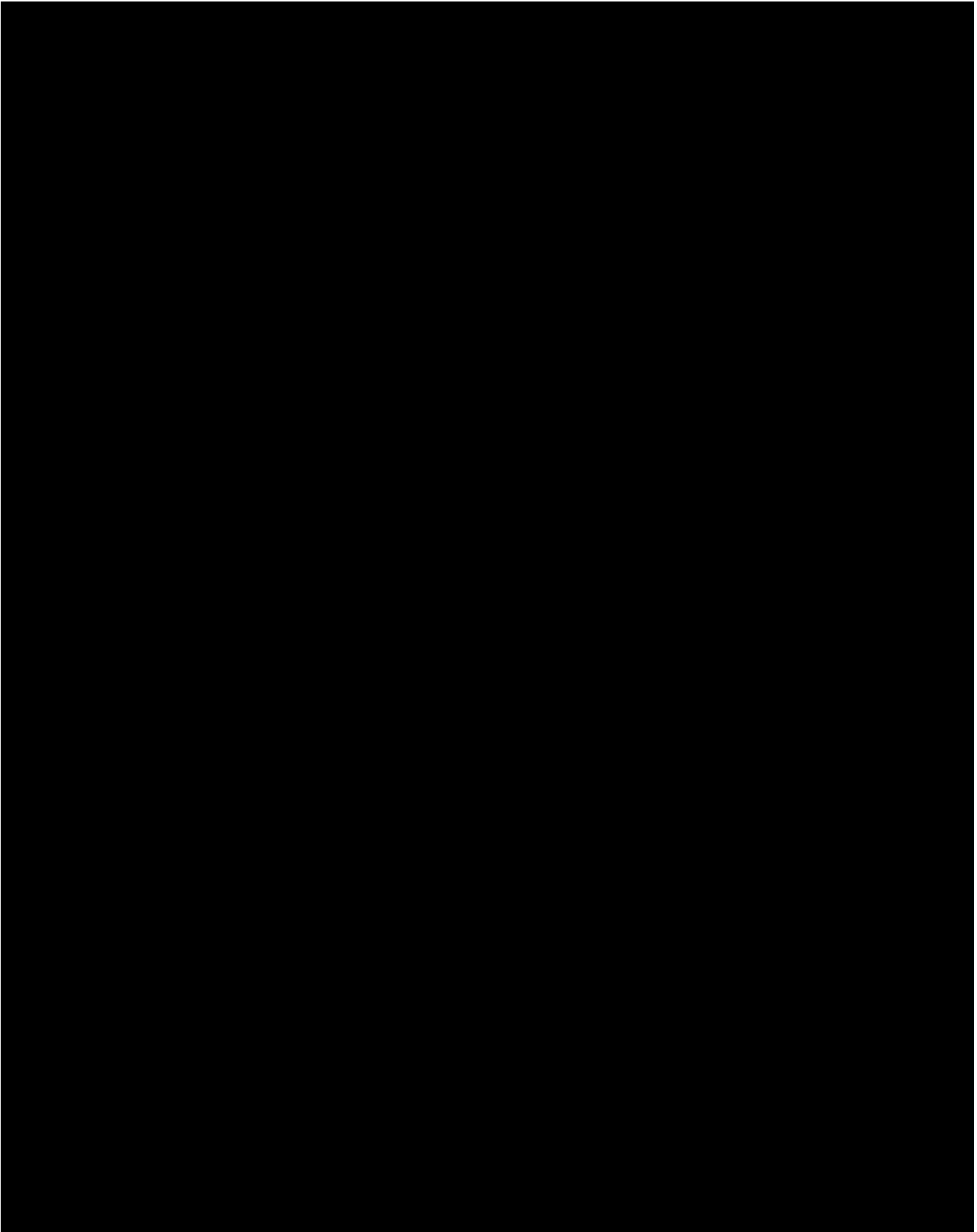


13.2 DIVERSITY, EQUITY, AND INCLUSION PLAN

Please provide a diversity, equity and inclusion plan that that includes a Workforce Diversity Plan and the Supplier Diversity Program Plan as outlined in Section 2.3.2.i of the RFP. Describe consultation with the Massachusetts Supplier Diversity Office, as applicable.

Vineyard Wind is committed to building a diverse, equitable, and inclusive offshore wind sector. The DEI Plan developed for the Project reflects this commitment and includes ██████████ ██████████ to fund DEI, workforce, and supply chain initiatives that will support local content, increase diversity in the industry and provide EJ Population residents and other underrepresented populations real opportunities to join the offshore workforce and supply chain (see Table 13.2-1).

⁹ See: https://www.bls.gov/oes/current/oes_ma.htm#00-0000



As part of the DEI Plan, Vineyard Wind will also leverage its “buying power” through the Project’s procurement process to ensure DEI is advanced by our industry partners and becomes a core value of the offshore wind sector as it is established in the US. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

13.3 ECONOMIC ACTIVITY AND DEVELOPMENT

Please describe and quantify any other economic activity or development expected to result directly from the proposed project. Impacts should be broken out by state and the region as a whole and highlight any impacts in economically distressed areas. Direct economic activity/development will be evaluated based on scale relative to project size, credibility and firmness. Commitments that secure long-term benefits are preferred. Commitments will be evaluated by the degree or extent to which the asserted benefits are contractually committed to by the bidder. Specific commitments to economic activity or development may include (but are not limited to):

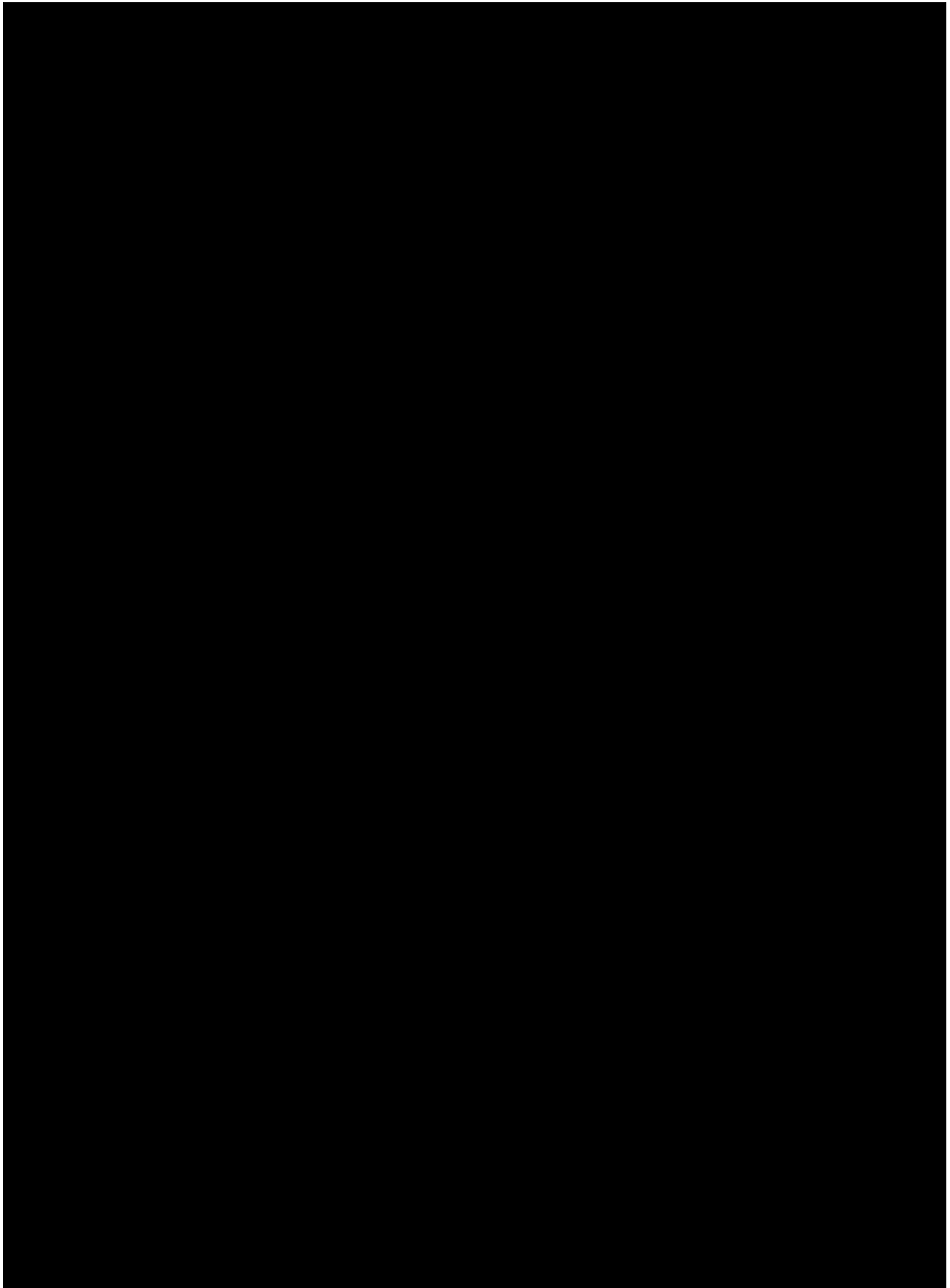
- Investment in supply chain improvements to support the offshore wind industry.
- Investment in workforce development to support the offshore wind industry, which may include partnerships with vocational and technical schools, community colleges, labor groups, and community-based organizations to create paid training, internship, apprenticeship programs. These investments could include public-facing educational outreach programs to engage youth, high schools, and residents about offshore wind, clean energy, and climate topics.
- Utilization and investment in port facilities and infrastructure during project development, construction, and operation and maintenance of the project.
- Investment in offshore wind-related research and innovation initiatives or partnerships
- Support for ongoing science and data collection to improve environmental, wildlife, and fisheries performance of offshore wind, including commitments to data sharing.
- Economic development activities and investments that directly benefit economically distressed areas, environmental justice communities, and/or low-income populations.

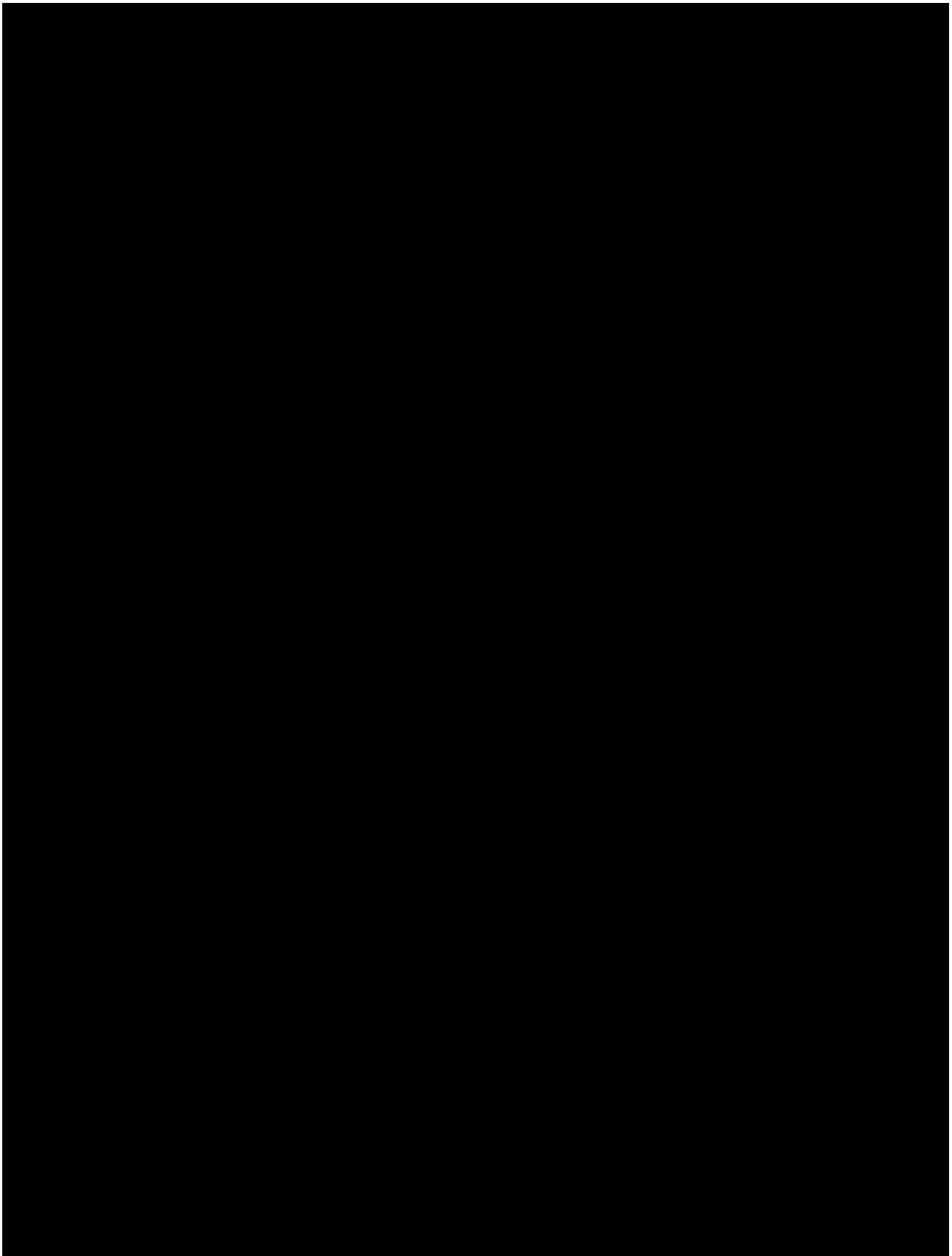
The Project will generate direct expenditures and investments in the Commonwealth across all the project phases. [REDACTED]

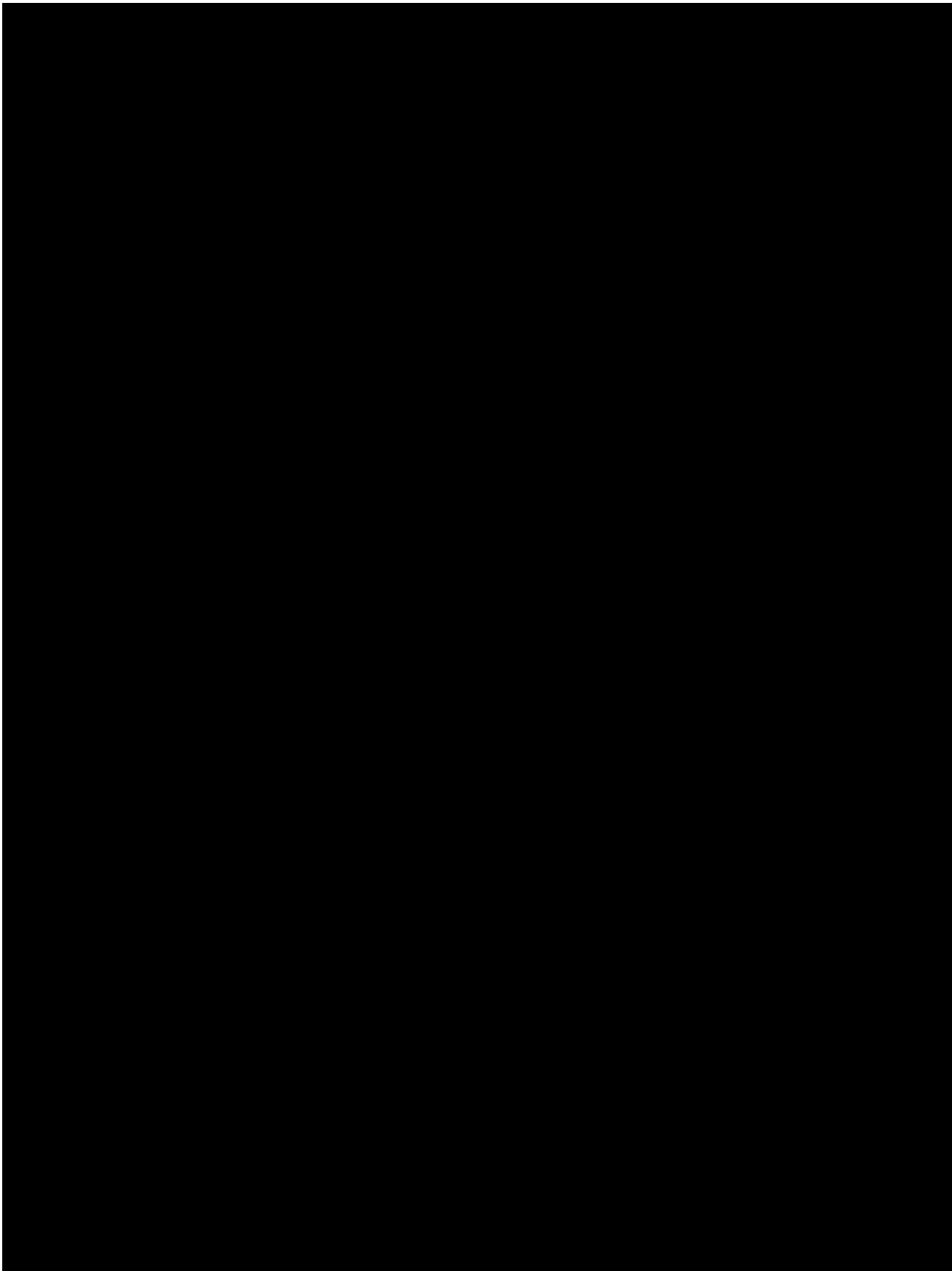
[REDACTED]

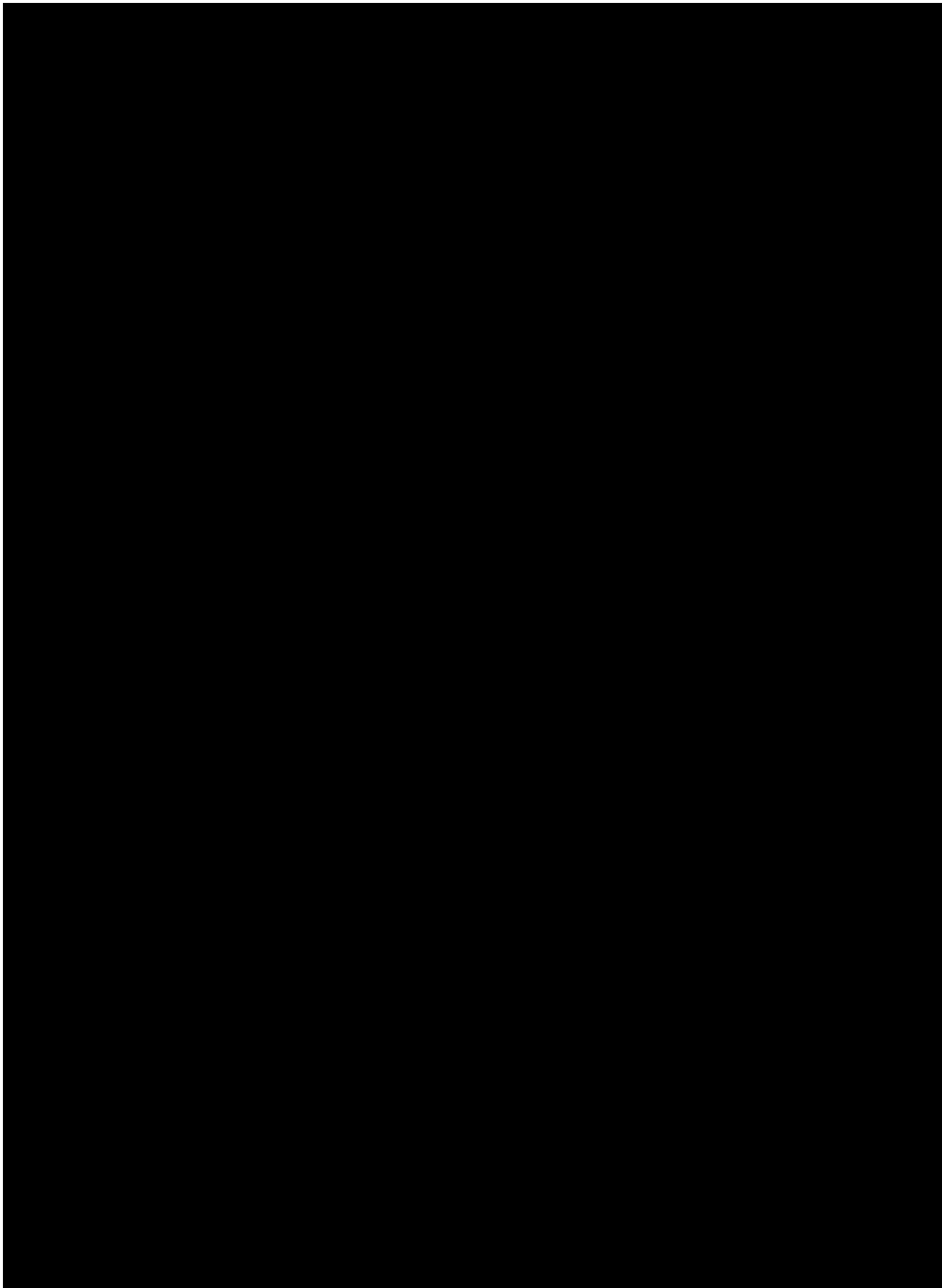
[REDACTED]

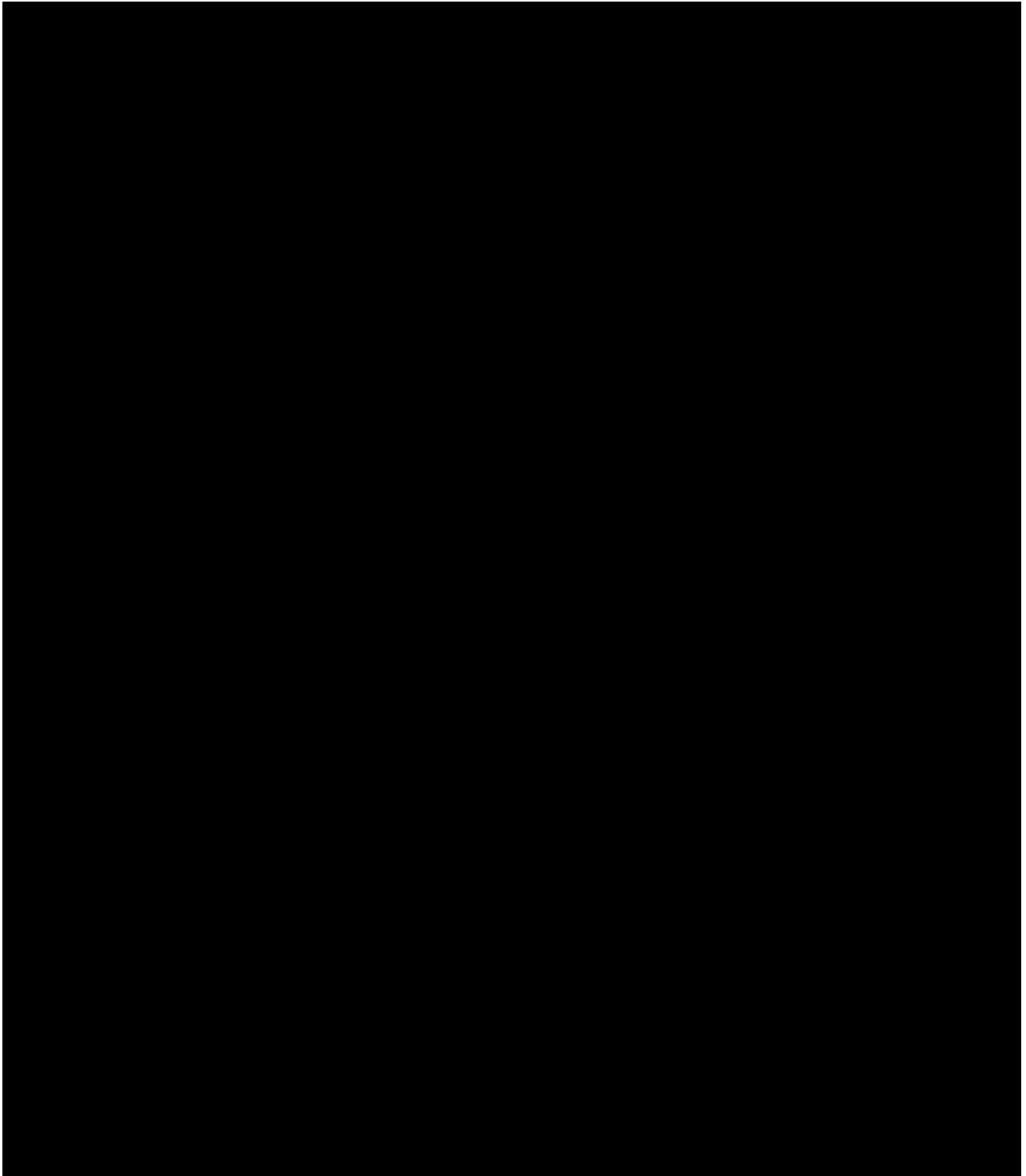
[REDACTED]











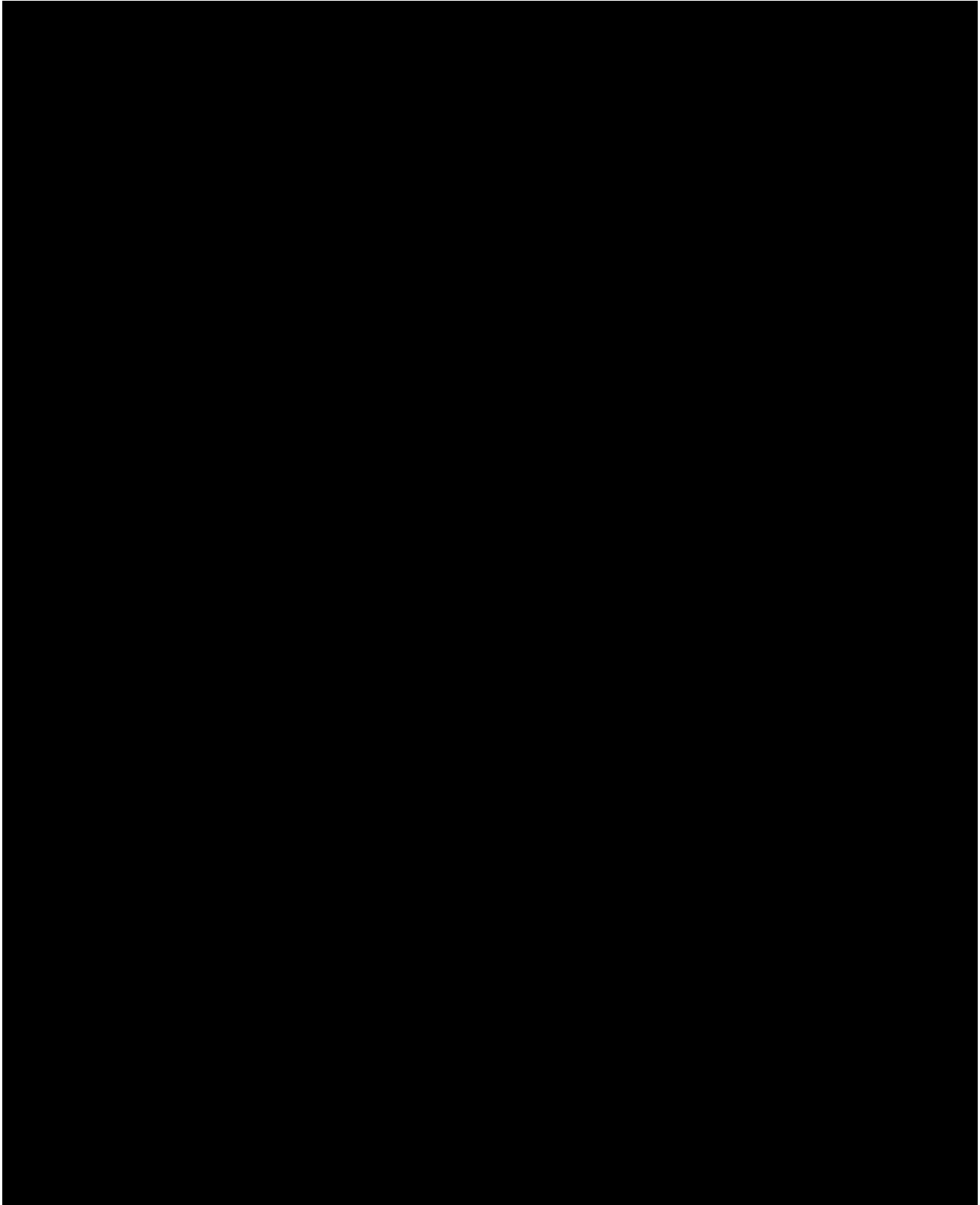
13.4 CONTRACTUAL COMMITMENTS

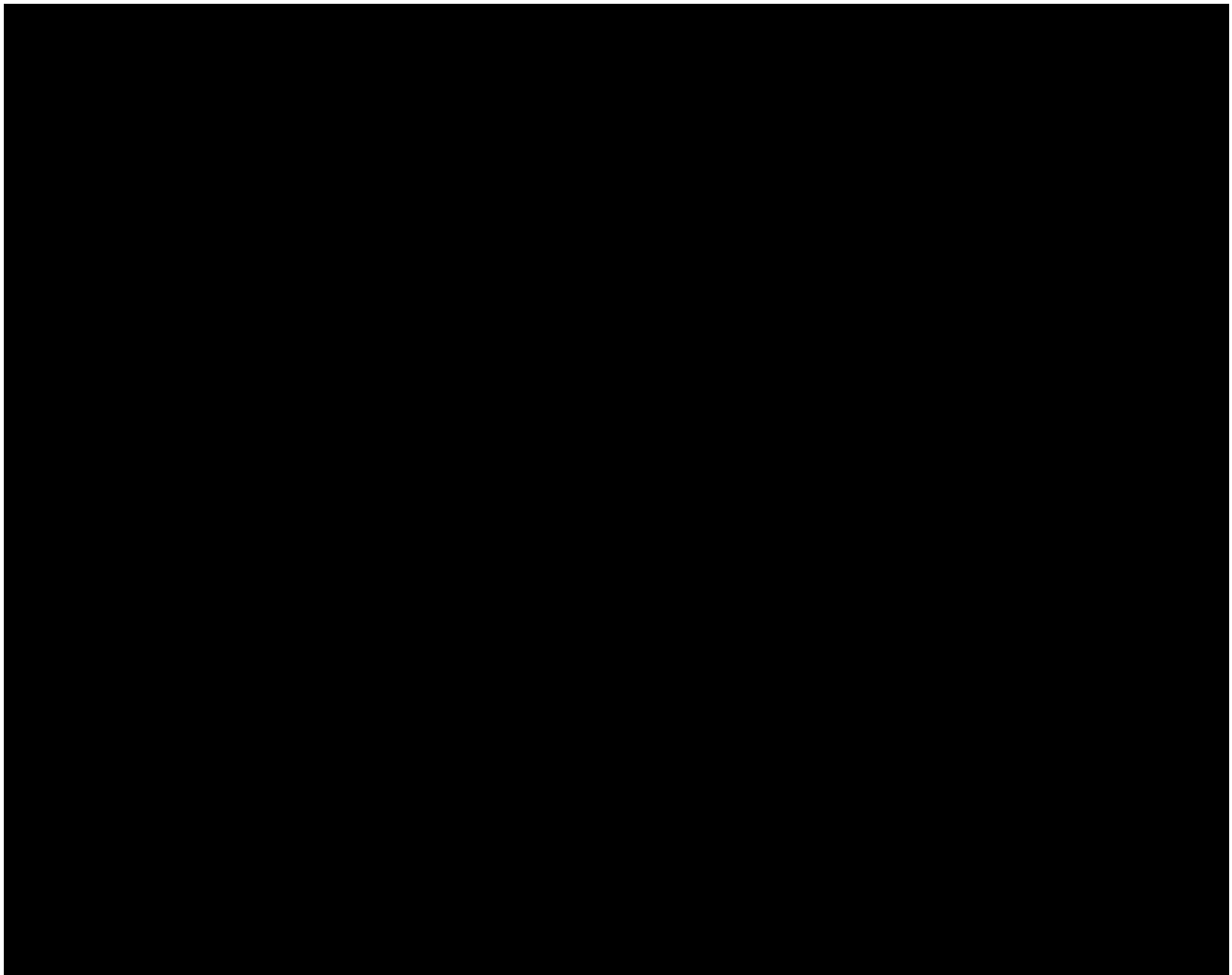
Please describe the status of any contractual commitments with respect to economic development and provide any pertinent agreements that have been executed. Please indicate how any economic benefits with specific commitments that are not already subject to contractual agreements will be covered by such agreements prior to executing Long Term Contracts under this solicitation (see RFP Sec. 2.2.2.8.) and your plan and timetable to negotiate and execute such agreements.

Please specify the administrator of any funds (i.e. fund administered by a third-party or by the Bidder).

Please propose a strategy to track and report on any applicable commitments, including progress in achieving promised economic benefits and the goals in the diversity, equity and inclusion plan. Such a strategy may include a commitment with a government entity to share said tracking and reporting. If such a commitment is not presented, DOER will work with

selected bidder after selection but before contract execution to implement an agreed-upon tracking and reporting strategy.





13.5 TRACKING AND REPORTING

Please describe any tracking or reporting mechanisms, such as an annual report(s) of milestones achieved and jobs created to verify the contributions to employment and economic development identified in 13.1, 13.2.

Tracking and Reporting

Vineyard Wind will track progress in achieving the economic benefits discussed herein, report progress on implementing our DEI Plan, and track and report on the status of EJ Population training and employment opportunities. [REDACTED]

The tracking and reporting strategy primarily consists of the following:

- [REDACTED]
- [REDACTED]
- [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

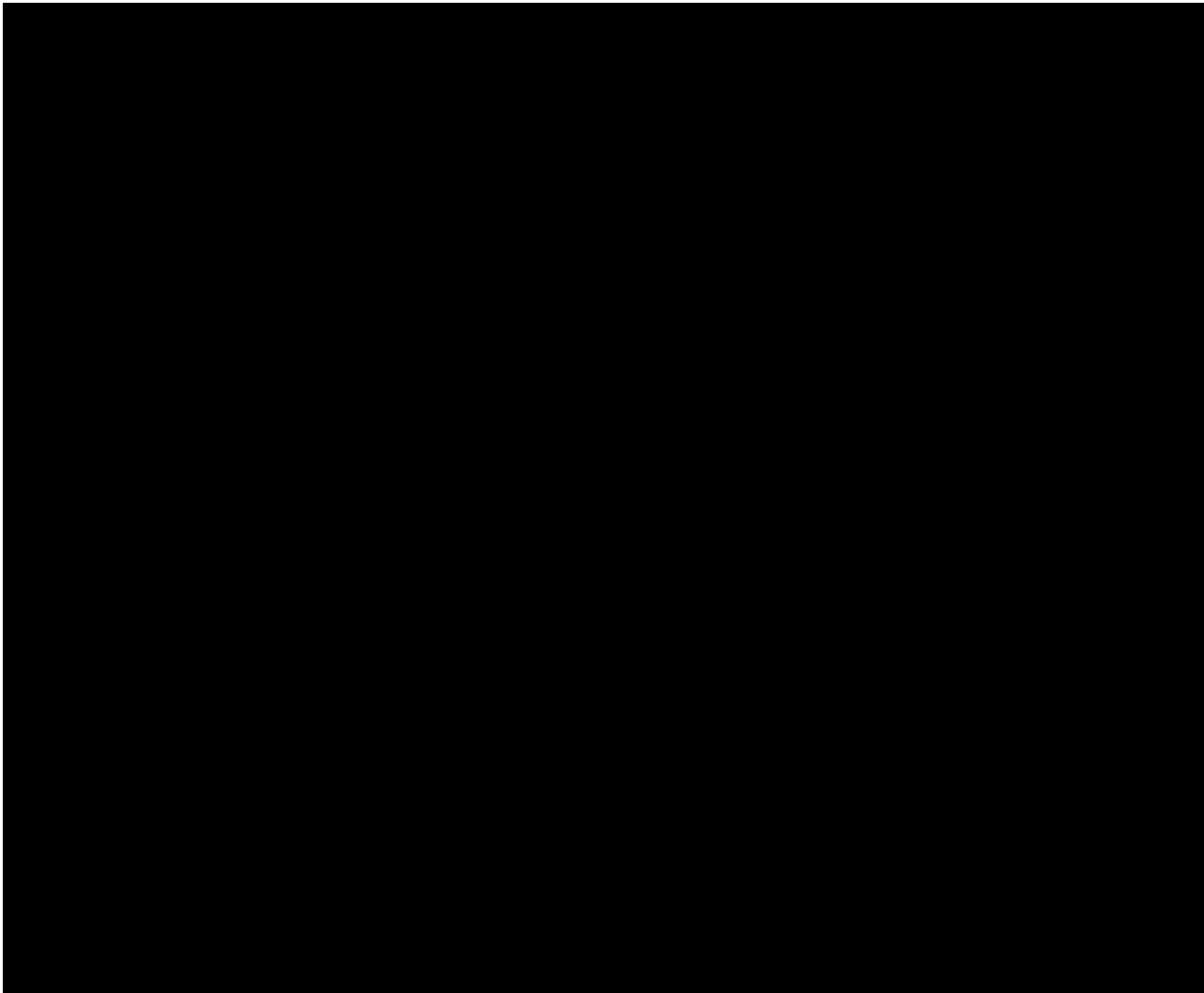
[REDACTED]

13.6 SECTION 2.3.2.I FACTORS

To the extent not already specified elsewhere in your response, please address the factors listed in RFP Section 2.3.2.i and describe any benefits or impacts associated with the proposed project.

[REDACTED]

[REDACTED]



13.7 LOW-INCOME RATEPAYER BENEFITS

Please demonstrate any benefits to low-income ratepayers in the Commonwealth, including, but not limited to: projects that reduce the energy burden for low-income ratepayers through energy efficiency or renewable energy upgrades; direct funding of rate relief through grant programs, support of existing community programs or other funding opportunities. Describe the impact, if any, those benefits will have on the cost to the project. Please provide any agreements to effectuate those benefits.

[Redacted text block]

[Redacted text block]

[REDACTED]

[REDACTED]

[REDACTED]

13.8 ECONOMIC DEVELOPMENT SUMMARY SHEET

The Section 13 Addendum: Economic Development Summary Sheet is a Microsoft Excel workbook provided on MACleanEnergy.com. Please fill out and submit the Section 13 Addendum to accompany responses in this section.

Attachments:

Copy of completed Section 13 Addendum in Excel format (.xls or .xlsx file):

[REDACTED]

[REDACTED]

SECTION 14

EXCEPTIONS TO FORM PPA

14.0 EXCEPTIONS TO FORM PPA

Please attach an explanation of any exceptions to the Form PPA set forth in Appendices B-1 and B-2. Comments to the proposed Form PPA must include any specific alternative provisions in a redline format to the Form PPA. If the bidder is proposing a two-phased project with each phase covered by a separate contract, the bidder should provide two separate contracts with specific alternative provisions to the Form PPA in redline format.

Bidders are discouraged from proposing material changes to the Form PPA.

The Form PPA redlines, included as Attachments 14.0-1 and 14.0-2, detail certain requested changes to be negotiated between the parties.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

SECTION 15

EXCEPTIONS TO FORM COMMITMENT AGREEMENT

15.0 EXCEPTIONS TO FORM COMMITMENT AGREEMENT

Please attach an explanation of any exceptions to the Form Commitment Agreement set forth in Appendix G. Comments to the proposed Form Commitment Agreement must include any specific alternative provisions in a redline format to the Form Commitment Agreement.

Bidders are discouraged from proposing material changes to the Form Commitment Agreement.

The Form Commitment Agreement redline is included as Exhibit G in Attachments 14.0-1 and 14.0-2 as part of Vineyard Wind's redlines of the form Power Purchase Agreements for Offshore Wind Energy Generation (Form PPAs). The redline details certain requested changes to be negotiated between the parties.

